

## THE BORDER REGIONS OF SERBIA: PERIPHERAL OR MARGINAL AREAS

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**Abstract.** The border regions of Serbia are marked by numerous problems that arise from their peripheral position. They mostly encompass municipalities that are underdeveloped, as compared to the rest of the country; unfavourable demographic characteristics are manifested in the long-term depopulation and out-migration and progressive population ageing. The purpose of the study is to explore their heterogeneity. By means of cluster analysis, groups of municipalities were identified according to the degree of development and demographic characteristics. Starting from theoretical and methodological concepts used in defining peripheral and marginal areas, the degree of peripherality/marginality is determined in the border areas of Serbia. The introduction of a large number of demographic indicators enables a more detailed analysis of border regions of Serbia and the identification of advantages and disadvantages of their development potentials.

**Keywords:** border regions of Serbia; peripheral and marginal regions; socio-economic indicators, demographic indicators; cluster analysis; population

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### 1. Introduction

Border regions are identified using various approaches and criteria. The concept implies a ‘peripheral system’, situated along the border. The key factor is the proximity of the border as a barrier, and it is justified to say that border municipalities are peripheral in a national context (Houtum 2000). Although border regions are not always underdeveloped (for example, Basel in Switzerland, Gibraltar in Spain, etc), in domestic literature, the prevailing opinion is that the border regions have been economical, socially and demographically downward, during the past decades due to the centralist model of the state (Đorđević 2002, Grčić 2002).

The peripherality of border regions is observed through the polarization of space due to widening disparities in the development levels of the ‘nucleus’ and

the ‘periphery’ (Grčić 2002, Houtum 2000, Pileček and Jančák 2011). Most authors consider that polarization, namely the formation of a nucleus (centre) and a periphery, is the result of the structural and functional differentiation of space and the product of socio-economic drivers.

The terms ‘peripherality’ and ‘marginality’ are frequently encountered in the studies on the polarization of space and they are often used as synonyms. Both concepts are relative and depend on the personal perception and perspective of the author. *Marginal areas are excluded from social, economic and political decision-making, while peripheral areas are at least partially integrated into the system* (Pileček and Jančák 2011:45). The overview of the definitions of peripherality and marginality reveals a wide range of opinions (Schmidt 2007, Fernandes 2000, Leimgruber 2004, Marada 2001, Harvey 2006, Holt-Jensen 2009) stemming from authors’ subjective concepts.

In 1994, Leimgruber summed up the *four basic approaches* for defining these regions. The same approaches have also been used in later research. The *geometric approach* was used by Wastl-Walter, Váradi and Veider (2003), Leimgruber (2004), Havlíček and Marada (2004), etc. The *ecological approach* can be found in the works of Chromý and Jančák (2005). Definitions based on the *economic* (Garrod and Wilson 2004, Chromý and Jančák 2005) and *social approaches* (Cullen and Pretes 2000, Mehretu, Mutambirwa and Mutambirwa 2001) are also widely present. In 1998, Schmidt elaborated Leimgruber’s concept by introducing the concept of *political and cultural marginality*. Comprehensive definitions can be found in Mehretu, Pigozzi and Sommers (2000), Sommers, Mehretu and Pigozzi (2001) and Boniface (2000).

Numerous indicators are used in determining peripherality and marginality. Nevertheless, what is marginal from the prevailing, economic point of view may not be marginal from the social, cultural and geographical aspects. A more precise definition of marginality was offered by Leimgruber (Leimgruber 2004:49). It took into account four criteria: significantly lower income per capita; poorly developed infrastructure; cultural isolation and geographic differentiation. Marginal areas are those parts of the periphery that are substantially different from normal values (for the centre and the periphery) and they are economically, socially, culturally and politically isolated (Pelc 2006:123).

The fact that the phenomena of peripherality and marginality are complex urges researchers to study the problem from a multidisciplinary perspective. The *spatial concept* of peripherality is observed from three aspects: causal, consequential and the cause-and-effect point of view. The causal aspect includes the geographical location, the distance from developed centres and economic activities. The second aspect is related to the first and it involves a high cost of services and a low level of entrepreneurship and innovation. The third aspect involves a combination of the previous two elements: depopulation, underdeveloped infrastructure, primary industry (Copus 2001:540). The spatial concept is also used to determine the peripherality level in the European Union (Trujillano, Font and Jorba 2005:30). Starting from the assumption that spatial marginality is

rooted in the physical distance from the centres of development (Larsen, Leimgruber, Müller-Böker, Sommers et al.), Kirkby and Larsen argue that living in border regions leads to marginality (cited after Gurung and Kollmair 2005:10).

*Non-spatial indicators* prevail in scholarly literature. They include a wide range of socio-economic indicators, which can be divided into several groups: population, culture, innovation and education, economic development and trend indicators. The most common indicators for determining peripherality are economic (Rusu 2007), socio-economic (Schmidt 2007), demographic and economic (Molleví-Bortoló and González-Rodríguez 2007) or only demographic indicators (Lonsdale and Archer 2007). When determining peripherality and marginality, qualitative (e.g. the subjective feeling of marginalization is examined) and quantitative methods (Déry, Leimgruber and Zsilincsar 2012) are used.

It may be concluded that peripheral areas are economically underdeveloped regions that are dependent on developed centres. Peripheral areas are distant from central settlements, not only in terms of space (natural barriers, traffic isolation), but also in the social sense (social exclusion, political isolation, demographic underdevelopment), but they are integrated into the system. Quite oppositely, marginal areas are located on the edge of the system.

Inspired by the works of the above-mentioned authors, the study is based on the hypothesis that the border regions of Serbia are heterogeneous and different in terms of the peripherality/marginality level. The introduction of a large number of demographic indicators in the process of determining peripherality will contribute to a more detailed analysis of the border areas of Serbia.

## 2. Methodology

In order to determine whether the border municipalities are peripheral or marginal, cluster analysis is performed. Here a multivariate statistical method is often used, which groups homogeneous elements into clusters (Žižka 2012). Grouping of municipalities aims to show the differences between border municipalities. A non-hierarchical model of the cluster analysis (K-means clustering) was employed, using the STATISTICA program. Grouping points are determined using a computer program. The choice of the number of clusters is based on the past research of border municipalities, in order to group mutually similar municipalities within the cluster, and also different ones in relation to the municipalities of other clusters. Four clusters were used in this paper, because the use of a smaller number of clusters separates municipalities with extremes in special clusters, while all other municipalities that differ significantly from each other are classified into one cluster. By choosing a larger number of clusters, we get clusters with fewer elements.

Based on previous research the selection of the indicator is reduced to a combined approach, respectively, spatial and social indicators will be used for the grouping of border municipalities. Spatial indicators determine the territorial aspect of the

research, and only the municipalities whose administrative territory is located along the state border of the Republic of Serbia are included in the analysis. Non-spatial indicators were used to determine peripheral and marginal levels.

The significance of variables for cluster analysis is determined using the Principal Components Analysis (PCA). This method is applied in each cluster analysis individually, in order to determine which variables are most significant for the grouping of the municipality, respectively which variables have the greatest influence on the differentiation of the border municipalities.

Three cluster analysis are made based on different indicators of the border municipalities. The first cluster analysis includes indicators of the level of development. These are indicators of the level of economic and social development:

- GDP per capita 2013. (the percentage of the GDP of the Republic of Serbia) (Official Gazette of the Republic of Serbia 2013);
- The index of social cohesion<sup>1</sup> 2013. (the percentage of the average index for the Republic of Serbia) (Government of the Republic of Serbia 2014);
- The composite index of social exclusion<sup>2</sup> 2011. (the percentage of the average index for the Republic of Serbia) (Republic of Serbia 2013);
- The percentage of residents without access to sanitation 2011. (Statistical Office of the Republic of Serbia 2012);
- Postal services and telecommunications 2011. (the number of subscribers per 100 inhabitants) (Statistical Office of the Republic of Serbia 2012).

The second cluster analysis is based on demographic indicators. Data from the Census 2011 and demographic statistics for that year were used due to comparability of data.

- the percentage of young people (Statistical Office of the Republic of Serbia, Book 2, 2012);
- the percentage of old people (Statistical Office of the Republic of Serbia, Book 2, 2012);
- population growth rate (Statistical Office of the Republic of Serbia, Book 21, 2014);
- net migration rate (calculation based on population growth rate and natural increase, Statistical Office of the Republic of Serbia, Book 21, 2014; Statistical Office of the Republic of Serbia, 2012b);
- general fertility rate (Statistical Office of the Republic of Serbia, 2012b);
- employment rate (Statistical Office of the Republic of Serbia, Book 7, 2013);
- the share of highly educated persons (Statistical Office of the Republic of Serbia, Book 3, 2013).

<sup>1</sup> The index of social cohesion includes 9 indicators, in three group of indicators: social relations, connection among community members, orientation to the common good.

<sup>2</sup> The composite index of social cohesion includes four dimensions: (1) economic (net earnings per employee, average pensions); (2) social (participation of minor and adult social welfare beneficiaries in the total population, the economic dependency ratio); (3) health (population per doctor) and (4) housing (constructed dwellings per 1000 inhabitants) (Government of the Republic of Serbia, 2014).

The third cluster analysis includes both combined indicators of the level of development and demographic characteristics. Based on the results of this cluster analysis, the heterogeneity of border municipalities will be determined, or whether for certain border municipalities it can be said that they are peripheral or marginal.

### 3. Results of the analysis

#### 3.1. Cluster analysis based on the development level variables

Table 1 shows the variability levels, where individual values are ranked in a descending order, indicating the importance of the corresponding factors in explaining data variations. After the PC analysis, five PC variables (components) were obtained. The first two of them cover the greatest variability of development indicators. Taken together, the first two axes explain 78% of the total variability of all entities; the first axis explains 57% and the second 21% of the total variability of the sample. According to the first PC axis, the highest variability is observed in the index of social cohesion and the composite index of social exclusion. In the second axis, the variables with the greatest influence are the percentage of residents without access to sanitation, postal services and GDP per capita. According to the first axis, the border municipalities in south and south-east Serbia stand out as underdeveloped on the one side, while on the other, more developed regional centres form a distinct group. Based on the second axis, it is possible to single out underdeveloped municipalities in the province of Vojvodina (Figure 1).

**Table 1. The values of PCA for development level variables**

Value number	Eigenvalue	% Total variance	Cumulative Eigenvalue	Cumulative %
1	2.87	57.35	2.87	57.35
2	1.04	20.75	3.91	78.10
3	0.46	9.22	4.37	87.33
4	0.36	7.27	4.73	94.59
5	0.27	5.41	5.00	100.00

Source: Prepared by authors, STATISTICA

**Table 2. The impact of development level variables in the PCA**

Case	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
GDP per capita	0.77	-0.42	-0.03	0.47	-0.07
Index of Social Cohesion 2013	0.87	0.12	-0.21	-0.23	-0.36
Composite social exclusion index	-0.85	-0.19	0.33	0.07	-0.35
The percentage of population who are not connected to sewage	-0.49	-0.79	-0.34	-0.16	0.01
The number of subscribers to the post and telecommunications per 100 inhabitants	0.74	-0.44	0.44	-0.25	0.10

Source: Prepared by authors, STATISTICA

The variance analysis reveals variations among groups, as well as variations among entities within individual groups. The highest variability among groups is the variability according to the level of GDP per capita. The composite index of social exclusion has a significant impact on the differences among groups. GDP per capita, the index of social cohesion and the percentage of residents without access to sanitation have the greatest statistical relevance.

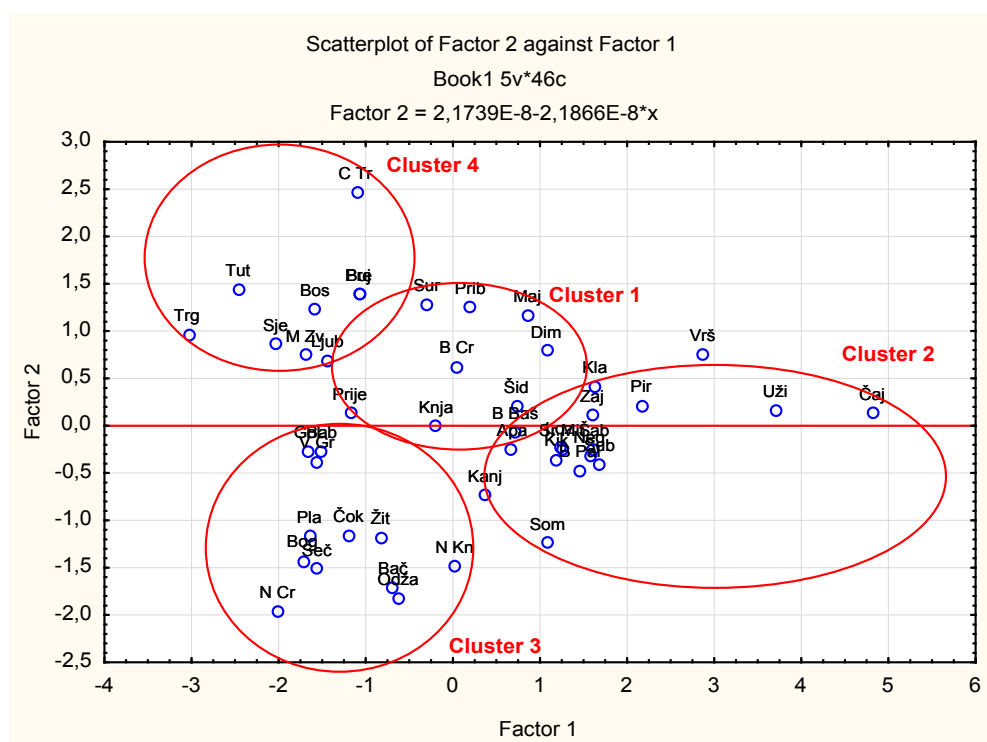


Figure 1. Entities (municipalities) grouped in clusters  
Source: Prepared by authors, STATISTICA

**Table 3. Variance analysis**

Variables of the development level	Between SS	Within SS	Significance P
GDP per capita	98.22	30.83	0.00
Index of Social Cohesion 2013	34.68	12.00	0.00
Composite social exclusion index	1.05	19.70	0.53
The percentage of population who are not connected to sewage	3.40	12.96	0.02
The number of subscribers to the post and telecommunications per 100 inhabitants	0.65	11.52	0.51

Source: Prepared by authors, STATISTICA

### 3.2. Cluster analysis based on demographic variables

The same statistical method was applied to group border municipalities based on demographic variables. Out of nine PC variables, the first PC axis explains 80% of the total variability. The second PC axis explains 12% of the total variability. Taken together, the first two axes explain 92% of the total variability of all entities. According to the first PC axis, the highest variability is caused by the population growth rate, the average age of the population, the share of old people, the mortality rate and the ageing index. The total age dependency ratio, the population growth rate, the birth rate and the percentage share of young people have the greatest impact in the second axis.

**Table 4. The values of PCA for demographic variables**

Value number	Eigenvalue	% Total variance	Cumulative Eigenvalue	Cumulative %
1	7.16	79.59	7.16	79.59
2	1.11	12.31	8.27	91.90
3	0.34	3.77	8.61	95.67
4	0.22	2.46	8.83	98.13
5	0.09	1.04	8.92	99.17
6	0.07	0.77	8.99	99.93
7	0.00	0.05	9.00	99.98
8	0.00	0.02	9.00	100.00
9	0.00	0.00	9.00	100.00

Source: Prepared by authors, STATISTICA

**Table 5. The impact of demographic variables in the PCA**

Case	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Population growth rate 1991–2011	-0.76	-0.47	-0.43	0.03	0.06	-0.09	0.01	0.00	0.00
Crude birth rate 2011	0.82	-0.47	0.24	-0.18	0.03	-0.15	0.00	0.00	0.00
Crude death rate 2011	-0.94	-0.07	0.02	-0.30	-0.10	0.00	0.00	0.00	0.00
Rate of natural increase 2011	-0.97	0.10	-0.06	-0.17	-0.09	0.05	0.00	0.00	0.00
The average age	-0.97	0.20	0.08	0.07	0.01	-0.07	0.01	0.04	0.00
The aging index	-0.93	-0.19	0.15	-0.08	0.23	0.09	-0.01	0.00	0.00
The percentage of young people	0.89	-0.43	-0.11	-0.01	-0.06	0.09	-0.04	0.02	0.00
The percentage of old people	-0.97	0.00	0.12	0.15	-0.05	-0.10	-0.05	-0.01	0.00
The total age-dependency ratio	-0.72	-0.62	0.20	0.18	-0.10	0.07	0.02	0.00	0.00

Source: Prepared by authors, STATISTICA

According to the first axis, which explains 80% of variability in the total sample, the most distinct groups are a group of municipalities with a majority Muslim population (Cluster 4), marked by a different reproduction model as compared to the rest of the population of Serbia, and a group of municipalities that experienced the earliest depopulation and are marked by the deepest demographic age (clusters 2 and 3). These municipalities stand out among all other border areas

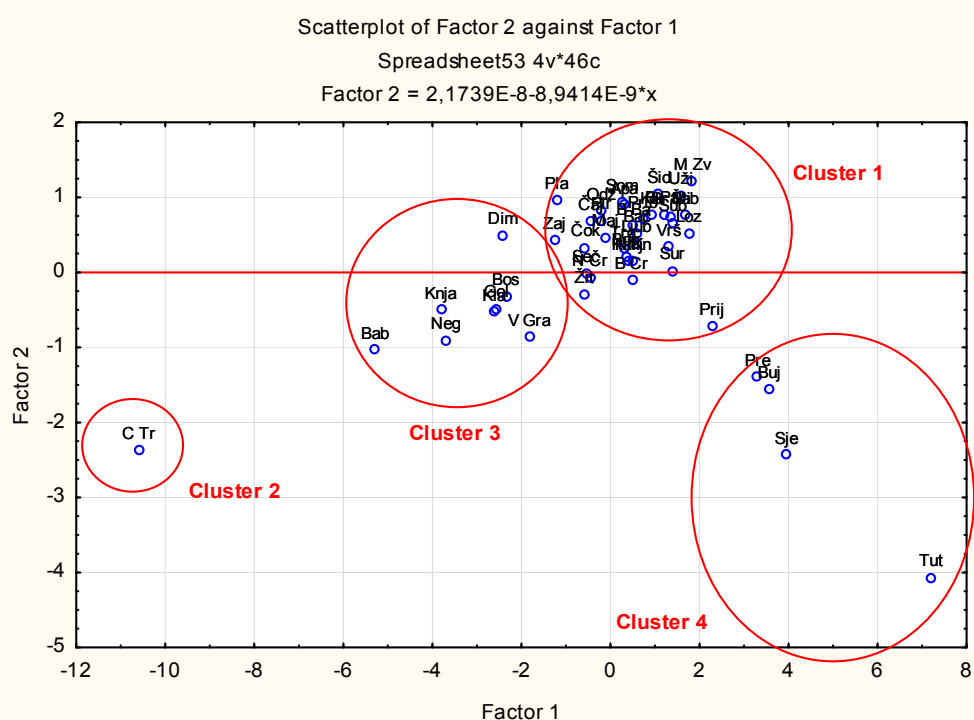


Figure 2. Scatterplot of municipalities by Cluster  
Source: Prepared by authors, STATISTICA

Table 6. Analysis of variance

Demographic variables	Between SS	Within SS	Significance P
Population growth rate 1991–2011	277.69	44.64	0.00
Crude birth rate 2011	37.88	11.98	0.00
Crude death rate 2011	0.13	15.13	0.95
Rate of natural increase 2011	3.91	6.06	0.00
The average age	1.67	2.52	0.00
The aging index	0.44	2.67	0.09
The percentage of young people	0.01	0.19	0.77
The percentage of old people	0.00	0.08	0.95
The total age-dependency ratio	0.00	0.00	0.92

Source: Prepared by authors, STATISTICA



according to the second axis, as well. The greatest variability among, but also within the groups is determined by the population growth rate and fertility rate, the rate of natural increase and the average age of the population. It is interesting that one cluster (Cluster 2 – the cluster of extremes) is composed of a single municipality from Southeast Serbia – Crna Trava (Figure 2) – because it has the most unfavourable demographic characteristics in Serbia. 3.3. Cluster analysis based on combined variables

### 3.3. Cluster analysis based on combined variables

Along with demographic variables and the development level, combined cluster analysis involves a set of indicators of the educational structure and the unemployment rate. The first axis explains only 43% of variability, whereas the second explains 31% of variability (the first two axes explain 73% of the total variability of the sample).

**Table 7. The values of PCA for combined variables**

Case	Eigenvalue	% Total variance	Cumulative Eigenvalue	Cumulative %
Population growth rate 1991–2011	5.59	42.99	5.59	42.99
Crude birth rate 2011	3.97	30.51	9.55	73.49
Rate of natural increase 2011	1.03	7.91	10.58	81.41
The aging index	0.76	5.85	11.34	87.25
Unemployment Rate	0.48	3.66	11.82	90.92
The share of illiterate persons	0.38	2.91	12.20	93.82
The share of computer literate persons	0.23	1.77	12.43	95.59
The share of highly educated persons	0.19	1.46	12.62	97.05
GDP per capita	0.15	1.14	12.76	98.18
Composite social exclusion index	0.11	0.86	12.88	99.04
Index of Social Cohesion 2013	0.06	0.47	12.94	99.52
Young dependency ratio	0.04	0.32	12.98	99.84
Old age dependency ratio	0.02	0.16	13.00	100.00

Source: Prepared by authors, STATISTICA

Demographic variables, such as the population growth rate, the rate of natural increase, the ageing index, the dependency ratio of the old, the percentage of computer-literate persons, the share of persons with high education, the index of social cohesion and the composite index of social exclusion, have the greatest impact on the cluster analysis of border municipalities.

According to the first axis, it is possible to distinguish the three most developed municipalities, which form functional urban areas of national or regional significance. Based on the second axis, it is possible to distinguish a group of economically least developed municipalities, though marked by demographically opposite characteristics rooted in different reproduction models.

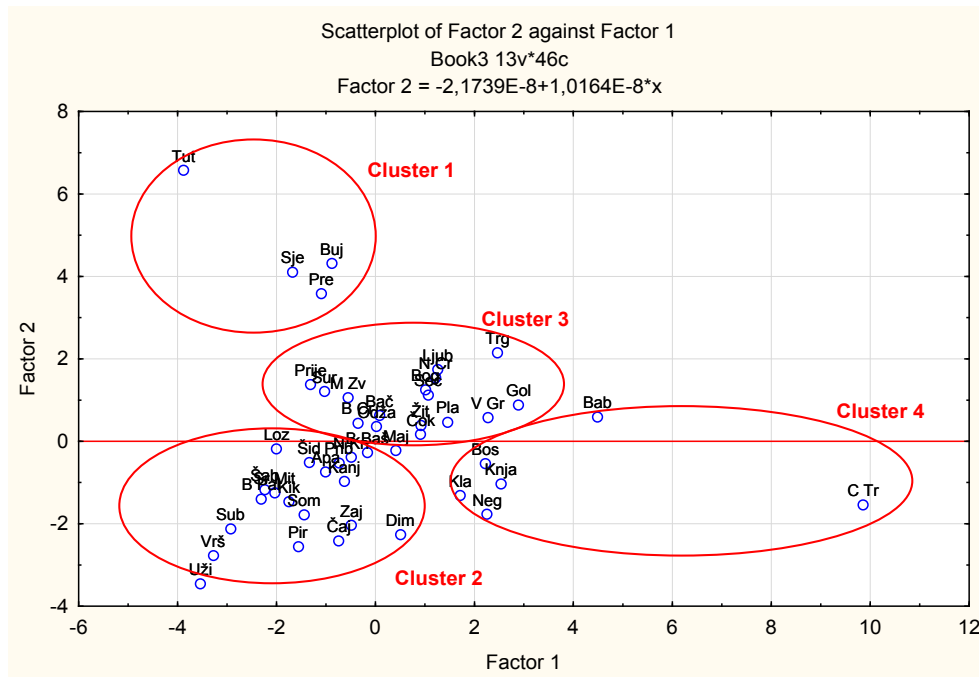


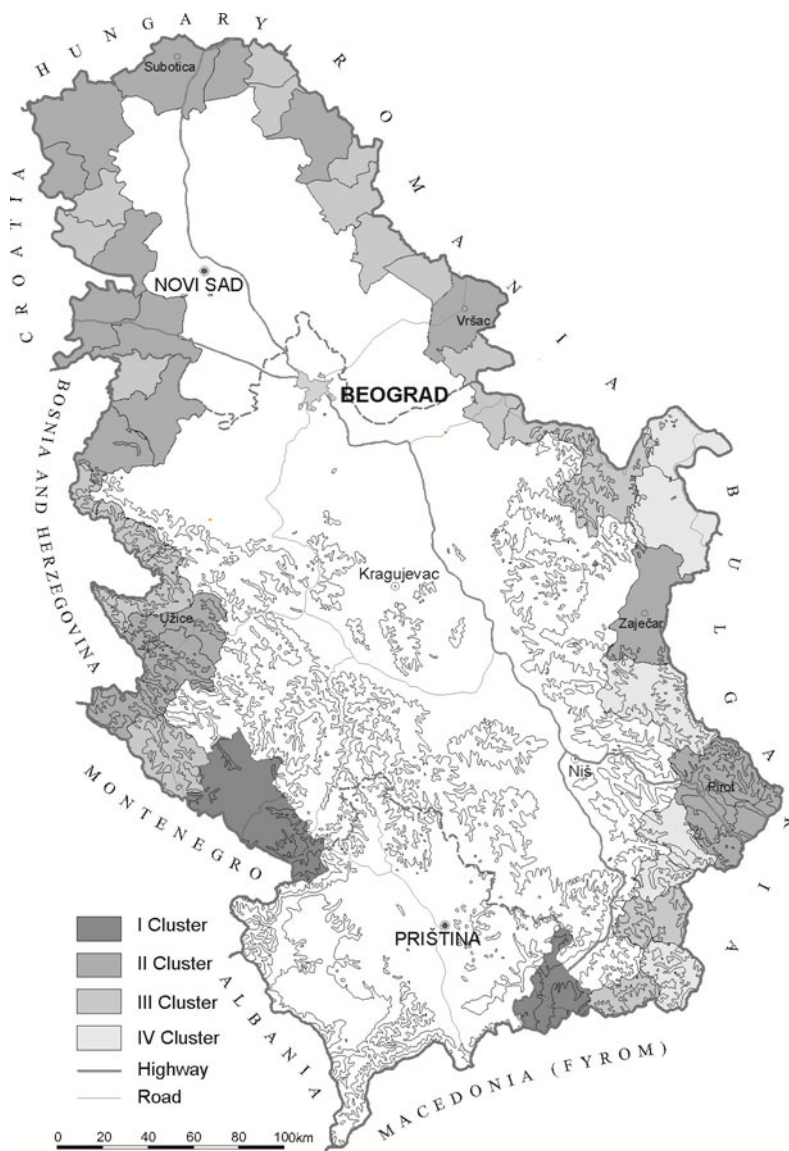
Figure 3. Scatterplot of municipalities by cluster  
Source: Prepared by authors, STATISTICA

The combination of developmental and demographic variables with the indicators of the educational structure and employment rate has resulted in the grouping of municipalities that is similar to the previous one. On the one hand, the municipalities with a lower development level usually have unfavourable demographic characteristics, while on the other, more developed municipalities are most commonly the municipalities with a more favourable demographic structure, as compared to other border municipalities.

The first cluster consists of four municipalities with a majority Muslim population and a significantly more favourable demographic structure of the population. Due to high fertility rates, these municipalities are the only border municipalities with a positive natural increase and a GDP smaller than 60% of the national average.

The second cluster consists of the municipalities marked by a relatively higher development level among the border municipalities. The most of these municipalities have a GDP that reaches 80% the national average, but there are also the six municipalities with a GDP above the national average. These are either regional industrial centres or municipalities with large administrative, educational and business centres in their territory. In the previous period, the development of functions was a pull-factor for in-migration. Due to this, these municipalities have favourable demographic characteristics. Similarly to Serbia as a whole, their natural increase is negative ( $-7\%$  on average), but this is a recent trend. The average

population age in these municipalities is 43, but the quality of human resources is improved due to a favourable educational structure of the population and a more qualified workforce.



Map 1. The clusters of border municipalities in Serbia defined on the basis of demographic and development indicators  
 Source: Prepared by authors

The third cluster includes the municipalities that have an unfavourable demographic structure (the average natural increase rate is  $-9\%$ , the mortality rate is  $17\%$ , the average age is 43 years) and rank among the municipalities with a lower development level (their average GDP reaches 50–60% of the national average). These are the most numerous, demographically small municipalities throughout the border regions.

The last, fourth cluster consists of the municipalities that have the least favourable demographic structure (the average natural increase rate of  $6\%$ , the mortality rate of  $25\%$ , the average population age is 48 years). The majority of municipalities have a GDP smaller than 50% of the national average. The distinguishing feature of this cluster is that it includes municipalities in eastern Serbia located along the natural border with Bulgaria, which largely runs along the mountain range of Stara Planina.

#### **4. Discussion and conclusion**

Although there is no universally accepted definition of marginality, there is a general agreement that marginal areas lag behind other regions or the national average. Their population is usually affected by poor public services, employment opportunities, education and income levels, which leads, in a causal chain, to depopulation.

The border regions of Serbia are extremely sensitive areas, exposed to the impact of geographic conditions and specific ethno-cultural, historical and political, demographic and developmental factors. Therefore, their level of economic development is usually lower than the national average. With the exception of six municipalities that have a GDP greater than the national average, all other border municipalities are marked by significantly lower average salaries and the GDP per capita. In ten municipalities, GDP is lower than 50% of the national average. The geographic distance and, in a number of municipalities, traffic isolation due to extremely adverse natural conditions have caused significant social and economic problems. The peripheral position has made the border area less attractive for investment, which has ultimately resulted in social exclusion and a high unemployment rate. The unemployment rate of the population of border municipalities reaches 24% on average (in some municipalities it is higher than 40%). Unemployment has led to out-migration, and, accordingly, to a significant loss of human capital. The indicators of social cohesion also confirm that these municipalities have an unfavourable position compared to Serbia's average: they have a smaller number of subscribers to postal and telecommunication services, a greater number of citizens per one physician, as well as a smaller share of residents who have access to sanitation. The population of Serbian border regions is marked by lower educational qualifications and a high percentage of illiterates – in some municipalities as high as 8% (recorded in the municipality with the oldest population in eastern Serbia, as well as the youngest municipality with a majority

Muslim population). The share of persons with tertiary education, as low as 9%, is low compared to 16% at the national level.

In all border municipalities in Serbia, the population is reduced (the indicator that is often used as one of the criteria for identifying and delimiting marginal areas), whereby the scale of the decline clearly reflects the degree of their peripherality. The largest population decline is recorded in the municipality of Crna Trava (cluster extreme), with an average annual rate of  $-38\%$ . However, a number of other municipalities also show a major population decline (the negative values of growth rates range between  $-11\%$  and  $-23\%$ ). There are few municipalities where depopulation is less pronounced (negative rates ranging between  $-3\%$  and  $-10\%$ ). These are mostly municipalities that have a higher development level, within the second cluster. The municipalities with a majority Muslim population are the only municipalities to have maintained a positive natural increase, while in other municipalities the negative values of the population growth rate have a wide range and reach  $-34\%$ .

The population decline is largely due to out-migration, initially from rural to urban areas. The process was associated with industrialization in Serbia between the 1960s and 1980s. Later migration currents were directed towards developed regional centres, which offered greater opportunities for education and employment to young people. The process of out-migration culminated with the collapse of industry in the 1990s, which affected even the municipalities that had previously had a stable inflow of population. During the first decade of the 21st century, all border municipalities were the source of out-migration (the maximum values of the average annual net migration rate reach up to  $-18\%$ ).

The long-term negative trends of the natural increase and net migration rates have resulted in an unfavourable age structure of the population of the border municipalities of Serbia. The population of border areas has an average age of 46 years, which is four years more than Serbia's average. According to the average age of the population, a half of the municipalities (22 out of 46) have the oldest demographic age structure. The highest values are recorded in the municipality of Crna Trava, where the average age of the population is 54 years. Twenty municipalities have an old demographic age structure, with an average age of 40–43 years, and only three municipalities, with a majority Muslim population, have an average population age of 37–39 years. Tutin is the youngest municipality with an average population age of 32 years, which could be defined as the 'threshold of demographic old age'.

Major differences in population trends, which have resulted in the different age structures of the population, are explained by the dual models of reproduction based on the ethnic structure of the population. The municipalities with more favourable demographic features are those where the majority of the population are Albanians or Bosnians. The Muslim religion, which is based on different values and patterns of behaviour, explains the high values of the birth rate (up to  $18\%$ ), and the age structure of the population. The opposite situation is observed in the municipalities of eastern Serbia, where the lowest birth rates ( $4\%$ ) have

been recorded. They are lower even than the national average (9‰). Although the demographic picture clearly illustrates cultural differences in peripheral areas, it cannot be placed into the context of ethnicity as a criterion of marginality, as indicated by studies undertaken in other countries. In the case of Serbia, the affiliation with an ethnic group and religion does not imply political isolation (not to a greater degree than in other border municipalities, as demonstrated by data), but does indicate different characteristics of human resources.

The cluster analysis has confirmed the heterogeneity of the border municipalities of Serbia and has enabled us to differentiate among them based on the peripherality level – i.e. to determine which of them are really marginalized. Generally speaking, a group of peripheral municipalities that have a development potential thanks to their position along the routes linking Serbia with the neighbouring countries (e.g. Corridor X or parts of European routes) stand out. The differentiation is done according to the development of economic activities and the availability of infrastructure. The municipalities of macro-regional centres, which have the capacity to become the factors of integration and drivers of development in border areas due to their geographic predispositions and a more developed structure of economic activities, stand out in the border region as the most developed.

In contrast, there are a large number of municipalities where the peripheral position and distance from the centres of development, accompanied with poor access to infrastructure, have been extremely limiting factors for development. Due to a high degree of rurality, an underdeveloped economy, and the linear structure of economic activities, they have stayed out of political decision-making, whereas low average salaries, unskilled labour force and high unemployment rates have become general features of this area. As far as their demographic characteristics are concerned, it is interesting that the starting point and the pace of depopulation (predisposed by physically geographic constraints for development) categorize them precisely and reflect the degree of their peripherality. It has also turned out that cultural factors and the reproductive behaviour that arises from them are the key differentiating factors in this development cluster, which is defined based on socio-economic factors. In eastern Serbia, in the entire border region towards Bulgaria, depopulation was intensified in the early 1960s, though its beginnings date back to the 19th century, when the low reproduction norms had been established. During the 1970s, depopulation affected the border municipalities of Vojvodina (at first the eastern areas), whereas in most border municipalities in the western part of Serbia, depopulation appeared in the 1990s (when this region became a border area in the new constellation of geopolitical relations after the splitting of the former Yugoslavia). Population dynamics is different only in the municipalities that still have a positive natural increase. Accordingly, among the municipalities that have a high degree of peripherality, a group of municipalities in eastern Serbia stand out. They can be described not only as peripheral but also as marginalized municipalities, where development is highly threatened. Along with structural problems, they are affected by intense depopulation. In most peripheral municipalities, the population density is low, compared to

the rest of the country, due to natural conditions and declining population. In these municipalities, it is lower than 20 people per square kilometre, whereas in Crna Trava it is as low as five people per square kilometre. These are demographically small municipalities with an extremely disturbed demographic structure. As a result, there is a lack of human resources necessary for effective regional management and overcoming problems associated with regional marginality. It is justified to say that these municipalities are on the margin of the system.

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