

# THE NEED OF HARMONISING THE ADMINISTRATIVE AND THE FUNCTIONAL METROPOLITAN AREA: THE CASE OF BELGRADE

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**The aim of this paper is to highlight the lack of correspondence between the administrative borders of the Belgrade region on the one hand, and its functional gravitational area, on the other. The paper seeks to define the boundaries of the functional area of Belgrade using several available criteria, where the key one is the body of data on the daily commuting of the employed population, students and pupils. In Serbia, commuting was taken into consideration as a criterion for delimiting urban areas, or an instrument in planning and achieving a decentralised and balanced regional development only in the most recent generation of spatial plans. Compared to the boundaries of the functional area, the current, inadequate, administrative boundaries of the Belgrade region reveal problems in the consolidation of the metropolitan region and they have a negative effect on the planning of this area, as well as on the territorial cohesion in Serbia.**

**Key words:** metropolitan, commuters, functional gravitation, spatial harmonisation, Belgrade.

## INTRODUCTION

Belgrade has always been a driver of development and prosperity in Serbia. It is beyond any doubt that Belgrade, with its administrative area, has a much stronger regional potential at various levels – international, national or regional – than it used to have in the past. The reasons for this may be found in external factors. Some drawbacks of the regional territory of Belgrade have to do with political circumstances, particularly those in the last decade of the twentieth century (the civil war and the disintegration of the former Yugoslavia, as well as the embargo imposed on our country by some members of the international community). First of all, the city's economic resources were exhausted, it was functionally disoriented, weakened, as there were no investments whatsoever from national or international financial sources. Those circumstances had direct repercussions on the territory of Belgrade and Serbia.

One of the key development factors in the Belgrade area would be to define its administrative boundaries appropriately. Throughout history, the boundaries of Belgrade's administrative area were conceptualised following different principles and objectives without a

clear scientific elaboration and methodological base. The changes of administrative boundaries, especially in the 20<sup>th</sup> century, are considered to be a factor that has not only affected the city's development, but also its importance for the regional development of the national territory and its role in determining the centralisation level or the polycentricity index, etc., as compared to international urban centres. Although it is quite clear that it is difficult to outline administrative and functional boundaries along the same lines, the lack of coherence between them may cause multiple problems in spatial planning (Andersen, 2002).

As it has already been pointed out in theory<sup>2</sup> and practice, defining a metropolitan territorial unit within its administrative boundaries should be based on the concept of nodal regionalisation. In modern spatial planning, functional urban areas are recognised as an instrument of a balanced regional development. In the analysis of the gravitational impact, the most commonly used indicators are those related to population movements. In urban geography studies, population movements within an area of gravitational influence are expressed quantitatively through the share of commuters in the employed population of a settlement or in the total number of daily incoming commuters of the analysed city.

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<sup>2</sup>Vresk, 2002; Tošić *et al.*, 2009; Tošić, 2012; Veljković, 1998.

The Administrative Area of Belgrade, which is in formal legislative terms called the "City of Belgrade" (CoB), covers Belgrade (settlement), with its ten city municipalities, and seven municipalities added to this area, thereby becoming city municipalities. However, the CoB has been defined with the purpose of solving numerous problems and it follows the territorial boundaries of municipalities, particularly along the boundary of the Autonomous Province of Vojvodina (as a subnational macro-region to the north of Serbia); it has not been based on demographic, socioeconomic, spatial and functional components and indicators. Also, commuting was not used as a criterion in defining the CoB.

## PREVIOUS RESEARCH

There are various methods for defining nodal regions or urban gravitational areas, no matter whether they refer to metropolitan regions or medium-size cities which have a role of regional centres at a national level.

The first scientific explanations of the position of cities in spatial-functional entities appeared in the second half of the nineteenth century and the beginning of the twentieth century. In the previous phases of development, nodal character was considered to be a result or a sum of interactions that occurred between a node and other nodes in space (Haggett, 1972). Under the influence of Berry (1967), Garrison (1956), Pred (1977), and particularly the Oxford School of Human Geography, nodality was determined based on the "threshold" of the minimum of functions concentrated in a settlement and the number and the maximum distance of their users (Tošić, 2012). Indicators of population mobility were introduced in scholarly literature as daily urban systems (Berry, 1967) and the concept was defined as an area around the city where convergent commuting occurred (Bourne, 1975), or a space that faced intensive population mobility between the place of residence and the place of other socio-geographic functions (Goodal, 1987). Since the mid-twentieth century, some characteristics of these migrations have had a multiple impact, which has been relevant for the study of European and global relations (Gottmann, 1961; Hall *et al.*, 1973; Boustdet, 1953; Coombes *et al.*, 1988; Green *et al.*, 1986; Karlsson and Olsson, 1999; Andersen, 2002; Aguilera, 2005; Artis *et al.*, 2000; Willis 2010). In the Western Balkans context, Vresk (1994) identified two types of the impact zones of a city based on the metropolitan area of Zagreb: the first with more than 50% and the second, wider one, with more than 20% of commuters in the total employed population.

As far as the countries outside the European continent are concerned, the identification of urban systems has been undertaken systematically in the USA, where the territory was divided into 171 urban systems (Berry, 1973) based on the level of development of labour and commuting functions. By the end of the twentieth century, various indicators for defining the urban area were used. Other classifications of the US urban systems are reported in Killian and Tolbert (1993), and Tolbert and Sizer (1996), "where the US is divided into commuting areas and labour market areas." Also, it has long been posited that the best rural development strategy may be urban development, as

rural areas can benefit from nearby urban agglomerations through commuting (Berry, 1970; Henry *et al.*, 1997; Moss *et al.*, 2004; Partridge *et al.*, 2007; Polèse and Shearmur, 2006; Shearmur and Polèse, 2007). The impact of spatial planning on workers' commuting time was examined on the example of Chinese cities (Zhao and Lü, 2009).

In Serbia, the body of knowledge on population migrations and commuting presented in academic discussions and papers is partial – both spatially and thematically, and studies dealing with this topic are scarce and usually lacking in accuracy (Stamenković and Gatarić, 2009; Lukić, 2006).

In Serbian geography and demography, the phenomenon of commuting is not taken into consideration when determining the impact zones of a settlement. It is also true that relevant statistical data for this type of research were missing until the 1981 Census. Due to this, surveys were used as a data source. They were not comprehensive and their results were too limited in scope to enable the understanding of functional and spatial relations in the studied territories.

Also, daily urban systems have been used as instruments in planning and implementing a decentralised and balanced development of Serbia or its sub-entities only since a few years ago, when the latest generation of regional spatial plans and the national spatial plan were developed. In the current national spatial plan, as of 2010, functional areas are treated in accordance with the EU practice: as functional urban areas determined taking commuting into account. However, the analysis was not performed at the settlement level, but rather at the municipal level. It should be borne in mind that municipalities in Serbia are among the largest, in terms of size and population, in Europe (507.8 km<sup>2</sup> and 43,000 inhabitants on average).

## ADMINISTRATIVE CHANGES OF THE COB

In the Kingdom of Serbia, in the early 20<sup>th</sup> century, the surroundings of Belgrade had the status of an autonomous administrative unit, as a district of Belgrade with 697,000 inhabitants and an area of 2,025 km<sup>2</sup>.

After World War I, the Kingdom of the Serbs, Croats and Slovenes, subsequently the Kingdom of Yugoslavia (from 1929), was established and Belgrade became the capital, losing its boundary position due to the integration of the province of Vojvodina (which had previously been part of the Austro-Hungarian Empire). This enabled a more balanced development of the city that extended on both sides of what had previously been the border-rivers – the Danube and the Sava, and not only to the south, to the hilly Šumadija region, but also to the west, to the Srem and Banat plains in Vojvodina. Before World War II, two towns in Vojvodina – Zemun and Pančevo, were integrated in the Belgrade capital administrative region.

However, after World War II, the idea of establishing physical links between Belgrade and Zemun was put into practice through urban planning schemes, by drying the wetlands that had covered the area between the two cities and creating new land for construction. In the early 1960s, the enlargement of what was then the CoB was accomplished by the inclusion of four southern municipalities into the

urban area. On the other hand, Pančevo (a town to the northeast, within a 15-kilometer distance from Belgrade) and its municipality area were excluded from the CoB. Although Pančevo was strongly linked with Belgrade in various development aspects, it became an isolated urban settlement. Finally, in 1970, the CoB got its present form with the inclusion of another two municipalities, located in Šumadija, to the south.

Nowadays, the CoB contains 17 city municipalities. According to the results of the most recent population census in Serbia (2011), it had an area of 3,222 km<sup>2</sup>, a population of 1,639,121 in 157 settlements, whereas Belgrade had 1,166,763 inhabitants.

The reasons for the enlargement of the CoB were numerous. The inclusion of a small territory in Banat, located on the north bank of the Danube River, was done in order to solve the problem of food supply in the city, since the fertile plain hosted large areas of agricultural land and food industry. On the other hand, beyond some political reasons, Zemun was included in the CoB due to the fact that the civil airport in Surčin and the military airport in Batajnica were on the territory of this municipality. The issue of water supply was solved by the inclusion of the Sava riverside. The issue of electricity supply was solved by the inclusion of two municipalities on the territory of Šumadija. The resulting administrative metropolitan area was a result of political decisions made in the period when it was formed, and it does not correspond to the concept of a functional and metropolitan urban area. The strengthening of the legal rights of autonomous provinces prevented a northward enlargement of the CoB, into Vojvodina (Bojović, 1999).

With the new territorial organisation of the Republic of Serbia (2007), the City of Belgrade (CoB) – within the boundaries outlined above: the inner urban area<sup>3</sup> with the Belgrade region, i.e. the defined administrative area – were granted the status of an autonomous macro-region (corresponding to the level of NUTS 2 in the European nomenclature of statistical territorial units). By the Law on Regional Development in 2009, four other regions were defined, apart from the Region of Belgrade, without further implementation. With the Law on the Capital City, adopted in 2008, this area was granted a degree of autonomy in the Republic of Serbia. The Law defines its responsibilities, territorial organisation, organisation of public services and institutions, forms of direct participation of citizens, as well as other issues relevant to the rights and obligations of the CoB. The City has the right to create its development policy and to apply for European funds with the aim of improving cohesion, competition and cooperation, so as to achieve a more balanced development, a better structural organisation and an improved social infrastructure. As far as the management of spatial planning is concerned, the city's municipal responsibilities are reduced significantly on the territory of the CoB<sup>4</sup>, compared to other local governments

<sup>3</sup> The inner urban area is the territory that encompasses Belgrade (settlement), its ten city municipalities, as well as 26 neighbouring settlements that belong to these city municipalities.

<sup>4</sup> City municipalities are not local self-government units. The CoB is the only self-government unit. (The Statute of the City of Belgrade, Official Gazette of the City of Belgrade, No. 39/08).

in Serbia. Among other things, this hinders the adoption of spatial and urban plans.

## THE BOUNDARIES OF THE COB IN THE PLANNING DOCUMENTS OF SERBIA

In order to show the complexity of this problem and clarify points relevant to defining the CoB, we will quote some solutions proposed in planning documents – urban plans of Belgrade and regional spatial plans of the CoB, as well as national spatial plans in different periods:

1. Belgrade's urban region defined in the *1950 Master plan* (GUP – General Urban Plan) of Belgrade covered a wide area of Banat, including Pančevo, as well as parts of Srem and Šumadija, and it had a territory of 200,841 ha. The urban region defined in this document has never been established in practice, particularly as regards the large area located on the left bank of the Danube River, in Banat (Stepić, 2003).

2. In the *1972 Master plan* (GUP), the wider and the inner gravitational zones of influence were defined, but the administrative area corresponded to its today's counterpart, with the exception of two municipalities in Šumadija, to the south. In the 1972 GUP, it was stressed that the area located on the left bank of the Danube River, in Vojvodina, was not activated due to natural reserves, which were not suitable for settlement. The attitude and action of the Autonomous Province of Vojvodina did not allow Belgrade's expansion and development on the other side of the Danube (Stojkov and Tošić, 2003). It is indicative that the urban entity and municipality of Pančevo in Vojvodina, to the northeast of Belgrade, retained its boundary position, while maintaining strong economic and intensive commuting links with the Belgrade agglomeration (Derić and Smiljanić, 2004).

3. The most recent *Master plan* (GUP) of Belgrade, adopted in 2003, is focused only on the inner urban area, covering 72,602 ha.

4. The working materials drafted in 1975 while preparing a plan that was eventually not adopted (Šećerov, 2012) sought to determine the functional region of Belgrade, though in a framework considerably wider than that delimited by the present administrative boundaries. It was supposed to include 44 municipalities from the surroundings of Belgrade. The plan according to which Belgrade was to cover such a wide area, defined in this way, has never been put in practice, principally for political reasons. In the 1960s, Belgrade entered the post-industrial phase with the development of tertiary and quaternary sector activities. In the 1970s, the policy largely destroyed the tertiary sector inside the City, while the official attitude towards individual business led to the "expulsion" of small enterprises, which would further form an economic base for the surrounding centres in Vojvodina and create better conditions for business and entrepreneurship in that area. In this way, Belgrade also influenced the urbanisation of the neighbouring Srem area in Vojvodina. State interventions in the planning of the construction of chemical industry facilities in Pančevo, which served the needs of the capital city, resulted in stronger economic ties between the two cities, which were for decades forced to be separated by administrative boundaries. The boundaries between

Belgrade and Vojvodina still hinder the development of the city's functional area (Bojović and Borovnica, 1998).

5. Another option for defining Belgrade's metropolitan area, which may be considered as the functional area, was presented in the *2004 Regional Spatial Plan of the Administrative Area of the City of Belgrade* (revised in 2011). Seven bordering municipalities were identified, as well as the municipality of Ruma in Srem, in Vojvodina (nine municipalities in the revised plan).

6. The *1996 Spatial Plan of the Republic of Serbia* defined six macro-regional centres in Serbia and indicated potential areas of their influence. According to Serbian scholarly and professional circles, Belgrade's zone of influence was unjustifiably expanded to the east and to the west, so as to coincide with Serbia's international borders. To the north and to the south, the boundaries ran along the lines separating Belgrade's zone of influence from those of the cities of Novi Sad and Kragujevac.

7. The current *Spatial Plan of the Republic of Serbia 2010–2020* contains proposals related to functional urban areas. The extent of functional urban areas (FUA) was determined based on commuting in municipalities and criteria that take into account demographic factors, the level of urbanisation, the share of population working in agriculture, etc. Belgrade is identified as the centre of international importance corresponding to the category of MEGA 4<sup>5</sup> (potentially MEGA 3) that should encompass additional six units of local self-government in the territory of Vojvodina.

The Programme of Implementation of the Spatial Plan of the Republic of Serbia presents the concept of an information system for monitoring and evaluation of spatial development at the national level. The theme "spatial planning" includes a package "spatial structures", which should contain data about FUA and MEGA in Serbia. Data processing within the spatial development information system could be useful for decision and policy makers in the domain of spatial planning and this could also lead to a better and more appropriate defining of the *Belgrade metropolitan area*.

#### CRITERIA FOR DEFINING THE METROPOLITAN AREA OF THE COB

Based on available data and knowledge and taking into account the results of international and national scholarly studies and planning documents (Vresk, 2002), the results of a comprehensive analysis of convergent commuting between urban centres, the level of urbanisation and functional transformation of settlements in their surroundings and the necessary travelling time using transport networks (i.e. the distance between settlements), the following relevant, necessary and sufficient criteria that should be taken into consideration in defining the metropolitan area of the CoB have been identified:

1. the share of convergent commuting to Belgrade from the surrounding settlements (within or outside the CoB);
2. the share of agricultural population in the settlements; and

<sup>5</sup> MEGA – Metropolitan European Growth Area in accordance with the ESPON 1.1.1 project

3. the distance between the settlements and Belgrade.

Several indicators are used in identifying functional gravitational areas and "...two of them should be particularly highlighted: daily movement of employees and the share of non-agricultural population. They are taken into account in most models used in identifying functional areas" (Vresk, 2002).

Table 1. Criteria for determining Belgrade's gravitational zones of influence

CoB - settlement	Share of commuters in active population	Share of agricultural population in active population	Distance in km
			(time necessary to commute)
<b>I zone</b>	≥ 50%	≤ 25%	≤ 20 (to 30 min.)
<b>II zone</b>	30-49%	26-50%	21-40 (to 60 min.)
<b>III zone</b>	10-29%	26-50%	41-60 (to 90 min.)
<b>IV zone</b>	two conditions fulfilled		
<b>V zone</b>	one condition fulfilled		

Source: the original author's method

Five gravitational zones of influence are identified taking into account the share of commuters from the surrounding settlements in the active population, the share of agricultural population in the active population, and the distance of settlements from Belgrade (Table 1 and Figure 1).

In the area covered by the five zones, there are 248 settlements: 156 (63.4%) belong to the CoB, while 92 (36.6%) are outside the CoB – in the province of Vojvodina (79 settlements) and in Central Serbia (13 settlements).

The passages to follow present an analysis of Belgrade's surroundings taking into account all of the cited criteria in order to define the Belgrade metropolitan area. This type of research was first made possible after the Census of 2002. However, census data required special processing.

The territory of Serbia is extremely polarised, especially due to the role of Belgrade. This is confirmed by the fact that Belgrade is the commuting destination for 13.9% of total commuters in Serbia.<sup>6</sup>

As far as commuting inside Belgrade (settlement) is concerned, 340,149 inhabitants commute on a daily basis between the place of residence and the place of work, the place of residence and the place of education, and *vice versa*. The number of people involved in convergent commuting to Belgrade is 108,046, which makes one-fifth of Belgrade's active population (21.58%), and they mostly come from settlements within the CoB. On the other hand, 16,732 people commute in the opposite direction (leaving Belgrade) daily.

Almost 50,000 people from 26 settlements located in city municipalities whose territory partially belongs to Belgrade's inner urban area (Čukarica, Voždovac, Palilula and Zemun) commute on a daily basis. There are 41,580 people commuting on a daily basis from the outer city municipalities of the CoB towards Belgrade. Out of 13,480

<sup>6</sup> The number of commuters whose destination is Belgrade is analyzed in this paper in relation to the total active population of the settlement of residence; the agricultural population was excluded since they do not commute.

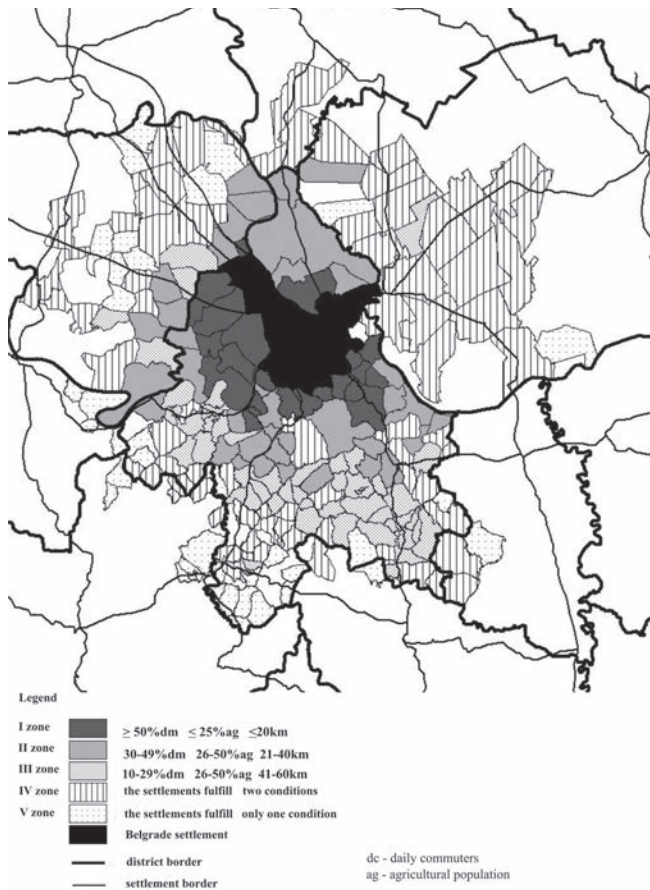


Figure 1. The zones of Belgrade's gravitational influence<sup>7</sup>

(Source: Specially processed data, Statistical Office of the Republic of Serbia)

commuters from the north who travel daily from the territory of the Autonomous Province of Vojvodina towards Belgrade, more than a half have the place of residence in the Municipality of Stara Pazova (to the northwest of Belgrade on the way to Novi Sad), the village of Pećinci and the town of Pančevo (with more than 1,000 commuters each). A small share of commuters (3.28%) come from the territory of Central Serbia outside the CoB (Table 2).

Along with the hindering effect of the boundaries towards the province of Vojvodina, the gravitational influence of Belgrade is weaker in the northwest due to the impact of the second largest city in Serbia – Novi Sad, located at an 80 kilometre distance from Belgrade. Although Novi Sad is more than five times smaller in terms of population, the

<sup>7</sup> All settlements that belong to Belgrade's convergent commuting system have been analyzed, as they constitute a continuous entity; the settlements in which there are no commuters to Belgrade have not been analyzed within the framework of Zone IV, although they meet the conditions related to the other two criteria.

number of convergent commuters to that central settlement equals a half of convergent commuters to Belgrade. Several settlements that are closer to Belgrade have far more commuters to Novi Sad than to Belgrade. On the other hand, the presence of power facilities to the southwest and south of Belgrade – a thermal power station at only 30 km and a mining complex at only 50 km from Belgrade, largely enabled local employment and reduced the intensity of commuting to Belgrade. The cited reasons, including the relatively unsatisfactory accessibility to Belgrade from the south, have contributed to an increased share of rural commuters to municipal centres in the periphery of the CoB. The convergent commuting system may be divided into several zones by grouping the territories of settlements that have similar migration characteristics defined based on the intensity of commuting (Figure 2):

1. the zone of intensive influence, where more than 70% of the active population commute on a daily basis to Belgrade, from 19 settlements;
2. the zone of strong influence, where 50–70% of the active population commute on a daily basis to Belgrade, from 26 settlements;
3. the zone of medium influence, where 30–49% of the active population commute on a daily basis, from 40 settlements;
4. the areas of weak influence, where 10–29% of the active population commute to work centres on a daily basis, from 61 settlements;
5. the periphery of the commuting system, where less than 10% of the active population commute on a daily basis to Belgrade, from 102 settlements.

The decline of agricultural population in the active population of the settlements surrounding other towns in Serbia has often been used as an additional criterion in determining the zones of gravitational influence of towns. This indicator began to be used as soon as data were available and it has been considered as the key indicator of settlements' functional characteristics and the level of their territorial development. The share of agricultural population, as well as its changes, can be brought into a relationship with the degree of urbanity of a settlement and the process of urbanisation. These data indirectly outline the boundaries of the areas of cities' gravitational influence, as they largely depend on the extent of population movements, i.e. convergent daily commuting.

The process of deagrarization between 1981 and 2011 was intensive in the CoB, but also in other parts of Serbia. It was even more intense in the 1960s and 1970s, in the period of intensive industrialisation.

Table 2. Belgrade's convergent commuting system

Place of residence of commuters	CoB	Inner	Outer	Wider area of influence outside the CoB	Settlements of Central Serbia outside the CoB	Settlements in Vojvodina	Total
		periurban area	periurban area				
Number of commuters	<b>90,908</b>	49,327	41,581	<b>17,141</b>	3,659	13,482	<b>108,049</b>
Share in total number of commuters in %	<b>84.23</b>	45.71	38.52	<b>15.77</b>	3.28	12.49	<b>100</b>

Source: Specially processed data, Statistical Office of the Republic of Serbia

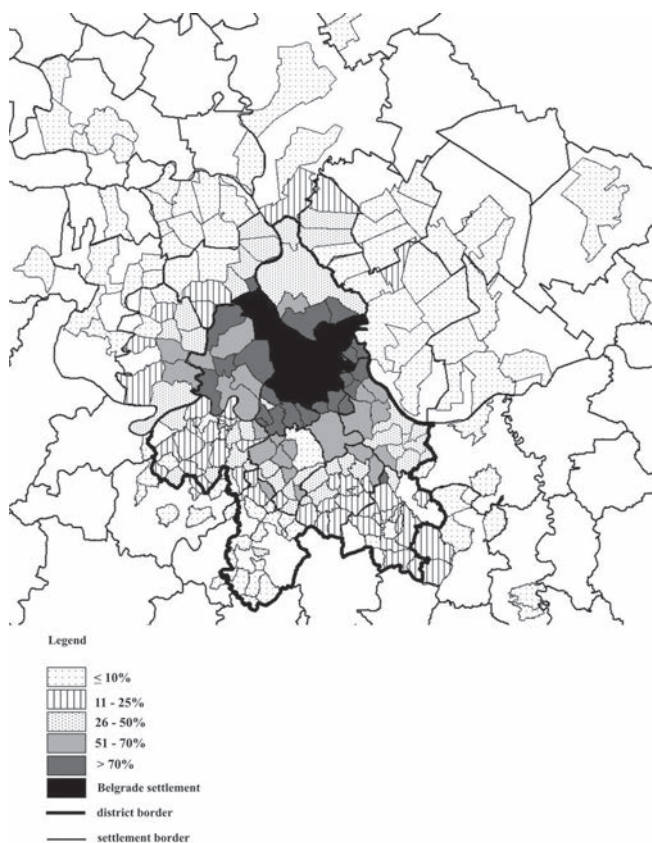


Figure 2. Belgrade's convergent commuting system (the share of commuters to Belgrade in the total active population of the settlements) (Source: Specially processed data and Census of Population – Activities, Statistical Office of the Republic of Serbia)

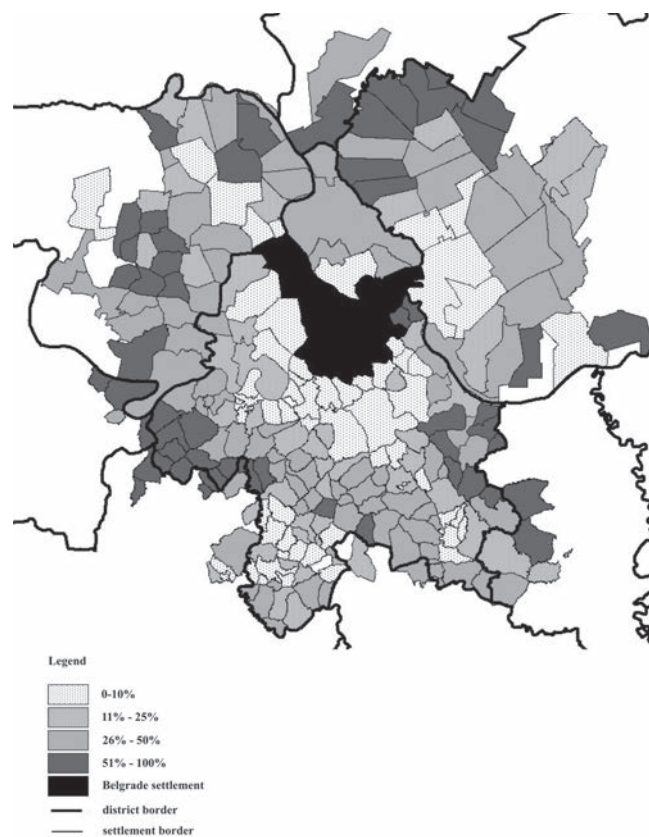


Figure 3. Settlements with the share of agrarian population in the total active population (Source: Census of Population – Activities, Statistical Office of the Republic of Serbia)

Table 3. The number of settlements with the percentage of agricultural population in the total active population

Share of agricultural population in total active population		Number of settlements		Change of the number of settlements
		1981	2011	2011-1981
≤ 10%	in the CoB	11	49	38
	outside the CoB	2	13	11
11-25%	in the CoB	25	29	4
	outside the CoB	5	16	11
26-50%	in the CoB	36	54	18
	outside the CoB	15	41	26
> 50%	in the CoB	84	24	-60
	outside the CoB	70	22	-48

Source: Census of Population – Activities, Statistical Office of the Republic of Serbia

In 1981, the share of agricultural population in the surrounding settlements within the CoB was 35.4%, to decrease to 19.5% in 2011. These data can be brought into a relationship with the increase in the number of settlements with a lower share of agricultural population, and vice versa: the number of settlements (108) with more than 50% of agricultural population increased considerably (Table 3). The share of agricultural population in settlements increases as the distance from Belgrade increases (Figure 3). On the other hand, those settlements, as a rule, have less convergent commuters to Belgrade (Figure 2).

The indicator of a settlement's location based on the distance from Belgrade in defined zones is given in the kilometre length of the shortest distance, i.e. the length of the route of the best quality road. Due to the relatively bad or uneven quality of roads in the area surrounding Belgrade, as well as due to a different pressure on roads, i.e. an uneven accessibility from certain parts of the surrounding area, it is difficult to estimate correctly the time distance of settlements. Therefore, it is rarely taken as a relevant indicator in Serbia. The distance of 30 minutes corresponds on average to a 20-kilometre route. The smallest number of the observed settlements (31) are located at the distance up to 20 km from Belgrade, and the most of settlements (97) are at a distance between 41 km and 60 km (Table 4). Only 10 settlements, based on the cited criteria, are at a distance of more than 70 km from Belgrade.

**CONCLUSION**

Although the issue of functional and spatial relations and links between a city and its regional surroundings is not fully resolved, most authors believe that the concept of nodal or functional regionalisation is the most appropriate model for delimiting the role of a city in regional territorial integration. As the starting point, the criterion of convergent commuting is used for cities, together with the functional characteristics of neighbouring settlements, the distance between settlements, etc. This makes it possible to define the metropolitan borders, as shown on the example of Belgrade.

Table 4. The distance of settlements from Belgrade

Distance in km		Number of settlements
≤ 20	in the CoB	29
	outside the CoB	2
21 - 40	in the CoB	44
	outside the CoB	34
41 - 60	in the CoB	60
	outside the CoB	37
> 60	in the CoB	23
	outside the CoB	19

Source: The Belgrade Tourist Area, map R 1:200.000, COPYRIGHT, Geokarta, Belgrade

In this paper, the metropolitan area of the CoB is defined using a model that takes into account three indicators related to the settlements in the surroundings of Belgrade: the share of convergent commuters in the total active population, the share of agricultural population in the total active population of these settlements and the distance between these settlements and Belgrade. The results obtained based on this model suggest the following conclusions:

- the influence of Belgrade certainly goes beyond the administrative boundaries as they are defined;
- Belgrade should have a more central position in the metropolitan area, which would enable its optimal functioning in the area of its gravitational influence; however, Belgrade, within its present boundaries defined since 1970, has a peripheral (northward) position imposed by the administrative boundary of the province of Vojvodina;
- if the boundaries of the area of gravitational influence coincided with the demographic, economic and functional strength of the city, then some municipalities in Vojvodina would be part of the CoB, rather than the province of Vojvodina.

Having in mind the size of the territory added to the CoB, its enlargement was more intensive to the south, towards Šumadija; in this territory, the process of expansion was not only unhindered, but was rather aimed for and fostered by Belgrade for multiple reasons, as explained above.

Although the law which defines the administrative boundaries within the Republic of Serbia makes this impossible to achieve at the moment, planning documents relating to the CoB also suggest the enlargement of the administrative area of the city, first of all into the territory of Vojvodina. Both internal and external factors – Serbian and/or European policies of boundary delimitation – have so far presented a limiting factor in the process that would lead to achieving this objective.

Limited by the administrative boundaries to the north, towards the province of Vojvodina, Belgrade could constitute its metropolitan area if there were political will and enthusiasm to take proper actions. Urban policy has to do with the use of public service facilities, communal infrastructure, defining public transport lines, etc. The development policy of the surrounding settlements is also burdened by the fact that Belgrade's responsibilities are

limited to the area within its administrative boundaries. This problem has been even more pronounced in recent years, having in mind an increased population density and, accordingly, population movement to the north of Belgrade's functional area.

Bearing in mind that it is difficult to determine any territorial boundary so as to meet all criteria, the improvement of interregional and inter-local links should be taken into account. This approach could contribute to interregional development. Although networking and interregional cooperation are desirable and necessary, not only as part of the measures of the EU regional policy, but also within the Regional Spatial Plan of the Administrative Area of Belgrade, it is our opinion that this process could not help overcome the mentioned problems caused by the discrepancy between the administrative and functional boundaries. On the other hand, there is a risk of the discontinuity of the metropolitan area, which may have a negative influence on its competitiveness, having in mind the polycentric development at the European and South-East European scale.

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