
**ВИСШЕ СТРОИТЕЛНО УЧИЛИЩЕ
"ЛЮБЕН КАРАВЕЛОВ"**

**UNIVERSITY OF STRUCTURAL ENGINEERING
AND ARCHITECTURE (VSU) "LYUBEN KARAVELOV"**

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VSU'2020
ПО
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**BORDERLAND SHRINKING CITIES: “UNCHARTED TERRITORY” IN
INTERNATIONAL RESEARCH OF URBAN SHRINKAGE**

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Abstract:

Shrinking cities has become a hotspot topic in international research during last decades. Although their shrinking patterns reflects the best through demographic loss, research cycles also point out that the main cause of their shrinkage is the economic problems of these cities. The other, less prominent factors has been just recently scientifically uncovered. This is the case with the issue of the proximity to or location of a city on national border. This factor is scarcely examined in the discourse of urban shrinkage, maybe due to the most of related research has been carried in larger countries or in economically united multi-state unions, where borderland position is less relevant. The aim of this paper is examine the influence of border on urban shrinkage in Serbia, a small European state where all national borders are fully controlled. This is done by comparing the demographic trends of the cities along long standing borders of Serbia, established after the World War I, with the same trends at national level. This comparison is critical to exact final recommendations for the urban planning of border cities, as well as for the regional planning of urban networks in Serbian borderlands.

Key words: *Shrinking cities, national border, peripherality, urban networks, regional vs. urban planning*

1. Introduction – Shrinking cities vs. Borderland position

Shrinking cities has become a common issue in the contemporary urbanisation at global level [1]. This joint international work and interest in the topic of urban shrinkage have resulted into a newly created, multi-sector concept – the concept of shrinking cities [2]. The concept postulates underline that the process of urban shrinkage is mainly characterised by population loss as a key determinant [3]. On the other hand, problems in local economy, mainly relating industry, are seen as the major consequence of this

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phenomenon [4]. Apart of these two main factors of urban shrinkage, there are also the other, minor ones, linked with cultural, demographic, ecological, administrative, political aspects. The aforementioned factors do not occur separately; they are all interconnected and overlapped.

Nevertheless, there are still some barely explored niches in the research of urban shrinkage, but they are still loosely established into mainstream scientific circles. This is a case with the topic of the influence of national borders on the appearance and process of urban shrinkage. There are reasons why this topic is underrepresented. Generally, the most of researchers of the shrinking cities are coming from (1) the territorially largest counties, such as the United States of America, Australia or Russia, (2) the countries that are island nations, such as Japan or the United Kingdom, or (3) the main countries in the European Union (EU), such as France or Germany, connected through the Schengen system of free borders. Thus, the issue of fully controlled national borders and the problems of border areas are marginal in their context [5]. Even peripherality as a wider theme is not adequately stressed in general research on urban shrinkage and shrinking cities [6].

Relevant international resources are thereby scarce, but worth to be mentioned. Fully controlled national borders are regarded as an obstacle for urban development and that they can trigger or accelerate urban shrinkage [7]. Interestingly albeit expectedly, researchers from small countries with relatively long fully controlled borders are active in this field. Such examples are peripheral Baltic States or in Finland, with long fully controlled border to neighbour Russia. For instance, Lithuanian researchers Bruneckiene and Sinkiene discuss that such borders limit the accessibility and “networkness” of cities in their proximity [8].

Post-socialist Europe is a proper region to study how proximity to fully controlled national borders affects urbanisation and trigger urban shrinkage. This emerged after the World War I, which significantly changed the space in the eastern half of Europe. Three former empires, Germany, Russia and Austro-Hungary, collapsed and fragmented into many new small national states [9]. Consequently, this process brought many new borders and border cities. This situation has further complicated after the World War II, with new demarcations. An illustrative example is the city of Trieste, which was the main port of the Austrian part of Austro-Hungarian Empire. After the downfall of the empire in 1918, the city ceded to Italy, by it lost its vast hinterland. Furthermore, after the World War II, Trieste became a real border city, located in the “pocket” of Italy surrounded by Yugoslavia. Left without a gravitation zone, the city economy contracted and Trieste entered a decades-long decline, accompanied with the other problems, such as fast population loss and rampant ageing [10].

Many border cities experienced such problems during last 20th century, but the enabling of free movement by Schengen agreement has radically changed this situation. This process, however, excluded non-EU countries in Europe, such as Serbia. Even more, with the rise of the problem of illegal mass-migrations in the 2010s [11], the external border of the EU to Serbia has become ‘over-controlled’ and extremely non-transparent. To conclude, this strange situation certainly made an impact on border cities in Serbia.

The aim of this paper is examine the influence of border on urban shrinkage in Serbia. This is done by comparing the demographic trends of the cities and towns along long standing borders of Serbia with Hungary, Romania and Bulgaria, established after the World War I, with the same trends at national level. These borders are also the external borders of the EU, as well as language borders. Such comparison is critical to exact final recommendations for the urban planning of border cities, as well as for the regional planning of urban networks in Serbian borderlands.

2. Methodology

This research is methodologically based on the statistical analysis of the latest demographic data for Serbian cities and towns, extracted from two last national population censuses in 2002 and 2011. Statistical methods refer to mass-phenomena, such as the case of 167 officially declared urban settlements (hereinafter: cities) in Serbia, excluding the Province of Kosovo and Metohija [12]. These settlements are roughly divided between those that are also municipal seats and the other settlements, which are usually 'coloured' by specific features, such as suburbs, mining towns or tourist destinations.

The other parameter important for methodological considerations is a proximity to national border. This parameter is locally sensitive. For example, in the USA, an official border zone along the USA-Mexico border is 100-mile (161 km) wide. This is an extremely big distance for European perspective, which would completely 'swallow' even some middle-size EU countries. EU Schengen system defines a border area with an extension up to 50 km on either side of the border. Even this distance is very big; moreover, it refers to the Schengen area as an entity, which has a supra-national character. Finally, European Statistical Office is the most customised to European context – it identifies a border region as a region with "a land border or a region where more than half of the population lives within 25 km of such a border" [13]. In accordance to this, 25-km distance to national border is adopted as a critical parameter to define border cities in Serbia and to include them in this research. Moreover, border-cities/towns are also considered. They are those ones which cadastral territories touch national borders.

3. Analysis

The 25-km wide area of Serbia along national borders to Hungary, Romania and Bulgaria represents a significant part of Serbian territory. There are 31 urban settlements in this region, which makes 18.6% of all urban settlements in the country. Furthermore, 11 included settlements (6.6%) are border cities, i.e. located at national borders. The basic comparison between these two categories and national figures is given in the Table 1:

Table 1. Basic comparison of the cities of the selected border region in Serbia with national figures – National census 2011

Parameter \ Scope	No.	POPULATION		CHARACTER		CITY SIZE				
		Total	Per city	Seats	Others	1	2	3	4	5
All cities in Serbia	167	4,271,872 (100.0%)	25,580 (100.0%)	125 (74.9%)	42 (25.1%)	4 (2.4%)	24 (14.4%)	51 (30.5%)	41 (24.5%)	47 (28.1%)
Cities in Border Region	31	540,134 (18.6%)	17,424 (68.1%)	26 (83.9%)	5 (16.1%)	0 (0.0%)	8 (25.8%)	7 (22.6%)	6 (19.4%)	10 (32.3%)
Border cities	11	181,094 (6.6%)	17,374 (67.9%)	7 (63.6%)	4 (36.4%)	0 (0.0%)	2 (18.2%)	1 (9.1%)	4 (36.4%)	4 (36.4%)

Notes for the Table 1:

- Relevant ratios are put in brackets “()”;
- Character of city: division between municipal seats and the other urban settlements;
- City size is former in relation to the importance of cities in urban network in Serbia and it mainly corresponds to the operative Spatial plan of the Republic of Serbia:
 - Category 1: cities with more than 100,000 inh. / capital and NUTS2 regional centres;
 - Category 2: cities with 30-100,000 inh. / mainly district centres;
 - Category 3: cities with 10-30,000 inh. / mainly secondary cities in districts and suburbs;
 - Category 4: cities with 5-10,000 inh. / smaller towns and suburbs; and
 - Category 5: cities with less than 5,000 inh. / the smallest municipal seats and the other cities which are not suburbs (mining towns, spa towns, urban ski resorts).

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More than half of the selected cities (18 or 58.1%) are located in the Northern Serbian Province of Vojvodina, which is NUTS2 Region at the same time. The other 13 cities (41.9%) is located in Central Serbia and, more concretely, in NUTS2 Region of Southern and Eastern Serbia. Their precise location is given in the Image 1:

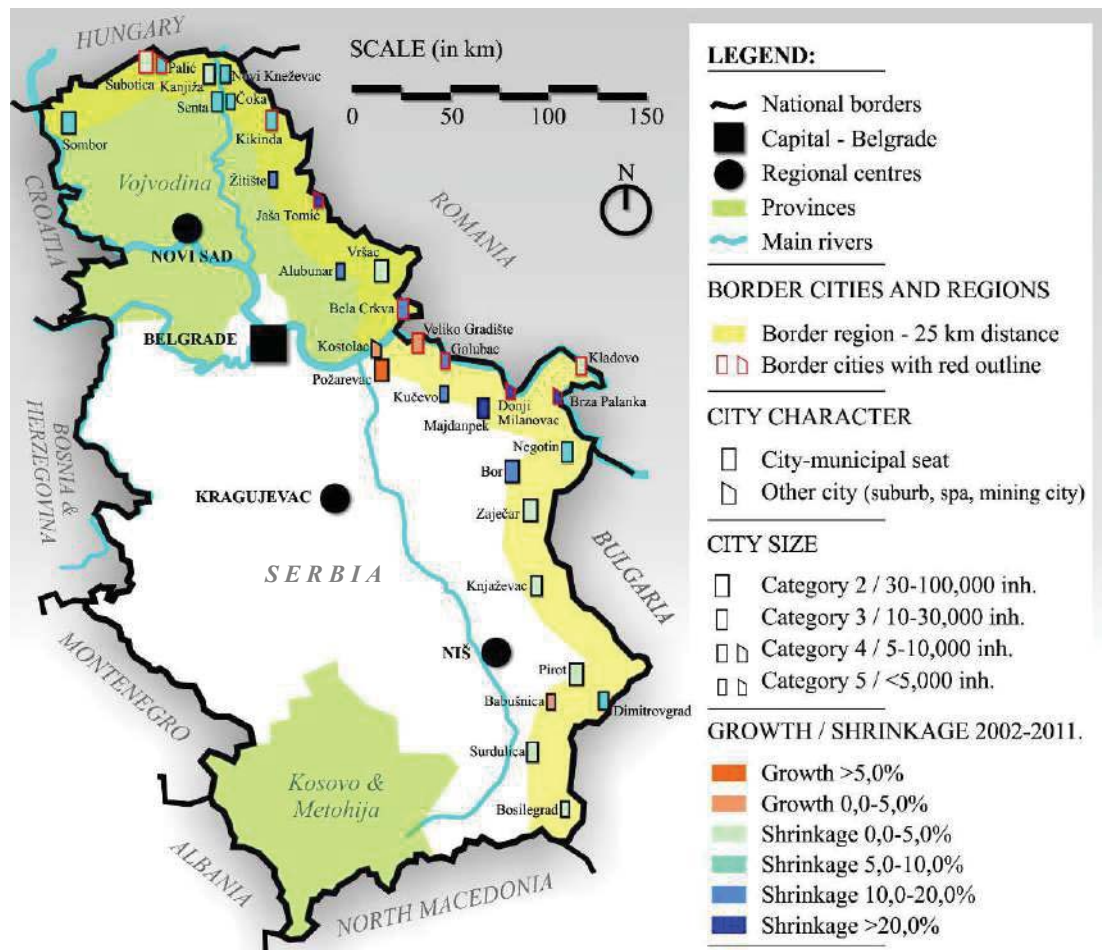


Fig. 1. The position of all cities in the border region, with their characteristics: size, character, and growth/shrinkage patterns for 2002-2011 (created by authors)

The image shows that urban shrinkage is widespread across the border region, with several severe examples (more than -20%). 27 (87.1%) cities in this region is shrinking, while this is even more evident for border cities – 10 of 11 (90.9%) are shrinking. Urban shrinkage noticeably outpaces growth, which is in contrast with national average (Table 2):

Table 2. Urban growth/shrinkage in the selected border region in Serbia 2002-2011

TRENDS \ SCOPE	PERIOD 2011/ 2002	URBAN GROWTH (Number + percentage)			URBAN SHRINKAGE (Number + percentage)				EXTREME SHRINKAGE
		>10%	5-10%	0-5%	0-5%	5-10%	10-20%	>20%	
All cities in Serbia	+1,8%	9	12	22	49	40	25	10	Divčibare (-40.0%)
		5.4%	7.2%	13.2%	29.3%	24.0%	15.0%	6.0%	
Cities in Border Reg.	-5.5%	0	1	3	10	6	7	4	Majdanpek (-23.6%)
		0.0%	3.2%	9.7%	32.3%	19.4%	22.6%	12.9%	
Border cities	-5.2%	0	0	1	2	3	2	3	D. Milanovac (-23.1%)
		0.0%	0.0%	9.1%	18.2%	27.3%	18.2%	27.3%	

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If growth/decline dichotomy is considered regarding the character of the city (Table 3), then extracted results imply that the cities that are municipal seats at the same time performs better by demographic patterns than the other cities, which also overrepresented among extreme cases, i.e. with the population loss bigger than 20%.

Table 3. The relation between urban growth/shrinkage and the character of a city in the selected border region in Serbia 2002-2011.

Character Scope	MUNICIPAL SEATS (Number + percentage)				THE OTHER CITIES (Number + percentage)			
	Total	Growth	Shrinkage	Extreme	Total	Growth	Shrinkage	Extreme
All cities in Serbia	125	28	97	3	42	15	27	7
		22.4%	77.6%	2.4%		35.7%	64.3%	16.7%
Cities in Border Region	26	3	23	1	5	1	4	3
		11.5%	88.5%	3.8%		20%	80%	60%
Border cities	7	1	6	0	4	0	4	3
		14.3%	85.7%	0.0%		0%	100%	75%

If growth/decline dichotomy is considered regarding the size of a city (Table 4), it is noticeable that shrinking cities prevail in all categories, by also that smallest cities (Category 6) make almost all extreme cases.

Table 4. The relation between urban growth/shrinkage and the size of a city in the selected border region in Serbia 2002-2011 (Gr. – growth; Sh. – shrinkage; Ex. – extremes)

City size Inh.	Category 1 >100,000 inh.			Category 2 30-100,00 inh.			Category 3 10-30,000 inh.			Category 4 5-10,000 inh.			Category 5 <5,000 inh.		
	Gr.	Sh.	Ex.	Gr.	Sh.	Ex.	Gr.	Sh.	Ex.	Gr.	Sh.	Ex.	Gr.	Sh.	Ex.
All cities in Serbia	4	0	0	9	15	0	12	39	1	6	35	0	12	35	8
	100%	0%	0%	38%	62%	0%	24%	76%	2%	15%	85%	0%	26%	74%	17%
Cities in Border R.	0	0	0	1	7	0	0	7	1	2	4	0	1	9	3
	0%	0%	0%	12%	88%	0%	0%	100%	14%	33%	67%	0%	10%	90%	30%
Border cities	0	0	0	0	2	0	0	1	0	1	3	0	0	4	3
	0%	0%	0%	0%	100%	0%	0%	100%	0%	25%	75%	0%	0%	100%	75%

Notes for the Table 4: Extremes (Ex.) are the cities with population loss bigger than 20%

4. Conclusion

The main finding from the analysis is that urban shrinkage is predominant in the selected border region. The percentage of growing cities is twice smaller than national average (13%/26%). In the case of border cities, this percentage is below 10%. Border cities are especially prone to extreme shrinkage (>20%), as well as the smallest cities (<5,000 inh.) and the cities that are not municipal seats. In the other side, all largest cities except Bor have a relatively 'mild' urban shrinkage (up to 10%).

The mapping of shrinking/growing cities in the border region (Figure 1) enables qualitative findings, too. Although there is no bigger city (>100,000 inh.) in the border region, their influence is noticeable. For example, three of four growing cities are actually the nearest ones to Belgrade. In general, the mapping reveals that the combination of the proximity to border and large distance from major cities leads to extreme shrinkage.

All findings clearly underpin that the proximity to national borders really matters in urban shrinkage in Serbia. They indirectly indicate that this problem cannot be dealt locally. National and international levels seem to be key ones; the overall centralisation in Serbia had to be reduced and more attention should be given to cross-border cooperation.

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