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## Article

# Functional and structural features of Suceava and Botoșani metropolitan areas

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*Reference:* Chiriță, Viorel Functional and structural features of Suceava and Botoșani metropolitan areas.

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## Functional and Structural Features of Suceava and Botoşani Metropolitan Areas

Viorel Chiriţă<sup>1</sup>, Daniela Matei<sup>2</sup>

**Abstract:** The development of metropolitan areas is a natural process of urban expansion, achieved through exurbanisation and suburbanisation, whereby urban functions extend into the rural periurban environment. The expansion of the concept of the urban metropolitan area to second tier urban areas encompassing regional hubs is driven by the urban-rural and functional territorial development in the proximity of Suceava and Botoşani municipalities in northern Moldova, which have always evolved in conjunction. The study aimed to identify the relevance of human development indicators and to assess the socio-economic development potential and the ranking of communes that are part of the Association of Botoşani and Suceava Metropolitan areas, amid the development of joint projects and of a metropolitan-type association between the two urban areas. The unfolding of evolutionary metropolitan-type mechanisms in this paired territorial setup is linked to general trends in functional and residential urban expansion into the periurban, to the establishment of periurban hypermarket platforms and, ultimately, to the merging of urban and rural space in an integrated territorial corpus, with prospects for urban and functional development through joint projects. Moreover, the study exposes genetic-evolutionary types of metropolitan spaces in the two areas, differentiated by their size and the urban hub status of each of the two municipalities.

**Keywords:** metropolitan area, development indicators, territorial differentiation, periurban

**JEL Classification:** H7, R11, J43

### 1 Introduction

The role of small towns in the development of regions is most often dependent on the local political structure and on the national and county-level development strategies. Owing to their polarising role (Groza, 2002), (Săgeată, 2000), they contribute to local and national economic growth, either as trade centres for agricultural products from neighbouring villages or as connecting points for national and export markets. They also serve as important manufacturing and goods and services distribution centres for rural areas in their proximity and as areas of growth and consolidation of non-agricultural activities and of employment of labour force through the development of SMEs or the establishment of branches of large enterprises (Ianoş, 1994), (Pascariu, 2010).

The territorial and administrative organisation of Romania has been marked, historically, by an emphasis on the role of urban polarisation centres, recognised variously as capitals of a county or district or as local trade polarisation hubs (Săgeată 2003), (Poclid, 2013). In the historical province of Moldavia, there are certain geographical areas where the socio-economic activities are polarised in complex ways, following the development of paired cities (e.g. Suceava during the

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Austro-Hungarian Administration rules) and Suceava-Botoşani, on either side of the Siret river and the Suceava Plateau and at the contact with the Moldavian Plain. Without delving too much into the development of this type of pairing, it is worth noting that historical records highlight the role of the two cities in the development of Suceava region (until 1968), as the cities of Botoşani and Suceava polarised economically the larger region of Bukovina and the Moldavian Plain (Groza, 2002), (Lupchian, 2010), (Săgeată 2015).

In the contemporary period, especially after the year 2000, one may notice an increase in various forms of economic and development transfer along an axis that is somewhat perpendicular to the Siret and Suceava river valleys, in agriculture and especially in community services shared between the two municipalities. This has been driving the development of this entire territory of urban and rural transfer (Ungureanu, 2003), and has prompted the need to create a structure common to the two cities and to their adjacent rural areas. All scientific papers should be written in English or French. The abstract must be written in English.

## 2 Methodology of analysis

The study was based on the assumption that the creation of partnerships between urban and rural localities must be structured on several levels, as follows (Matei, 2012):

- *administrative level*, with cooperation on an equal footing between urban and rural municipalities. Establishing partnerships at this level can constitute an effective means to address the diverse administrative problems of communes. This is especially the case for voluntary groupings, based on affinities in terms of the range of problems faced or the type of funds used for various aspects of development;
- *economic level*, which encourages the phenomenon of delocalisation of certain industrial activities such as food processing, wood processing, abattoirs, etc.
- *social level*, which encourages and facilitates contacts between rural and polarizing centres. This involves the establishment of cooperation that promotes exchanges in both directions, e.g. the development of spaces with leisure functions in rural areas, attracting the urban population.

Each of the levels listed above have been interpreted and summarised and the findings have been rendered using maps.

The analysis conducted sought to identify peculiarities in the differentiation and in association, respectively, of the periurban areas of the cities Suceava and Botoşani, in a *metropolitan-type territorial setup* (cf. Law 351/2001), with paired functionality, for which the use of the term Metropolitan Area/ Zone (MA/ MZ) was deemed appropriate.

Methodologically, in order to assess as accurately as possible the state of development of the Suceava - Botoșani metropolitan area, we took into account the share of the labour force employed in various sectors of the economy, while two composite statistical indicators were selected to reflect and quantify optimally the reality of the development of the examined area: the local human development index (LHDI)<sup>3</sup> and the composite indicator assessing the potential socio-economic development and ranking of municipalities (IC).

For the first indicator, LHDI – Local Human Development Index, the present study used the public databases from the World Bank projects which produced *The Atlas of Rural Marginalised Areas and of Local Human Development in Romania* (2015). The findings were mapped and corroborated with data from the National Authority for Cadastre and Land Registration. For the second indicator, data was drawn from Chapter IV *Calculation of the composite indicator assessing the potential socio-economic development and ranking of communes* study of the paper titled *Studiu privind stabilirea potențialului socio-economic de dezvoltare a zonelor rurale* [Study on determining the socio-economic development potential of rural areas (ASE 2014)].

The cartographic rendering of composite indicator values, at the scale of territorial administrative units in the MA, made it possible to demarcate the rural areas with differentiated features and functionalities. Data processing was performed using the GIS – ArcMap 10.3 software.

### **3 The necessity to establish metropolitan areas as paired metropolitan territorial setups**

The functionality of metropolitan areas is determined by their complementing territorial administrative units – both urban and rural - and their varying degrees of development and polarisation. The differences between the two categories of populated areas are exacerbated by population densities, urban facilities, local budgets, surplus areas etc.

Metropolitan areas were originally established in the USA in the 1950's as SMSA (Standard Metropolitan Statistical Areas), and subsequently in France as *Zones de peuplement industriel et urbain*, corresponding to towns that were connected by daily workforce commuting to adjacent rural areas.

Metropolitan areas were recognised in Romanian geographic literature too, with the expanding influence exerted by towns with polarisation functions over their adjacent rural or urban environment, resulting in areas with more than 1 million inhabitants (Erdeli, 2006). Subsequently, the National land development plan and

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<sup>3</sup> Designed by sociologist Dumitru Sandu jointly with a team at the National Statistical Institute, LHDI adapts an index used internationally to quantify the development of a locality, i.e. Human Development Index (HDI). It includes human capital indicators and capital assets indicators of a locality.

Law 351/2001, which stipulated it as a pragmatic document for national development, defined the metropolitan territory as follows: *an area located around large urban areas, demarcated by specialist research, where mutual relations of influence are established in areas of communication networks, economy, in social, cultural and urban infrastructure*<sup>4</sup>. The same document defined as *the periurban territory the area surrounding towns and cities, demarcated by specialist research, where interdependencies are created in areas of the economy, infrastructure, commuting, in order to guarantee access to food, green and leisure spaces*<sup>5</sup>. Practically, the two notions form a legal framework for the establishment of metropolitan areas in Romania.

According to the law, metropolitan areas can be legally established exclusively around mega-type urban polarisation centres, i.e. the first-tier cities of Romania. This means that the population defined of the metropolitan setup defined as a metropolitan area must number at least 500,000 inhabitants. Nonetheless, under Law 351/2001, as amended, metropolitan territories may be established around county capitals such as Suceava, Botoşani or Bacău, whose urban functionality expands markedly into the periurban level, thereby creating a complex territorial structures as a metropolitan territory, towards adjacent periurban localities.

In the North-East Development Region of Romania, several metropolitan structures have emerged and are currently at different stages of organisation: Iaşi Metropolitan Area (established in 2004), composed of the municipality of Iaşi and 13 communes, in addition to 5 communes with observer status; Bacău MZ (established in 2006), Suceava MZ (established in 2011), around the city of Suceava, including the town of Salcea and 12 adjacent villages, located within a radius of 20-25 km from the city of Suceava, Botoşani MZ (2012), consisting of the municipality of Botoşani and 6 communes<sup>6</sup>.

The legal steps to establish metropolitan-type associations for tier-two cities such as Suceava and Botoşani took into consideration the fact that Suceava had been classified as a Potential Urban Strategic Horizon regional hub, with a specific function. This was part of the classification of urban hubs in Romania, according to the strategic concept underlying Romania's territorial development by 2030 and ESPON European-level hierarchy.

Considering their long-standing historical and commercial links, the authorities of Botoşani and Suceava counties contemplated establishing a metropolitan area. However, since both these county capitals are tier two cities, under Law 351 / 2001, they lack the capacity to establish metropolitan areas. Nevertheless, in 2011, Suceava municipality, Salcea town along with the villages of Adâncata, Ipoteşti, Mitocu Dragomirnei, Moara, Pătrăuţi and Bosanci set up the Suceava Metropolitan Zone (Area) Intercommunity Development Association, abbreviated as MZA. In

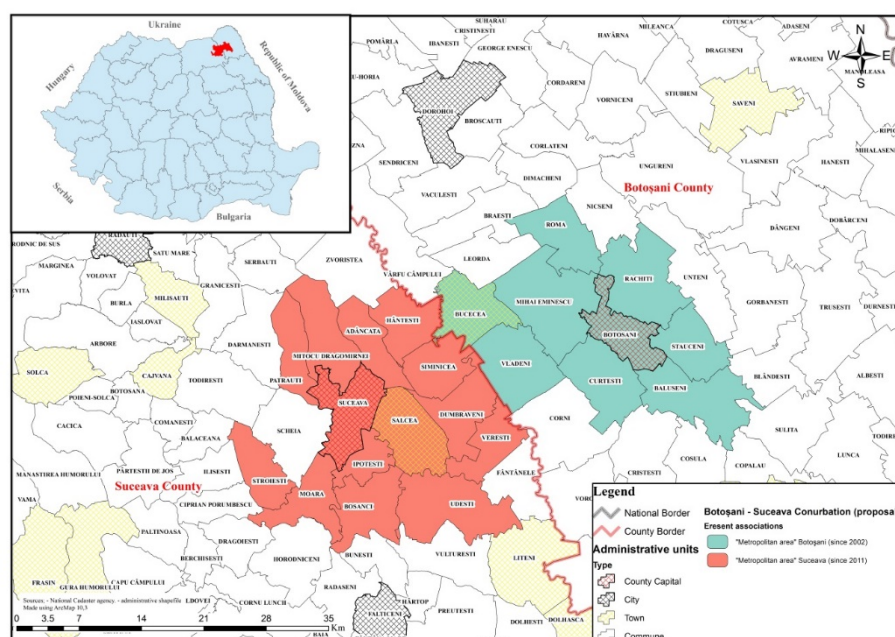
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<sup>4</sup> Law 350 of 6 July 2001 on Territorial Planning, Land Development and Urbanism, with subsequent additions.

<sup>5</sup> idem

<sup>6</sup> 2014-2020 Regional Master Plan, North-East.

April 2013 the communes Verești, Siminicea and Stroești became members, while Dumbrăveni, Hânțești and Udești joined in June 2013. So far, the association has drafted and agreed on the 2014-2020 development strategy for the area. It covers projects in the fields of education, public utilities and transport. In parallel, in 2012, the Association for the Intercommunity Development of Botoșani Metropolitan Zone (MZ) was founded, its members including: Botoșani municipality and adjacent communes: Răchiți, Stăuceni, Bălușeni, Curtești, Mihai Eminescu and Roma. In 2013, the town of Bucecea and Vlădeni commune also joined the association.



**Figure 1** Metropolitan intercommunity development associations, Suceava and Botoșani municipalities

Given that the two "metropolitan areas" are adjacent, officials from the two counties and the two county capital cities signed a protocol establishing the Botoșani – Suceava Urban Area. The structure is expected to act as a counterweight to the Iași Metropolitan Zone (Area). It also would serve to review the administrative and functional statutory framework of this prominent regional polarisation territory, by creating a body to raise funds for projects that will lead to the development of the region, thus aiming to reduce the gap separating it from the Iași growth hub.

### 3.1 Shifts in the economic profile of the metropolitan area

It is a well-known fact that the polarisation exerted by an urban space over time, through its specific urban functions (e.g. industrial, services, healthcare, education,



etc.), is complemented by the emergence of periurban areas within the boundaries of former suburban communes and due to the establishment of bipolar functional connections. This feature of urban associative structures emerged as the result of the expansion of jointly-operated transport systems, as illustrated by Salcea airport in Suceava County, which has amplified and multiplied the exchanges between the two cities and urban areas (Suceava and Botoșani).

Consequently, the development during the contemporary period of urban-type with a high degree of polarisation, such as the commercial areas in Suceava (Chiriță, 2015) and its periurban area has triggered increased interactions with the metropolitan area as well as an expanding sphere of mutual influence between the two cities (Suceava and Botoșani). Thirdly, the improved efficiency of road and later railway connections between the two cities, following the refurbishment of the road linking Suceava and Botoșani and the shifts in the collective mind on the role of one's permanent residence in the periurban area have enabled the expansion of the urban residential function. Thus neighbourhoods of the municipalities have sprung up along this development axis, resulting in a quasi-continuous urban and urban-rural space, on either bank of the river Siret, in the paired metropolitan territory (metropolitan areas) Suceava-Botoșani. As a result, there is a conspicuous expansion of the residential, commercial, service and industrial into the periurban area of Suceava: new urban structures have emerged in Mereni and the town of Salcea; the village of Dumbrăveni has evolved into a locality with a marked urban profile; and an industrial area, in the periurban area of Suceava (Salcea town), has largely taken over the municipality's industrial function, as it now hosts important manufacturing and service businesses (energy, metalwork, construction materials, wood processing and food industry). Similarly, in the proximity of the city of Botoșani, the area Hudum-Agafton-Baisa has developed as an urban-type residential area and as recipient of urban services (warehouses, supermarkets).

This territorial dynamics of the metropolitan area has been determined by changing outlook on the Suceava-Botoșani territorial links. It has aimed, on the one hand, in the case of Botoșani municipality, to expand the agricultural products supply base for urban markets, while keeping supply sources from the east and the east-north, while for Suceava, it has led to the gradual diminishing of the role of the periurban structures of Salcea-Prelipca, Adâncata and Ipotești, in favour of those of Liteni and Stroești. These mutations were based on the role of periurban in industrial and service rebalancing.

### **3.2 The labour profile of the population in the metropolitan area**

The urban polarisation in the area under consideration has determined developments both in terms of population dynamics and especially as regards the share of agricultural land allotted to the supply periurban area, without however a considerable reduction of these land areas, as a significant part of the population continues to be employed in subsistence agriculture.

Most of the communes in the metropolitan areas association feature predominantly agricultural functions. Led by Bălușeni, where 83.15% of the population works in the primary sector, in a large majority of communes 50% of the population is registered as working in this sector. The exceptions are the county capitals and the town of Bucecea, where the percentage varies between 3% and 25%. The large number of people working in agriculture in Bălușeni commune is due to its specialization in animal breeding and the salutary presence there of two cooperatives and a Karakul sheep breeders association. As a matter of fact, the entire metropolitan area exhibits a trend towards association, at least in Botoșani county (18 different types of associative structures in agriculture in the communes of communes part of Botoșani MZ).

The differentiation in the share of the employed population can also be attributed to the communes' location in the plentiful agricultural area of the Siret river corridor, as they largely fit the profile specific to this physical-geographical unit (Vlădeni, Dumbrăveni, Siminicea, Verești, Hîntești, Mihai Eminescu).

In terms of their function in the agricultural system, lands are largely organised in associations, based on the large field crop, focused predominantly on cereal. While the Siret corridor, prior to the development of the non-agricultural economic functions, was among the key beetroot growing regions in the country, nowadays, after the decommissioning of sugar processing plant in Bucecea, it is an area focused primarily on cereal and secondarily fodder. The recomposed land ownership map and the development of an associative agricultural system and / or of large-surface farms complete the picture of the role of attractiveness and urban polarization in building a new type of rural-urban space, combining confluence and transfer.

The secondary sector is better represented in Botoșani, Bucecea and Salcea (over 25% of the population employed in the sector), displaying a defined agro-industrial status, whereas in almost half of the communes the share of the population employed in the secondary sector is below 15%. In Suceava there is greater number of communes with higher rates of employment in the secondary sector (Ipotești, Bosanci, Udești as well as Pătrăuți, Mitocu Dragomirnei and Hîntești), while in Botoșani this category includes only the communes of Mihai Eminescu and Roma. The map also highlights the existence of a series of communes with low ratios of residents employed in industry (below 5%). National statistics for the year 2015 indicate a notable gap between the Suceava and Botoșani counties in terms of the share of population working in the secondary sector, with the share of the population employed in the secondary sector being double in localities in the Botoșani City metropolitan area (18.29%), compared to localities in the metropolitan area of Suceava (9.54%). The same ratio is maintained for population in the secondary sector of the two municipalities of the metropolitan area, being respectively higher in Botoșani than in Suceava.

It is also worth noting that, in terms of the expansion of the economic functionality, most the rural localities examined are polarised mainly by the municipalities of



Suceava ('OPUS' Potential Urban Strategic Horizon regional hub, with a specific function) and Botoşani ('OPUS'), in addition to a number of rural settlements that play a micro-regional polarisation role. The latter includes a limited number of localities that have polarising functions, owing to earlier trade sites, some of which predate the entry into the sphere of influence of the municipalities. As a result, other periurban localities were favoured in the development of polarising structures by the establishment of raw agricultural materials processing industries, as was the case for Şcheia and Sfântu Ilie polarised by Suceava or Răchiţi, polarised by Botoşani.

The second category includes settlements which developed in exacerbated manner during the communist period, in order to capitalise on the surplus manpower accumulated in certain localities with residential (dormitory villages), generated by the "closed-town policy", as was the case of Cătămărăşti Deal village (part of Mihai Eminescu commune) in the north-western proximity of the municipality of Botoşani.

With respect to employment in the tertiary sector too, statistics record a higher share of the population for settlements in Suceava MZ compared to Botoşani (42.48% vs. 21.74%), while the rate exceeds 50% in the two county capitals. Very high shares of tertiary sector employment, compared to the larger metropolitan area, are found in communes to the west of city of Botoşani (35%) than in the periurban area of Suceava, where, except for the Ipoteşti commune, rates are below 35% of the total.

There have been several reasons for the concentration in the north-eastern part of Suceava municipality of a particularly high number of commercial properties. First, the conversion of former industrial areas to commercial property in Suceava resulted in about 40 ha of commercial space and the potential to polarise, via services, the population of Botoşani, which, in 2008-2010, had no such sites.

In conclusion, one may argue that most of the communes of AMZ (Association of the Metropolitan Zones) or the metropolitan territory feature a high share values of population employed in the primary sector, with only a few (Bucecea, Vlădeni, Mihai Eminescu and Ipoteşti) with a higher share of employment in the tertiary sector, while in the towns of Bucecea and Salcea more than 30% of the population is employed in the secondary sector.

One can also note the grouping of southern communes (Bosanci, Udeşti, Vereşti, Dumbrăveni in Suceava county), with modest shares of employment in the tertiary sector, and those along the eastern flank (below 20%), compared to other communes to the north and west, where the share of the population in the secondary sector and partly in the tertiary sector is predominantly above 20%. A number of rural or predominantly rural areas, such as Salcea and Dumbrăveni are marked by notable differences in the share of their population employed in tertiary and secondary, although they are adjacent. Dumbrăveni, Vereşti, Siminicea localities, on the eastern border of the county of Suceava, behave more like the communes Vlădeni and Curteşti in Botoşani than those in the periurban area of

Suceava. This structure of the employed population in the Suceava - Botoşani metropolitan territories is a consequence of predominant development of the tertiary sector, especially in the proximity of the major communication axes, e.g. Suceava - Botoşani (Vlădeni and Curteşti) or Salcea and Siminicea, and is also a reflection of agricultural industry traditions existing in Salcea and Bucecea, favourable to the growth of the secondary sector.

Differences between the administrative territorial units in Suceava and Botoşani AMZ are the consequence of a certain local functional dynamics, of distances from the main transport axes and of traditions in functional use of land resources. These may all serve as the basis for analysis and references in developing metropolitan-type structures and local development projects integrated with the metropolitan-type territorial setup (Săgeată, 2011, Groza 2003).

### **3.3 The level of development of the territorial system of the metropolitan area**

In order to assess as accurately as possible the development status of Suceava-Botoşani metropolitan area two composite indicators (composite statistical indicators) were selected, in order to optimally reflect and quantify the reality of growth in the area under examination: the local human development index (LHDI) and the composite indicator assessing the potential socio-economic development and ranking of municipalities (CI).

#### **3.3.1 Assessing the level of development using the local human development index**

Local human development index (LHDI) includes indicators for the human and physical capital of settlements. It was proposed by sociologist Dumitru Sandu and developed over two successive projects of the World Bank. Technically, the index measures the total capital of localities, considered in terms of human capital, health and assets. The first three dimensions of capital stock are estimated using a single indicator. Physical capital, the fourth dimension, is computed as a factorial score of three quality of life indicators related to local housing size (habitable area per residence), private cars per 1000 inhabitants and gas distributed for domestic consumption per capita.

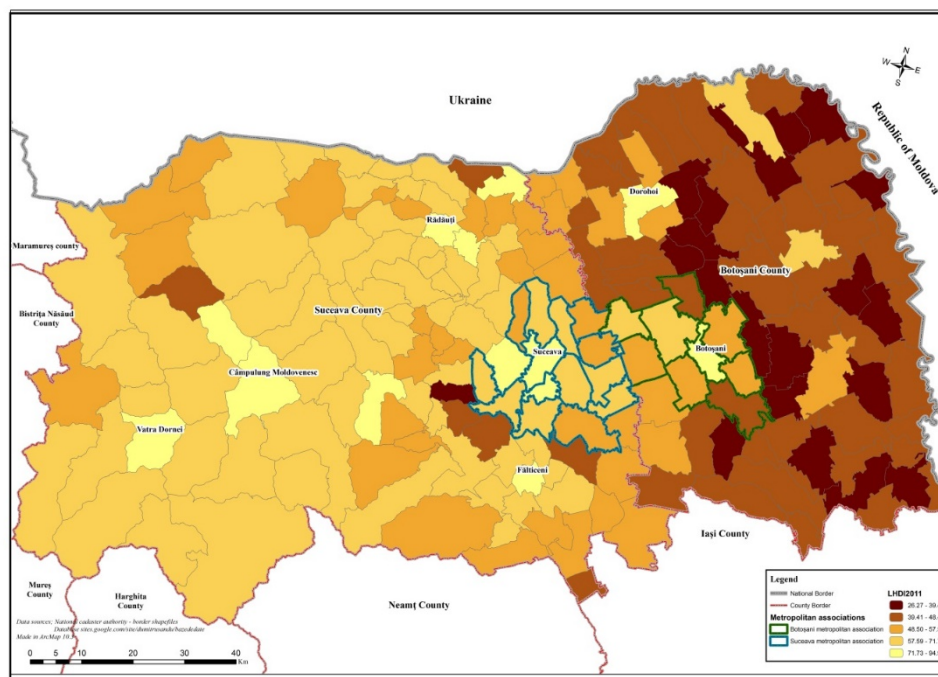
A new factorial score aggregates the values of the four indicators that estimate community capital dimensions. A major advantage of LHDI is that it allows comparisons with very different territorial units, urban areas (under 30,000 inhabitants) and rural, whether large or small.

This study focuses on 4 towns and 18 villages for which the human development index was computed. The analysed communities, regardless of their size, differ not only by the level, but also by the type of development. A village, for example, is developed comprehensively, against the national benchmarks, if it has high a stock of all five dimensions of community capital (education, housing, employment, the size of the working age population and the mobility experience of its population).

The index findings are different in metropolitan areas of the two cities compared to other communes of the two districts.

A first category includes most developed localities of the metropolitan area. This covers primarily the Botoșani and Suceava municipalities, which benefit from the presence of all categories of social and cultural services, with a balancing and polarisation role at county and regional level.

The category also includes Ipotești commune in Suceava county, a large locality that benefits from urban facilities and recently from local entrepreneurship. Not coincidentally, this locality is listed in the same category as the county capital cities, as it has taken over part of the residential function of Suceava and boasts the highest number of building permits over the last decade. According to the ranking produced by the World Bank in 2015, summarised in *The Atlas of Rural Marginalised Areas and of Local Human Development in Romania*, three villages in the commune of Ipotești rank among communities with the highest development in Suceava (comprehensive development): the main village of Ipotești and villages of Lisaura and Țibănești.



**Figure 2** The LHD2011 spreading in Suceava and Botoșani Counties at levels of the Territorial Administrative Units

Most of the localities ranked in the second tier of the LHD2011 form the periurban crowns of the two county capitals: Mitocu Dragomirnei, Adâncata, the town Salcea, Bosanci and Moara. Only the commune Stroești exceeds slightly this status, given that it is located along one of the most important transport axes towards the west of the county of Suceava. It follows that those two categories of

polarising influences of the county capital cities, centripetal and centrifugal, are manifested not only in population mobility but also in the adoption, to a large extent, of the industrial, warehousing and residential functions by the periurban space (Bosanci and Ipotești for Suceava; Mihai Eminescu for north Botoșani – Mihai Eminescu).

The third category comprises communes situated in areas with a high share of the population employed in the primary sector, as the share of arable agricultural land (Răchiți, Stăuceni) and of forest areas (Pătrăuți) is very high, above 70%, while the share of the population in the tertiary sector is low, below 15% (Hânțești, Răchiți, Stăuceni, Bălușeni, Curtești). Communes at this level constitute the marginal areas of the metropolitan areas.

A final category consists of the communes Bălușeni and Roma, both in Botoșani county, where, although economic activity is present (meat processing in Bălușeni, while Rome features a slaughterhouse, textile factory, several agricultural companies and a furniture factory), the high mortality and population aging drive down the LHDI values.

Most of the administrative territorial units in the analysed areas fall within the mean range, confirming their role in the structural and functional development of the AMZ territorial metropolitan setup. Both for Suceava and Botoșani, this geographical space is strongly concentrated on development, based on an urban-rural type of polarising area, given its status of official residential urban area, complemented by industrial functionality and the existence of warehouses. There are no less than 54 projects proposed with the aim of developing the metropolitan area of Suceava, which could therefore be included among first-tier urban projects (new access routes between Botoșani and Suceava, such as high-speed trains; building a shared sports centre, probably in Salcea; creating periurban transport hubs that should constitute secondary polarisation areas outside the built-up areas of localities; integrated public transport systems etc.).

### **3.3.2 Assessing the socio-economic development potential of the communes in the territorial system**

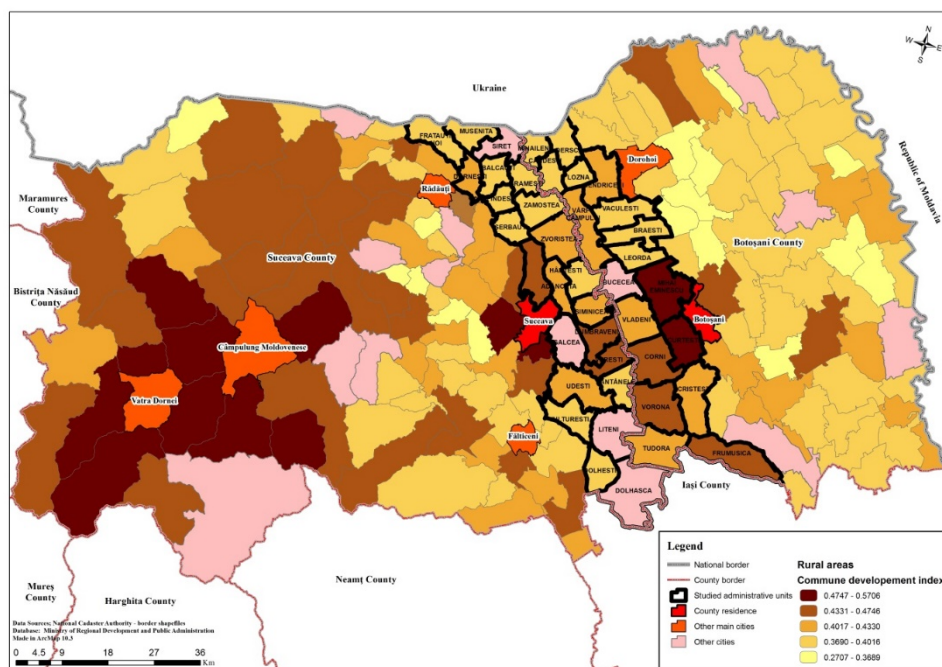
To determine the socio-economic development potential of communes in the analysed area a complex indicator was employed, designed as a study on determining the socio-economic development potential of rural areas, conducted by the Academy of Economic Studies in Bucharest in 2014. In order to determine the development indicator for communes and ensure the accuracy of the findings, the authors used 5 criteria: endogenous potential (PEND), physical-geographical factors (FGEO), economic activities (AECO), urban infrastructure (EEDIL) and human potential (PUMAN).

The territorial demarcation of the Suceava and Botoșani metropolitan area is largely conventional, because, in many respects, it falls geographically, for the most part, within the territory of the Siret river corridor, with particular socioeconomic features both in Suceava and Botoșani county. On both sides of the

corridor, in the analysed communities one notices gradual changes specific to the socio-economic framework of Suceava Plateau and, partly, the Western Moldavian Plain. For this reason, it is deemed necessary to extend the AMZ analysis to the overall Siret corridor in the two counties and to compare the figures of the composite indicator of communities belonging to the metropolitan areas with those of localities elsewhere in Siret corridor within the two counties.

The largest part of the indicators analysed and mapped reveal notable differences between the administrative territorial units in Suceava county and those in Botoşani county, even though Siret river corridor stands out with a specific behaviour, with key differences along the north-south axis and less across, from west to east.

For municipalities examined, the values of the partial indicators and composite one (CDI), are presented in the cartograms below.



**Figure 3** The spreading of the Commune Development Index (CDI) of Suceava and Botoşani counties at levels of the Territorial Administratives Units.

A first category of figures includes administrative units located to the west of Botoşani - Mihai Eminescu and Curteşti, on account of the high human potential (Mihai Eminescu) and the considerable economic potential (large number of businesses in Mihai Eminescu and Curteşti). These values of the development indicator are also the result of a strong correlation to the presence of urban element and major communication paths.

The second category comprises 6 rural administrative units in the MZ, most of them in Suceava county. They delineate a north-south axis, one either side of



Suceava municipality (Pătrăuți, Mitocu Dragomirnei, Ipotești, Bosanci) or within the Siret river corridor (Dumbrăveni and Verești); particularly relevant here being the high values of PUMAN indicator, at least for Ipotești and Bosanci and partly for the others. The values of the economic indicator are high in most of the communes previously mentioned. The puzzle generated by the mapping of the CI is supplemented by the subsequent categories, covering an area demarcated by the towns of Bucecea and Salcea as well as the communes of Vlădeni, Siminicea and Adâncata. The physical-geographical potential and the endogenous potential exercise a secondary role in ascertaining the major categories of the indicator categories, yet are an important causal element for the communes of Mitocu Dragomirnei and Pătrăuți, Dumbrăveni and Verești. Conversely, the PUMAN and AECO indicators play a decisive role in establishing hierarchies overall in the Association of metropolitan areas.

Accordingly, the communes of Mihai Eminescu, Dumbrăveni, Ipotești, Bosanci and Moara fall into the category of administrative territorial units with a significant share of the population that has returned after migration abroad, either temporarily, make investments, or permanently. All these localities benefit from very efficient connections to higher tier urban centres, such as Suceava and Botoșani municipalities. As for the town of Bucecea, its urban features have diminished considerably, in contrast to Salcea, which has developed a different relationship with Suceava due to the presence of elite services, intended largely for consumers from urban areas (airport, light industry, food industry, the planned Bukovina Business Centre, a potential future technology park). "Stefan cel Mare" airport from Salcea (serving both communities of Suceava MZ and Botoșani MZ is second to the airport in Iași in terms of infrastructure for direct international flights, featuring the latest facilities for landing in fog.

The direct correspondence between socioeconomic and land development indicators taken into account and the values of the composite indicator lead to the conclusion that the territory of the examined metropolitan area association has good prospects as a future complex regional development hub, functional while bipolar: Suceava-Botoșani. The analysis carried out has provided a picture of the interplays between existing urban functional structures and the adjacent rural areas, anchoring the future development of criteria grouping communities / administrative territorial units in metropolitan areas as follows:

1. *by position*, the communes which were declared towns in 2004, justify their membership of the MZAs not so much in terms of economic function, but rather because of their position, and do not rank high according to the CI;
2. *proximity* is a criterion which groups communes with high development level, following the expansion of urban functional structures into rural areas, as is the case for Bosanci, Ipotești, Mihai Eminescu, Curtești, Moara;
3. *development potential and the strategic development vision* brings together communes within the 45-minute isochrone from the county capital cities, with significant accumulation of potential population, natural, resource and land assets.



This will enable their optimal future integration into metropolitan areas, through joint projects with the municipalities or as areas of polarisation, benefiting either from major transport axes on their territory (Verești, Stroești) or from the capacity for functional integration with the broader MZ (Siminicea, Răchiți, Curtești).

#### **4 Conclusions**

Metropolitan areas have been established as a result of the individualisation of the need for a support space for the development of urban settlements, which have come to the fore in the national and regional network of settlements thanks to substantial economic development. This new level of development is a major challenge for policy makers, as they must identify those territorial management systems capable to further key development objectives in a new territorial context.

The aspects presented in this study provide part of the picture of a highly complex reality. Although we aimed to identify common points in the development of communities in the territorial system Suceava-Botoșani, development peculiarities related to geo-demographic differences are the result of local variables that can rarely be controlled from the outside. Ultimately, the differences between the communes in the metropolitan areas analysed are due to the urban elements, workforce and resources leveraged for development purposes, while similarities mostly concern the economic side.

The periurban character of localities is manifest at the level of services provided by the city and less by their function of agricultural supply to the city. What is at stake, both for Suceava and Botoșani, is rather an expansion of the urban into rural areas, as the periurban becomes a more prominent migration reservoir than other rural localities in the county.

Villages located along key development axes no longer expand their agricultural function, in favour of services or of communication connections with proximate cities. In other words, most of the population is focused on territorial mobility and emigration in search of other sources outside agriculture.

#### **5 Acknowledgement**

The authors gratefully acknowledge to Mr. Iulian Axinciuc, B.A., M.A.degree graduated of the GIS and territorial planning from University of Suceava, from the Pedological Office of Botosani, for connection with statistical realities of the Botosani County, in obtaining the necessary data and the cartographic materials elaboration in development the present study.

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