

Growth pole policy's induced development and spatial inequalities in the metropolitan areas of Romania - a critical assessment

Növekedéspólus-politikára épülő fejlődés és területi egyenlőtlenségek Románia metropolisztárségeiben – kritikai értékelés

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ABSTRACT: The increase of regional inequalities in Europe and in particular in Central and Eastern Europe (CEE), during the past two decades, has led to the reconsideration and revival of the 'growth pole' concept in academic fields like regional economics, economic geography and spatial planning. Contrary to the classic viewpoint developed by French economists, the new policy-led approach on growth poles is emphasizing a much broader perspective. Initially designed for the reduction of regional inequalities, the rebirth of growth poles concept in the development planning practice triggered an important debate about the relation between spatial inequalities, economic growth, and development. This article provides a critical overview and assessment of the growth pole policy and spatial inequalities in Romania.

The main objective is the analysis of the spatial change in the metropolitan areas of the seven Romanian growth poles by taking into consideration three groups of indicators which are reflecting the spatial effects of growth pole-investments. The empirical results show two major trends: a differentiated socio-spatial dynamics of the metropolitan areas, and an intra-metropolitan deconcentration process. Moreover, there is no evidence for the appropriateness of the growth pole spatial planning tool for its main objective: the reduction of spatial inequalities. In this case the challenge represented by increasing spatial inequalities and peripheralization has not generated any transformative power in spatial planning, which raises serious doubts about the innovative capacities of the spatial development policies.



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KULCSSZAVAK: növekedéspólus-politika; térbeli egyenlőtlenségek; regionális fejlődés; metropolizációs tendenciák

ABSZTRAKT: A regionális egyenlőtlenségek elmúlt két évtizedben tapasztalható növekedése Európában és különösen Közép- és Kelet-Európában a "növekedési pólus" fogalmának átgondolásához és feléledéséhez vezetett olyan akadémiai diszciplínákban, mint a regionális gazdaságtan, gazdaságföldrajz vagy a területfejlesztés. A francia közgazdászok által kidolgozott klasszikus álláspont-hoz képest az új, fejlesztéspolitika-vezérelt megközelítés szélesebb felfogást tükröz. Míg eredetileg a növekedési pólusokat a regionális egyenlőtlenségek mérséklésére alkalmazták, a fogalom kortárs használata fontos vitát generált a területi egyenlőtlenségek, gazdasági növekedés és a fejlődési folyamat közötti összefüggésekről.

Tanulmányunk kritikai áttekintést nyújt a növekedéspólus-politika és a területi egyenlőtlenségek kérdésköréről Romániában. Írásunk fő célja a hét romániai növekedési pólus metropolizációs tendenciáiban végbement változások vizsgálata három olyan indikátorcsoport használatával, amelyek alkalmasak a növekedéspólus-beruházások térbeli hatásainak mérésére. Az eredmények a metropolizációs tendenciák élesen elkülönülő társadalmi-térbeli dinamikájára, valamint a metropolizációs tendenciákon belüli dekoncentrációs tendenciára mutatnak rá. Ugyanakkor nem találtunk empirikus evidenciát arra, hogy a növekedéspólus-politika alkalmas lenne a területi egyenlőtlenségek csökkentésére. Mindez azt mutatja, hogy a növekvő területi egyenlőtlenségek és a periférisáció okozta kihívások a területfejlesztés rendszerében nem generáltak a folyamatok mérséklésére alkalmas változásokat, ami komolyan megkérdőjelezi a területfejlesztési szakpolitikák innovatív képességét.

Introduction

The study of policy instruments designed for the reduction of spatial inequalities is becoming more and more important in times of growing territorial inequalities and uneven spatial development. The issue is of special interest for the CEE countries, where the high economic growth rates and a significant economic convergence process to the EU average level of development is overshadowed by a dramatic increase in the spatial polarisation of socio-economic development in their capital regions. While Prague, Warsaw, Bucharest-Ilfov and Bratislava are all among the top 20 wealthiest regions of the EU – when measured using GDP/capita (as % of the EU average) –, a large number of non-metropolitan regions, especially on the Eastern border of the EU, are among the poorest ones, becoming increasingly marginalised during the past decades. This polarised development model that appeared during the transition period in CEE countries is not accidental, reflecting deep structural

bottlenecks (related to human capital, innovation, infrastructure etc.), which hindered the catching-up process of peripheral regions.

While the reduction of regional disparities was a major objective of the European Cohesion Policy, there was room for Member States to select and design their own policy tools. This is the case in Romania, where the classical concept of growth poles has been rediscovered as an important tool in the reduction of regional disparities, during the 2007-2013 programming period. The reinvigorated growth pole policy raises the legitimate question on its effectiveness: has it delivered the expected reduction in regional inequalities? This topic is little explored in the literature, with the most relevant exceptions concerning the specific cases of Romania (Benedek, Varvari, Litan 2019) and Greece (Parr 2015), where growth pole policies have undergone a revival, or Hungary, which made a serious planning effort in the period 2007-2013 for designing this policy, which, eventually, was not implemented (Faragó, Lux 2014). In their recent paper Benedek, Varvari and Litan (2019) have presented evidence that the urban growth pole policy has failed in the long term. On short term spatial disparities - measured by Gini coefficient - among cities and counties had reduced in the period 2007-2013, but after that they have started to increase again.

The idea that this paper intends to bring forward and to empirically test is whether the new growth policy has had any effects on the socio-spatial development and on the local spatial inequalities. In other words, we aim to check the adequateness of the new growth pole policy, contributing this way to the general and contradictory debate on the effectiveness of European Cohesion Policy (ECP) in Romania, a largely ignored topic (Le Gallo, Védrine 2021; Nagy, Benedek 2021).

The structure of the paper is as follows. The first section discusses the relevant literature on the growth pole concept. The next section addresses the process of establishment of the growth pole policy in Romania, followed by the presentation of the methodology and data used in the empirical analysis. The final section discusses the results, followed by conclusions and further policy prospects.

Polarisation theories and the growth pole concept

The growth pole concept developed by Francios Perroux (1950), Jacques-Raoul Boudeville (1966) and José Ramón Lasuén (1973) is part of a much broader viewpoint on regional economic development, labelled under the term 'polarisation theories'. They are based on two major assumptions.

First, unlike the neoclassical theories, the theories of polarisation consider the growth of interregional inequalities, since the development advantages created in a region have a cumulative character determining the spatial and

sectoral polarisation of socio-economic development (Benedek, Moldovan 2015). The equilibrium concept promoted in the neoclassical theories is replaced in the polarization theories by the concept of circular cumulative causation, introduced, for the first time, by Myrdal (1957) and Kaldor (1957). According to this concept, the intensity of interregional inequality is determined by the intensity of two effects: the backwash effects through the migration of mobile production factors (labour, capital) from the peripheries to the core regions; and the spread effects, which come from the spatial diffusion of innovation, production and services from the core regions to the peripheries. Generally, the backwash effects are more intense than the spread ones, which generate growing inequality tendencies, the notable exceptions being represented by the core economies where inequalities are decreasing due to the development of transport and communication infrastructures.

Second, polarisation theories consider that polarized development is generated by the unequal regional distribution of growth factors (labour, capital, technology, infrastructure, investment and consumption functions, natural resources) and by the limited mobility of production factors.

In this broader theoretical framework, Perroux (1988) has developed the concept of growth poles. Growth poles are larger cities polarising a larger region through a single large firm, a key economic sector or an innovation cluster (Lasuén 1973). In other words, the sectoral polarisation of an economy generates a regional polarisation process, a spatial concentration of firms and population in a larger city (regional growth pole). The intensity of this regional polarisation depends on the market share and on the size of the dominant economic sector. The possibility of spatial diffusion of economic growth and innovation from the urban core centres towards peripheries is accepted. The intensity of diffusion depends on the innovation capacity of the adopting regional economy. At a high level of regional polarization and concentration, core-periphery structures are reinforced, as the cores attract more capital and population, while peripheries are shrinking both in economic and demographic terms. All this means that regional polarisation leads to increasing economic divergence, and this way, to increasing regional inequalities, which negatively affect the overall economic growth (Benedek, Moldovan 2015).

The growth pole concept attracted the attention of policymakers shortly after the publication of the main work of Perroux. Policymakers were preoccupied by the unbalanced spatial development and viewed growth poles as tools of reducing these spatial imbalances in the distribution of firms and demand. The possibility of establishing new growth centres, which may reshape the dominant regional polarization pattern attracted special attention in France during the 1950's and 1960's. More exactly, it was expected that the new growth poles will generate economic growth that will spread to their influence zone (Parr 1999). Based on this assumption, a range of growth pole policies have been created and

implemented from the mid-1960s to the mid-1970s (eb.). The policy was abandoned in the late 1970s, being unable to generate a more balanced spatial structure in France, although there are also benefits of this program (Egyed 2014). After a long period of absence, the revival of growth poles in the spatial policy during the 2000s came, somehow as a surprise, Romania being to our knowledge the only CEE country with an implemented growth pole program (Benedek, Varvari, Litan 2019).

Growth poles, metropolitan areas and the new regional policy in Romania

Sub-national regional inequalities in the European Union (EU) have registered an increasing trend during the last two decades (Amarante 2014; Benedek et al. 2021). Studies examining the economic convergence showed that economic growth has been much higher in Central and Eastern European (CEE) countries with a more homogenous spatial structure and a lower level of initial GDP per capita (Benedek, Kocziszky 2015; Ivan et al. 2020b). This has been the case of Romania as well: while the country as a whole has achieved convergence with the EU average, it has registered an increasing internal, sub-national divergence (Benedek, Cristea, Szendi 2015; Török, Benedek 2018; Ivan et al. 2020a). In order to address this deepening regional divergence, an urban growth pole policy has been established in Romania as a key element of the new regional policy. It was designed for the reduction of regional disparities and to assure a balanced and sustainable regional development. This policy was elaborated on the basis of Law no. 351/2001 regarding territorial planning in Romania. The Government Decision no. 998/2008 selected seven growth poles (Brasov, Cluj-Napoca, Constanta, Craiova, Iasi, Ploiesti and Timisoara) that were to receive dedicated funding within the Priority Axis no. 1 (Support to sustainable development of urban growth poles), Key Intervention Area no. 1.1 (Integrated urban development plans), of the Regional Operational Programme (ROP) 2007-2013. These growth poles were eligible for one third of the available EU funds for Axis 1. The main aim of offering dedicated allocations for these urban agglomerations, as mentioned in ROP 2007-2013, was to increase the quality of life and create new workplaces in cities by rehabilitating urban infrastructure, improving urban services, including social services, and developing business support infrastructure and entrepreneurship (MRDT 2012).

The seven growth poles were defined so that there was one for each development region, except for Bucharest-Ilfov region, in order to encourage long term balanced development throughout Romania. These growth poles were selected from the biggest cities in terms of population, first rank cities, which were also the biggest economic centres of the development regions which they belonged to (Benedek, Varvari, Litan 2019). The main argument of supporting

these growth poles was inspired by the classical theories on growth poles, namely that concentrating resources for development in these urban centres would lead to the spreading of the benefits to the surrounding areas and then to the regions they are polarising. Bucharest municipality, the capital of Romania, was not selected due to the fact that the growth poles were aimed to counterbalance the weight of the capital in the national economy.

At the same time 13 urban development poles have been identified (the municipalities of Arad, Baia Mare, Bacau, Braila, Galati, Deva, Oradea, Pitesti, Ramnicu Valcea, Satu Mare, Sibiu, Suceava, Targu Mures), all second rank cities in the Romanian settlement classification, and 170 urban centres (rank 3 cities). However, the focus of the programme was on the seven national growth poles, which have benefited from a consistent financial support, 621 millions of euro out of the 2.26 billion euro being allocated to axis 6 during the period 2007-2013 (Benedek 2019).

Moreover, the concept of growth poles was used also in the delimitation and establishment of metropolitan areas (MAs). In order to benefit from the advantages and the funding offered through the ROP, the national growth poles, together with their neighbouring rural communes, had to build up metropolitan areas and elaborate Integrated Urban Development Plans (Nagy, Benedek, Ivan 2018). The seven national growth poles identified their metropolitan areas and created, through voluntary association of the cities and of the surrounding settlements, the so-called Intercommunity Development Associations, that were taken into consideration within the Integrated Urban Development Plans and in the definition of integrated development projects with significant impact at metropolitan and regional levels. The metropolitan areas, called intervention areas in the Integrated Urban Development Plans, were limited to areas bordering 30 km around the growth poles, as mentioned in the legislation in force at the time, Law no 351/2001 regarding the approval of the National Spatial Development Plan – Section IV – The Settlement Network. This delimitation does not take into consideration the fact that major urban agglomerations usually cover wider functional areas, sometimes even exceeding regional boundaries. We also have to mention that the demarcation of the metropolitan areas (except Iasi and Ploiesti) was based on the existing cooperation relations between municipalities or the political affiliation of the mayor.

ROP 2007-2013 represented the most important source of public investment for these metropolitan areas. As mentioned earlier, the allocation for the seven growth poles was of 621 million euros, higher for the national growth poles located in regions with a lower GDP/capita than the national average. Interventions were mainly focused on the growth poles and did not have an integrated approach at the metropolitan level. The surrounding settlements benefited more from indirect effects than from direct investments, a fact, which led to negative reactions and dissatisfaction of local authorities and citizens with

the communities positioned at the periphery of the metropolitan area. They did not see the benefits of the metropolitan area and, in some cases, left the association (Benedek, Cristea 2014). This raised concerns about the viability of the metropolitan areas in the future.

Data, method, and study area

We propose an indirect evaluation of the appropriateness of the growth pole policy. The amount of the financial support and the short period of time for the implementation could not raise high expectations in what concerns the 'hard' outcomes of this policy - to generate growth diffusion across space. Instead of hard outcomes we focus on 'soft' outcomes, namely we analyse the evolution of basic indicators selected based on their relevance for capturing the theoretical effects of growth pole investments, and on their availability. We do not assume statistical causalities between financial support of the growth poles and their spatial effects, the growth pole policy fulfilling rather a framework role in this case.

Given the fact that the metropolitan structures are flexible and still in formation, we considered the most recent composition of the metropolitan areas of the urban growth poles, called in the rest of the paper Growth Pole Based Metropolitan Areas (GPMAs). Two criteria were considered for the demarcation of GPMAs: on one hand the literature and official sources, and on the other hand the functional criterion. Various studies (Grigorescu 2010; Rusu, Moldovan, Dănuț 2012; Ionescu-Heroiu et al. 2019; Kriss et al. 2019) listed the members of metropolitan areas at given moments. The official sources were represented by the Integrated Urban Development Strategies of the Growth Poles, which further provide useful information about the metropolitan areas. Some of these areas (except for Timisoara and Ploiesti) also have updated web pages, which represented another official source in order to support the selection of the component administrative units. The other criterion is referring to the functionality. In this case, based on technical considerations related to the principle of spatial contiguity we also included some additional communes as components of metropolitan areas, even if they do not appear officially as members (see Fig. 1, Table 1).

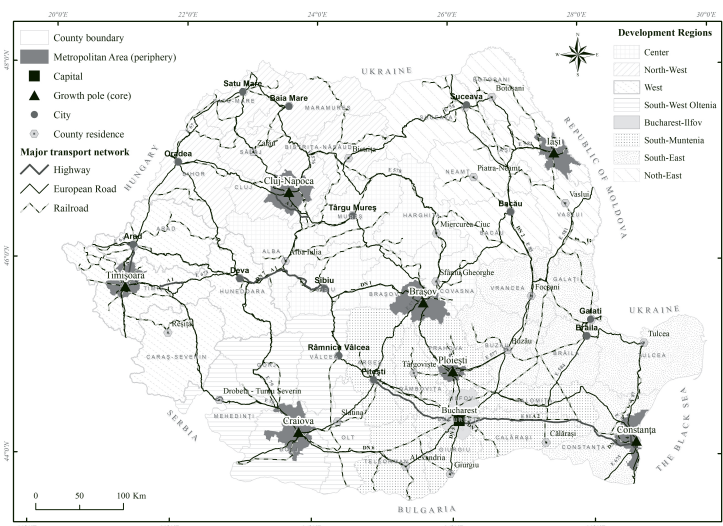
The resulting GPMAs are considerably different in terms of surface and population, between 611 km² and 1,700 km², respectively between approx. 355,000 and 522,000 inhabitants. Looking at the number of territorial administrative units (TAUs) that are members of the metropolitan areas, Craiova GPMA is the largest, with 29 members, and the rest of the metropolitan areas have between 14 and 22 members. On the opposite side is Ploiesti GPMA, with 14 members and the smallest surface (611 km²). The largest metropolitan areas by surface are Brasov, Craiova and Cluj-Napoca, with over 1,700 km².

Table 1.: Basic data of the Growth Pole Based Metropolitan Areas
A növekedéspólus-alapú metropolisztérsegek alapadatai

Metropolitan area	Surface (km ²)	Population (2018)	County capital city	Cities	Towns	Communes	Total TAUs
Brasov	1,969.52	488,862	1	2	4	15	22
Cluj-Napoca	1,740.70	436,016	1	0	0	19	20
Constanta	1,115.62	491,148	1	0	5	10	16
Craiova	1,822.57	409,581	1	0	2	26	29
Iasi	1,238.64	522,613	1	0	0	20	21
Ploiesti	611.77	355,721	1	0	3	10	14
Timisoara	1,173.23	428,126	1	0	0	15	

Source: Tempo online, NIS

Figure 1.: Functional Urban Areas in national context
Funkcionális városrészek Romániában



Source: authors' construction

Looking at the percent of urban TAUs, Brasov GPMA has the highest urbanization rate, followed by Ploiesti. Cluj-Napoca, Iasi and Timisoara GPMAs have only one urban unit, represented by the county administrative centre, in all three cases cities of regional importance, exceeding 300,000 inhabitants, and with an important service sector.

The highest number of inhabitants is registered by Iasi GPMA, with almost 523,000 inhabitants, mostly due to the large recent migration flows from the Republic of Moldova. In the second place is Constanta (491,000 inhabitants) and next is Brasov (489,000 inhabitants), both having a dense urban network.

For the GPMAs we considered three categories of indicators, with a total number of 11 indicators and the Gini Index in order to emphasize the socio-economic dynamics of metropolitan areas, as described in Table 2. We used time series from 2005 to 2018, which covered two years before the implementation of the growth pole policy, the first programming period in which this policy was implemented (2007-2016, and two years after). In order to capture the basic idea

Table 2.: List of analysed indicators
Az elemzésbe bevont indikátorok listája

No.	Name of the indicator	Category	Measurement unit	Data source	Time series/ Years
1.	Number of residents		No. Of inhabitants	National Institute of Statistics	2005-2018
2.	Population growth rate over the entire period		%	National Institute of Statistics	2005-2018
3.	Population density	Demographic	Inhabitants/km ²	National Institute of Statistics	2005-2018
4.	Net migration rate		Migrants/‰	National Institute of Statistics	2005-2018
5.	Infant mortality rate		Deaths/‰	National Institute of Statistics	2005-2018
6.	Number of companies		Companies per 1,000 inhabitants	National Trade Register Office	2009-2018
7.	Share of employees in total population	Economic	%	National Institute of Statistics	2005-2018
8.	Average local income		Lei/inhabitant	Ministry of Public Works, Development and Administration	2005-2018
9.	Number of dwellings built until the end of the year per 1,000 inhabitants		Dwellings per 1,000 inhabitants	National Institute of Statistics	2005-2018
10.	Number of building permits	Housing	Building permits per 1,000 inhabitants	National Institute of Statistics	2005-2018
11.	Living space/inhabitant		Km ² /inhabitant	National Institute of Statistics	2005-2018

Source: authors' construction

of growth diffusion generated from the core-cities towards the neighbouring communes and cities of the metropolitan areas, we divided each GPMA in an urban core region and a periphery, and accordingly evaluated the evolution of the selected indicators for these two categories.

Five demographic indicators were analysed: the number of inhabitants, the population growth rate over the entire period, the population density, the migratory balance, and the infant mortality. For the number of inhabitants, the population based on residence from 1 July of each year was considered.

For the economic dimension of spatial change three indicators were considered: the number of companies per 1,000 inhabitants (2009-2018), the share of employees in total population, and the average local income. The latter refers to the incomes collected by the administrative units and includes “taxes, fees and income tax payable by residents, economic agents, legal entities and public institutions of local importance” (Benedek, Varvari, Litan 2019, 179.). The source of this data is the Department for Fiscal Policy and Local Budgeting within the Ministry of Public Works, Development and Administration from income and expenditure statements at the administrative-territorial unit level (http://www.dpfbf.mdrap.ro/sit_ven_si_chelt_uat.html). The local income was reported for the population by domicile in order to have more comparable outcomes. As far as the three housing indicators are concerned, they were considered to be relevant for the study taking into account the fact that the economic growth can be transposed in an increase of the built-up space.

Empirical results

As a general picture (Table 3), there were two growth pole based metropolitan areas that registered a positive evolution in all analysed indicators, Brasov and Cluj-Napoca. Timisoara recorded a negative evolution for one indicator (no. of companies/1,000 inhabitants), while Iasi and Constanta had a decrease for two indicators. Ploiesti and Craiova registered a negative evolution for all demographic indicators. This picture indicates a positive economic dynamic for the first two GPMAs, considered as regional economic powers of the country, following immediately after Bucharest-Ilfov. The negative demographic dynamic combined with positive economic trends for the Ploiesti and Craiova metropolitan areas is expressing rather an adaptation and optimization process to market forces. Iasi has a particular situation, its demographic trends being highly influenced by the statistical effects of Moldavian citizenship requests, but showing negative economic trends. More exactly, the high immigration flux from the Republic of Moldavia towards the eastern counties of Romania (Iasi being the main destination) was generated by the simplification in the procedure of obtaining Romanian citizenship by Moldavians in the year 2012. The immigrants from

Table 3.: The evolution of demographic, economic and housing indicators in the GPMAs for the period 2005-2018
 (+ shows a positive evolution, - shows a negative evolution)
 A növekedéspólus-alapú metropoliszférségek demográfiai, gazdasági és lakhatási indikátorainak alakulása
 2005 és 2018 között

Indicator\metropolitan area	Brasov	Cluj-Napoca	Constanta	Craiova	Iasi	Ploiesti	Timisoara
Number of inhabitants	+	+	+	-	+	-	+
Population growth rate over the entire period	+	+	+	-	+	-	+
Population density	+	+	+	-	+	-	+
Net migration rate	+	+	-	-	+	-	+
Infant mortality rate	+	+	+	+	+	+	+
Number of companies per 1,000 inhabitants (2009-2018)	+	+	+	+	-	+	-
Share of employees in total population	+	+	+	+	-	+	+
Average local income	+	+	+	+	+	+	+
Number of dwellings built until the end of the year per 1,000 inhabitants	+	+	+	+	+	+	+
Number of building permits per 1,000 inhabitants	+	+	-	+	+	+	+
Living space/inhabitant	+	+	+	+	+	+	+
GINI Index	-	-	-	-	-	-	-

Source: authors' construction

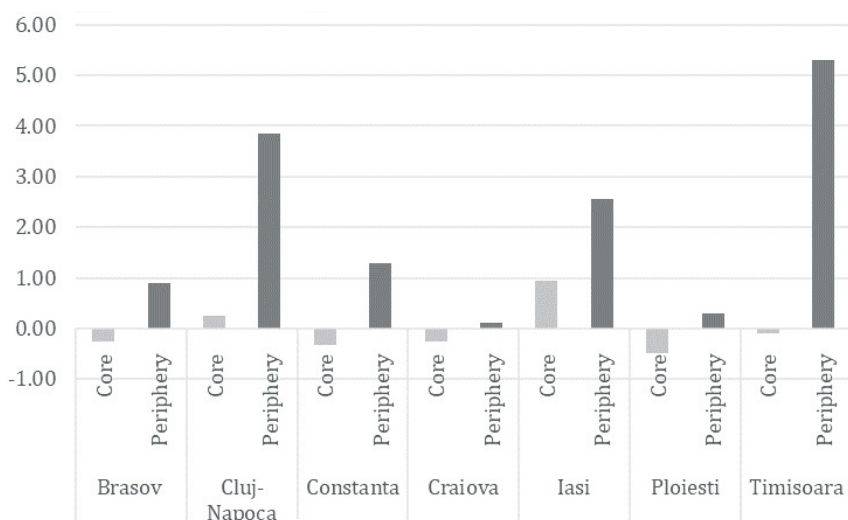
Moldavia have their residence in the localities of Iasi GPMA, but they do not actually live there (there are some cases in which one could notice that there are hundreds of Moldavians that have their residence at the same address).

The analysis of the trend in the evolution of the average annual population growth rate and of the population density reveals that with two exceptions (Cluj-Napoca and Iasi) all core areas of the GPMA's have registered a decrease, while all of their peripheries show a positive trend. This tendency towards population deconcentration from cores to peripheries is connected to the suburbanization processes and to the high entry prices to the real estate market of urban cores (Fig. 2 and 3).

It is noticeable that the infant mortality rate (viewed as a social development indicator) has a strong decreasing tendency in both types of areas, cores and peripheries, while at country level, Romania is still struggling with this issue. That means that the GPMA's registered not only economic progress, but they improved considerably in terms of social development (Fig. 4).

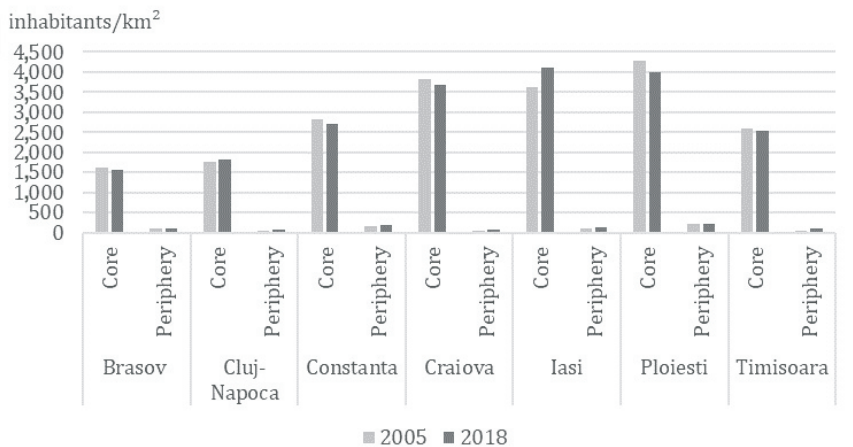
Looking at the number of companies per 1,000 inhabitants one core area (Cluj-Napoca) has an outstanding positive trend, while the rest of cores have a modest increase, while all peripheries (except for Timisoara) show an increase (Fig. 5). This comes somehow surprisingly, but is understandable from the perspective of the suburbanisation process of services and industries. However, what looks to be an economic deconcentration process has rather to do with the above-mentioned process than with some kind of growth diffusion induced by growth pole investments in the urban infrastructure.

Figure 2.: Average annual population growth rate between 2005-2018
Átlagos éves népességnövekedési ráta 2005 és 2018 között



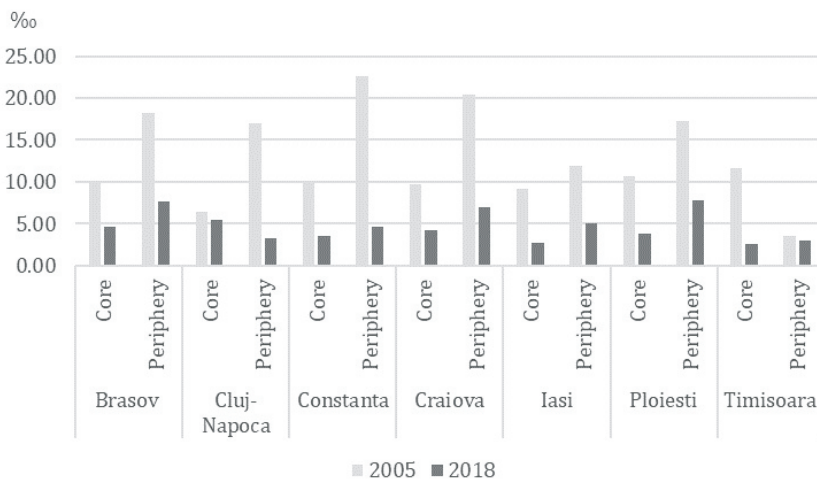
Source: authors' construction

Figure 3.: Population density for each MA
A metropolisztérsegek népsűrűsége



Source: authors' construction

Figure 4.: Infant mortality rate for each MA
Csecsemőhalandóság a metropolisztérsegekben

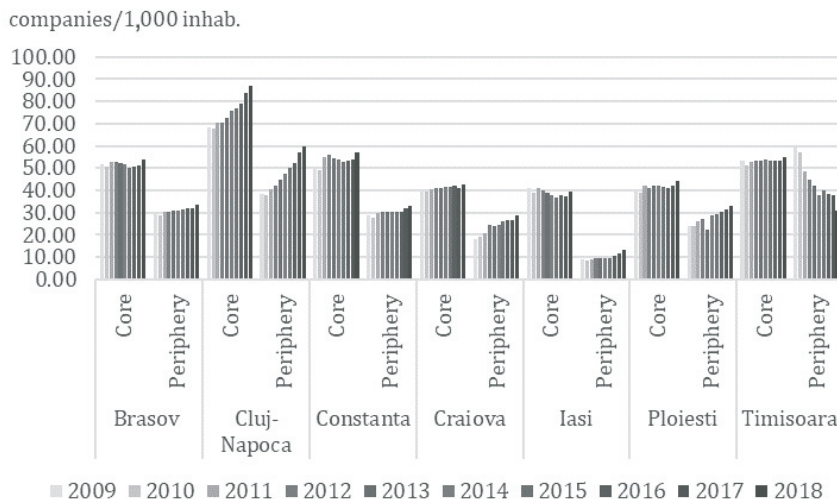


Source: authors' construction

The evolution of average local income shows the same positive tendency for both cores and peripheries, with two distinct notes, Constanta and Ploiesti having a decreasing or stagnating tendency for both categories in the last four years (Fig. 6).

Based on the 'local income' indicator explained in the previous section, we have calculated the GINI Index for the GPMAs. This indicator is a good proxy for

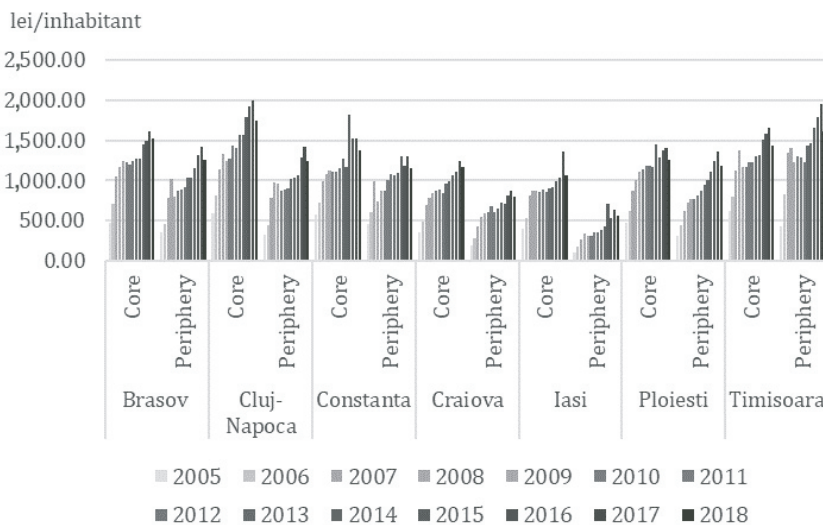
Figure 5.: Number of companies/1,000 inhabitants (2009-2018)
 Az ezer lakosra jutó vállalkozások száma (2009-2018)



Source: authors' construction

the local economic output (see for more details Benedek, Varvari, Litan 2019), but in the case of Iasi it should be interpreted with some reservations taking into consideration the particular context of the statistical increase in the total number of population, generated by the Moldavian citizenship attainment described for the first group of indicators. The results are shown in Figure 7 and

Figure 6.: Average local income (2005-2018)
 Átlagos helyi bevételek (2005-2018)

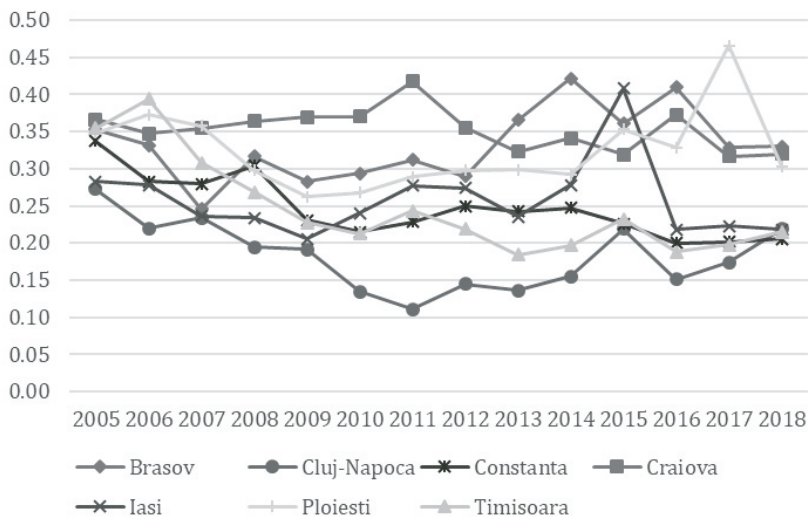


Source: authors' construction

Table 3 (last row), and they indicate a clear tendency towards lower income inequalities from 2005 to 2018 inside of the GPMA. At first glance this result can be interpreted as a result of the growth diffusion from the core cities represented by the growth poles to the communes and cities of the metropolitan areas. From this perspective, the growth pole policy can be interpreted as a successful strategy in diminishing spatial inequalities, a major goal of the Romanian spatial planning policy. However, this interpretation also raises some issues: the low volume of the investments from the growth pole programme poses serious doubts that the diminishing GINI Index could be associated with the growth pole programmes output. In addition, local income data used in this study represent incomes related to local taxes in personal incomes and personal property assets like land or vehicles, and not company related incomes. The growth pole investments were mainly directed towards infrastructure development, reflected in the second group of incomes. Moreover, if we look at the spatial distribution of the growth pole-based investments, there is a clear concentration of them in the core urban areas (Benedek, Cristea 2014), with a low probability that such investments in the transportation or social infrastructure can generate spatial diffusion effects on economic growth in the peripheries.

Figure 7 also reveals a second important fact: apart from Iasi, there are two clear GINI Index clusters: one is represented by three GPMA with lower level of development (Constanta, Craiova and Ploiesti) but with significantly higher GINI Index than the second cluster represented by the other three GPMA (Cluj-Napoca, Timisoara and Brasov), all with higher levels of development and lower

Figure 7.: The evolution of the GINI Index in the GPMA
A metropolizstérségek GINI indexének alakulása

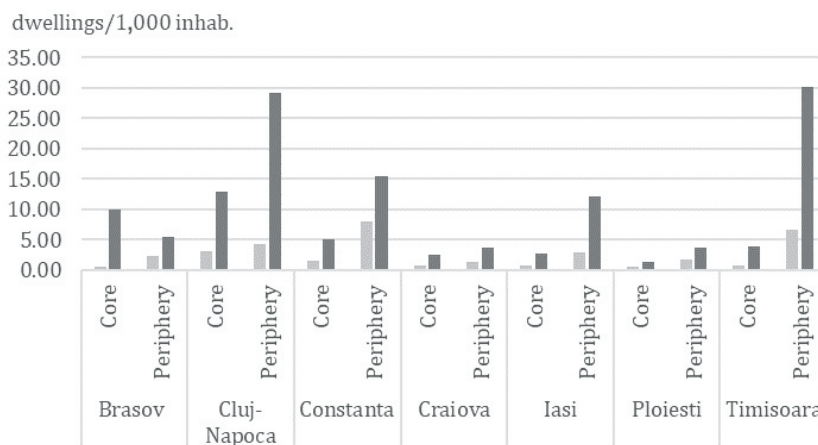


Source: author's construction using Wessa (2016) software

GINI Index. Moreover, in 2018 the gap between these two clusters was significantly higher than in the basis year (2005), indicating a clear tendency towards increasing inequalities between these two groups of GPMA.

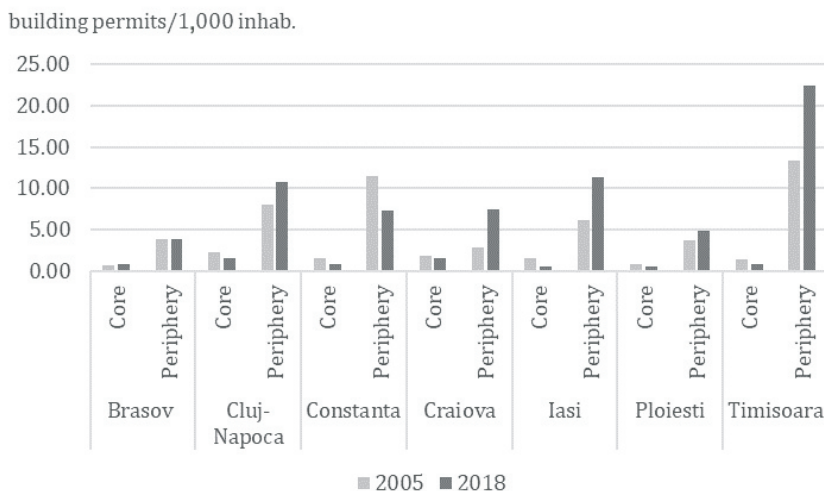
The analysis of the housing indicators reveals the same tendency as in the case of demographic and economic ones: new dwellings have followed the

Figure 8.: The number of dwellings built until the end of the year per 1,000 inhabitants
Az adott éven belül épített lakások ezer lakosra jutó száma



Source: author's construction

Figure 9.: The number of building permits per 1,000 inhabitants
Az ezer lakosra jutó építési engedélyek száma



Source: author's construction

suburbanization of population and economy. Therefore, the peripheries show stronger increases than the urban cores in the number of dwellings/1,000 inhabitants (excepting Brasov) (Fig. 8) or in the number of building permits (Fig. 9).

Conclusions and discussion

Introducing a new policy instrument aimed at reducing regional imbalances is becoming crucial in times of uneven spatial development. Often classical policy concepts and instruments are reshuffled and reintroduced into the policy circuit. It is the case of the growth pole concept, which raises the basic question of this paper: how appropriate are these instruments for the tackling of the rising territorial inequalities in CEE? Briefly, our answer is that the reinvigorated growth pole policy in Romania during the 2007-2013 programming period did not deliver the expected reduction of regional inequalities. There is no evidence for the appropriateness of the growth pole spatial planning tool for its main objective: the reduction of spatial inequalities. One of the main challenges of the Romanian spatial development represented by increasing spatial inequalities and peripheralization has not generated any transformative power in spatial planning, which raises serious doubts about the innovative capacities of the reinvented, classical spatial development concepts, in our case the growth pole concept.

The empirical results show differentiated socio-spatial dynamics of the growth poles based metropolitan areas, with two distinctive development paths of GPMA's. One group (Cluj-Napoca, Timisoara and Brasov) has registered higher values of demographic and economic development, a strong decrease and low values of income inequalities, and a more dynamic housing development. This group is led by the Cluj-Napoca metropolitan area, which registered the most dynamic evolution in the period 2005-2018, having the highest increase for most of the analysed demographic, economic and housing indicators. The whole group is part of the larger region of Transylvania and Banat, which, following the capital city Bucharest, are the most dynamic economic spaces in Romania.

The second group comprises four GPMA's from Moldova, Dobrogea, Muntenia and Oltenia regions, with a much lower overall economic development (Iasi, Constanta, Ploiesti and Craiova), which registered the lowest dynamics for most of the analysed indicators for 2005-2018, and a higher level of income inequalities. Except for the demographic indicators, Iasi GPMA also saw one of the smallest improvements for most of the analysed indicators. The effects of well documented market factors of regional development couldn't be counterbalanced by a questionable and poorly designed planning tool. The most important among these market factors for the differentiated evolution of GPMA's with very similar structural conditions the literature mentions are: for Cluj-Napoca and Timisoara the benefits from a real demographic advantage due to the university function they have,

unlike Craiova and Ploiesti, which registered a demographic decline between 2002-2011 (Benedek, Cristea 2014). The increase or decrease of the population is also correlated with the dynamics of the local economies reflected in the increasing construction permits in metropolitan areas like Cluj-Napoca and Timisoara (Benedek, Cristea 2014). The structure of local economies also plays an important role: the more dynamic metropolitan areas focus on IT, engineering, automotive industry, while less developed areas are characterised by the dominance of light industries (Benedek, Cristea 2014).

The analysis of the selected indicators at the scale of intra-metropolitan cores and peripheries brings us to the conclusion that local spreading effects around the growth poles (cores) for all three groups of indicators can be identified. According to the concept of circular cumulative causation described in the second section above, the intensity of interregional inequality is determined by the interplay between the backwash and spread effects. The empirical results bring evidence for more intense spread effects through the migration of population, production and services from the core regions to the peripheries. However, taking into consideration the limited budget of the urban growth poles program, we consider that these effects can be interpreted as reflecting the suburbanisation processes of population and economy. In addition to the moderate budget, a second limiting factor for the moderate potential of the growth pole program is represented by the short time of its implementation, the program being practically abandoned after the 2007-2013 programming period. Moreover, the spatial focus of the program prioritised the investment projects in the urban poles, with spread effects hardly to be expected in the short term.

In other words, the growth pole status has not produced a convergent development among the GPMAs, questioning its adequateness in relation to its main goal: the reduction of spatial inequalities. The development of the GPMAs was rather embedded in a regional context, where the spatial planning tool designed originally for levelling regional disparities seemed to be less effective. In this case a socio-economic crisis (increasing spatial inequalities and peripheralization) has not generated any transformative power in spatial planning, which raises serious doubts about the innovative capacities of the latter. It seems that regional policy and spatial planning have no new solutions, while the recirculation of older (and odd) concepts has not generated the expected results. At the same time, this means that to the unfolding crises of finance, economy, environment and political institutions we have to add and recognise the serious limitations, and, maybe even the crisis of spatial planning instruments.

On the other hand, we have also outlined in our study that the Romanian growth pole policy has emphasized a much broader perspective than the classical viewpoint developed by French economists. Initially designed for the reduction of regional inequalities, the rebirth of the growth poles concept in the Romanian development planning practice has shifted from its classical focus on the role

played by a dominant economic sector to a broader perspective, encompassing a larger scale of development priorities, from transport infrastructure to the development of social services, tourism or the business environment. A second important shift was noticed from the narrow spatial focus of the classical concept on a small number of large cities to a more diversified spatial spectrum organised in three levels according to population size: seven national growth poles, 13 urban development poles and 170 urban centres. These improvements in the policy design could form a good basis for the improvement of the overall effectiveness of the growth pole policy. However, it was abandoned in the following, 2014-2020 period.

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Annex 1.: The funds spent through POR 2007-2013 for each MA
 Metropoliszrészterügek támogatása a ROP 2007-2013 programból

MA	2010	2011	2012	2013	2014	2015	2016	Total for each MA	Amounts/2018 population
Brasov	0	5,161,682	109,529	41,860,223	17,423,910	62,462,113	377,314,948	504,332,406	1,032
Cluj-Napoca	23,049,651	371,953	32,574	37,568,425	67,542,158	81,277,106	446,471,404	656,313,271	1,505
Constanta	0	2,433,534	11,564,339	18,133,958	42,341,550	153,878,073	227,106,109	455,457,562	927
Craiova	7,151,127	8,098,465	5,821,488	217,151	67,574,330	55,888,339	415,354,065	560,104,965	1,368
Iasi	29,082,161	729,561	948,524	3,461,652	18,951,224	130,983,740	384,283,705	568,440,567	1,088
Ploiesti	1,391,777	0	0	55,061,093	0	55,588,677	514,659,725	626,701,271	1,762
Timisoara	0	4,356,592	7,126,479	10,531,881	31,611,941	63,056,822	236,535,384	353,219,099	825
Total	60,674,716	21,151,788	25,602,934	166,834,383	245,445,113	603,134,869	2,601,725,339	3,724,569,142	1,189

Source: Ministry of European Funds