

www.ebscohost.com www.gi.sanu.ac.rs, www.doiserbia.nb.rs, J. Geogr. Inst. Cvijic. 66(3) (433–448)



Review paper

UDC: 372:-2 DOI: 10.2298/IJGI1603433A

CAN BORDER MUNICIPALITIES COUNT ON EDUCATION AS A RESOURCE DEVELOPMENT?

Marija Anđelković-Stoilković*¹

* Institute of Social Sciences, Demographic Research Centre, Belgrade, Serbia

Received: September 24, 2016; Reviewed: November 17, 2016; Accepted: November 28, 2016

Abstract: Education is one of the relevant topics, when it comes to the development of a society. There aren't economic and cultural progresses without educated and skilled workforce. In terms of ageing, "lifelong learning" is introduced as a new perspective in the field of education. There are large regional disparities in the educational structure of the population of Serbia. In this paper, research will include the educational characteristics of the population of Serbian border municipalities, primarily working-age population. The importance of monitoring the educational structure is large, having in mind the indicators of development. The aim of the paper is to determine the availability and quality of human resources. The typology of the border municipalities was done according to achieved level of education of the population. In addition to the basic indicators, literacy and educational attainment, education was monitored through the share of the population with lower educational achievements and tertiary education in specific age groups. The analysis is based on the Census 2011, with a comparison of the two-preceding censuses. The results show that border municipalities have lower educational attainment than the average of Serbia, with great inter-municipal and regional differences, and differences in education by sex, age and type of settlement. The municipalities with larger urban centers have better educational achievements, but the high share of the population with primary education in the population of smaller municipalities cause to doubt of whether these border municipalities can count on education as a development resource.

Key words: education, literacy, educational attainment, human resources, border municipalities.

Introduction

From a sociological point of view, education is a social process by which knowledge is acquired, and who is the main driver of social change (Gvozdenović, 2005). This is one of the most important indicators of social progress and social welfare. As a mechanism of social integration, educational attainment significantly affects the improvement of the quality of life and higher standards of living, as well as reducing the risk of poverty and social exclusion.

^{~ .}

¹ Correspondence to: amarijamaca@gmail.com

Modern economic developed society evolves from the post-industrial to society based on knowledge. Several documents of the European Union emphasize the importance of education, and the main goal is economy based on knowledge and innovation. The goals of improving education are set in development plans in Europe by 2020 (Branković, 2011). In accordance with the objectives of EU, the goals of development and improvement of human capital in Serbia are defined: reducing the number of people who have dropped out school early (less than 15%), increasing the share of persons aged 30-34, who have a tertiary education (30%), and a reduction of young people under the age of 15 with an insufficient level of functional literacy (less than 25%) (Pešikan & Antić, 2011). One of the strategic goals is increasing public funding of education from the current 4.5% to 6.0% of GDP by 2020 (Official Gazette of the Republic of Serbia, 2012).

In addition to the informal education of young people, modern society is characterized by organizations providing non-formal adult education. Serbian education system has task to properly and efficiently educate the population with the aim of sustainability (Official Gazette of the Republic of Serbia, 2012). One of the biggest problems in Serbia is ignoring intellectual capital, as evidenced by the emigration of highly educated persons from Serbia. About 30,000 persons on average leave Serbia per year, of which 10% are highly educated (Predojević-Despić, 2011).

Given the importance of education for development and progress of society, the subject of this paper is an educational structure of population of the Serbian border municipalities. Bordering municipalities are those municipalities whose parts of territories coincide with the state border. There are 46 border municipalities, which occupy an area of about 28,000 km², which is 31% of the total area of the Republic of Serbia. Approximately 1,520,000 people live there, which make 21% of the total population of the Republic of Serbia².

Since the borders of municipalities are peripheral in relation to developmental centers and infrastructure corridors, they are often designated as underdeveloped municipalities that are economically, socially and population declining. Border municipalities are very heterogeneous, which is caused by several factors. The heterogeneity of these municipalities is primarily reflected in the geographical basis, traffic, and infrastructure equipment. In this case, border municipalities in lowland area are preferred, as well as those municipalities that are located on major roads (there is a parallel between the municipality of Subotica and Crna Trava). Also, the great impact has a type of the border, time of formation of

² The territory of the Autonomous Province of Kosovo and Metohija isn't covered by this analyze.

border, as well as the relations with the neighboring country during the history. Today, the concept of undeveloped bordering municipalities of the Republic of Serbia means "old" border municipalities, but "new" municipalities appeared in the new political map, which had better development position and chances during the former Yugoslavia than the municipalities with a "long tradition". For example, the municipality of Užice, which for many years had not a border status, and municipalities on the border with Bulgaria and Romania. The process of industrialization, based on a centralized policy, during the second part of the 20th century, had an influence on the increase in "isolation" of border areas. Most of these municipalities are more underdeveloped than the average of the Republic of Serbia, but in the border area, there are also larger urban and city centers with developed tertiary functions, which have a level of development above the national average. Territorial polarization leads to adverse consequences, such as economic, social and others, and uneven economic development has affected the demographic polarization. The border area is the area of demographic extremes and cultural factors and ethnic structure of the population are the most common reasons for the differentiation. This caused the differentiation of the border area, from the youngest demographic to the oldest demographic municipalities. The heterogeneity of the border area is also reflected in the migratory movements of the population (from migration static to highly dynamic areas of migration). In this paper, the diversity in educational accomplishments of that population is pointed out, with the aim to determine whether the border municipalities have quality human resources, on which to base its development. The typology of the border municipalities was done according to achieved level of education of the population, clearly highlighting developed municipalities in which there is a potential for future development, municipalities that have lower levels of education, or municipalities with extremely poor educational characteristics that cannot count on education as a resource.

Theoretical and methodological notes

In terms of globalization, economic and social development is an important issue, where education has a significant role. This approach is evident in the concepts of "a knowledge society" and "a knowledge economy". These theories explain that the development potential of education depends on the achieved level economic development, political and socio-cultural capital and other factors. Theories on education came upon some criticism: generous investment in the education of experts did not result in their retention, and education knowledge quickly becomes obsolete. For this reason, there is a redefinition of the concept of education theory, which is based on the idea of lifelong learning,

in response to the rapid global, technological, economic, political and cultural changes. As a result, the education of adult is affirmed, through lifelong learning and non-formal education, which is particularly important in terms of demographic ageing. From there is an importance of the role of education for the development of certain areas. In development theory, human resources occupy an important place, because only by improving the quality of human resources can act on social development (Pastuović, 2012).

Educational characteristics of the Serbian border municipalities are presented through literacy, computer literacy and educational attainment, by gender, age, type of settlement and regional affiliation. The analysis is based on Census data 2011, with a comparison of the census data from 1991-2002, and reference group consists of the average of the Republic of Serbia³. The population aged 20-64 years is in the focus because most of the population aged 15-20 years is still attending school. This population is differentiated into three fifteen-year age groups, which observe differences in their level of education. An indicator that points to existing human capital is also used, and it means the share of the population with tertiary education in the population older than 25 years, and the share of people with tertiary education in the group aged 30–34. The value of the modified Laeken indicators⁴ is also used. One of the three Laeken indicators in education makes the proportion of working age population with low education (Government of the Republic of Serbia, 2012). Published statistical data do not provide an opportunity for calculation of these indicators at the municipal level, but we can calculate the modified value, a participation of the population that has a three-year high school or less in the population older than 15 years. This is important because specified level of educational attainment is considered the threshold of risk of social exclusion and marginalization in the European framework (Petrović, 2011).

To point out the diversity of border municipalities, problems and potentials of certain municipalities for future development, the typology of municipalities is made, for which we used the average level of education of the population, expressed through the index: EMN = \sum Lj Sj (j \in {1,2,3} is achieved level of education, Lj is percentage of the population with a certain degree of education, Sj is an education category). For people with primary education S1=0; for secondary S2=1, for tertiary education S3=2 (Jokić, Dželebdžić & Petovar, 2015; Rodríguez-Pose & Tselios, 2011). The values that we got, group border

³ There are methodological problems in the form of incomplete results for the municipalities of Bujanovac and Preševo, where the Albanian population boycotted the Census in 2011.

⁴ Laeken indicators are an instrument for standardise measuring of a degree of social inclusion at EU level (Government RS, 2012).

municipalities into five groups. By calculating this index, we can easy compare these municipalities, both in relation to the average of the Republic of Serbia and between the municipalities themselves. The average level of education is calculated for the population aged 20–64 years, and for three age groups within this population.

The development of border municipalities

The development is not measured only by economic indicators. But the economic perspective has been defined as a basis when determining the level of development. National income and unemployment rate are the most representative indicators. This work is designed to educate, and because of its role in the definition of underdevelopment, it is necessary to consider initial indicators in detecting underdeveloped areas. According to indicators of economic development, Serbia belongs to the group of less developed countries, but within it, there are huge development discrepancies. Based on economic indicators, border municipalities are characterized as underdeveloped or areas with specific development problems, where there are many structural and demographic problems. Next to unadjusted economic structure and lack of human resources, border position has a huge limiting factor in development. These municipalities have underdeveloped transport infrastructure and a lower level of social and economic development (Vuković, 2009). These are characterized by high share of rural population and further along the process of demographic ageing, as evidenced by studies of border municipalities to Bulgaria (Gigović, 2010; Radovanović & Gigović, 2010; Petrović, 2011), in Banat (Ivkov-Džigurski, Bubalo-Živković & Pašić, 2010) and in Srem (Đerčan, Lukić, & Bubalo-Živković, 2011). The border areas in other countries are at a lower level of development compared to the national average, which can be confirmed by the examples of Romania and Bulgaria (Săgeată, Dumitrescu & Damian, 2010), Germany (Hachmöller, 2001) and Argentina (Schmidt, 2007).

Data on the level of development of municipalities (2014)⁵ extract ten Serbian border municipalities, where the level of development is 50% lower than the national average, five municipalities have development level 50–60%, while the largest number of municipalities have development level 60–80% of the national average. Ten municipalities have development level higher than 80% of the average, while only five border municipalities have a level of development above the national average (Official Gazette of the Republic of Serbia, 2014). Seven municipalities that have been the bearers of economic development are

437

⁵ Determination of the level of development is done based on the value of GDP per capita in the region in relation to the national average for the reference period.

devastated, and today have a high proportion of unemployed and have specific developmental problems (Republic Development Bureau [RDB], 2009).

Characteristics of educational structure of the population in Serbian border municipalities

Considering elements of the economic development of the border municipalities, it is important to look at the educational structure of the working age population. These municipalities are improving the educational structure of population in the period 1991–2011, which is reflected in the reduction of share of the population without any education (from 13% to 4%), with incomplete primary and primary education (from 30% to 16%) and increasing share of population with secondary (from 25% to 44%) and tertiary (from 5% to 10%) education. We cannot ignore the impact of mortality because uneducated people are older and dying. However, in the last inter-census period, some border municipalities have different trends, increasing the share of persons with basic and reducing the share of people with secondary education (municipalities of Bujanovac, Veliko Gradište and Tutin).

Census data from 2011 showed that the biggest part of border municipalities population, aged 20–64, have secondary education, then primary education. Shares of modalities of education are significantly different between the border municipalities. The index of the average level of education clearly differentiated border municipalities in five groups. This typology represents a kind of "assessment" on whether education is potential or obstacle of the development of Serbian border municipalities.

I The first group consists of the municipality of Užice, with a level of education above the national average, with a high share of people with secondary and tertiary school than Serbian average, and smaller share with primary education. II The second group⁶ has a smaller share of people with high and higher education, while other modalities of education are more numerous compared with Serbia.

III The third group has a higher percentage of people with primary and secondary education, compared to persons with a tertiary level of education.

⁶ II: Pirot, Vršac, Priboj, Subotica, Srem. Mitrovica, Sombor, Šabac, Loznica and Bač. Palanka; III: M.Zvornik, Kikinda, Dimitrovgrad, Apatin, Zaječar, Odžaci, Prijepolje, Čajetina, Surdulica, Knjaževac, Bosilegrad and Šid; IV: Plandište, B. Crkva, Majdanpek, N. Kneževac, Sečanj, Babušnica, Preševo, Kladovo, Bajina Bašta, N. Crnja, Sjenica, Kanjiža, Čoka, Negotin, Ljubovija, Žitište and Trgovište; V: Crna Trava, Bač, Bogatić, Bujanovac, Golubac, V. Gradište and Tutin.

IV The fourth group has very low percentage of people with high and higher education.

V The worst-ranked municipalities have very high percentage of people with no education or incomplete primary education.

Table 1. Classification of Serbian border municipalities towards the educational structure of the population. Census 2011

	Number of municipalities	popula	Educational attainment of the population (%)			
Type of municipality		Age groups	Without & incomplete primary school	Educational attainment		
				Primary	Secondary	Tertiary
The I group Above average	1	20-64	10.6	20.1	53.1	15.9
		20-34	0.4	6.9	73.4	19.1
		35–49	0.5	14.4	65.8	19.1
		50-64	5.3	24.9	52.1	17.5
The II group Relatively good 90–100%	9	20-64	14.2	22.2	50.6	12.7
		20-34	2.6	11.2	69.7	16.3
		35–49	2.5	18.7	63.7	14.9
		50-64	10.3	25.4	50.3	13.7
701 III		20-64	18.1	24.8	46.2	10.6
The III group Bad	12	20-34	3.4	12.5	69.1	14.8
80–90%	12	35–49	3.3	21.9	62.5	12.1
80-90%		50-64	11.7	31.5	44.6	11.9
Th - IV	17	20-64	22.0	27.7	41.9	7.9
The IV group Very bad 70–80%		20-34	6.0	17.0	65.3	11.3
		35–49	6.4	27.3	56.8	9.0
		50-64	17.3	32.9	39.8	9.4
The V group Extremely bad 55–70%	7	20-64	25.9	32.0	35.0	6.7
		20-34	6.5	27.1	56.6	9.5
		35–49	6.9	33.5	51.4	7.8
		50-64	22.2	37.9	31.4	8.1
Average bordering municipalities	46	20-64	7.1	22.2	57.0	13.3
		20-34	3.7	14.3	67.1	14.6
		35-49	3.7	22.3	60.5	13.2
		50-64	12.8	28.4	46.0	12.4
		20-64	5.3	17.4	58.2	18.7
Serbian average		20-34	2.6	10.8	66.5	19.8
		35-49	2.6	16.6	61.3	19.1
		50-64	10.1	23.8	48.3	17.4

Source: Statistical Office of the Republic of Serbia (2011), Special Data Processing

The border municipalities have a more unfavorable educational structure of the population aged 20–64, compared to the national average. Only Užice has a favorable educational structure in relation to Serbia, on education as a development resource can count both developed and municipalities with large urban centers, such as Pirot, Vršac, Sremska Mitrovica, Sombor, Šabac and

Loznica. These two groups of municipalities are developed, larger in terms of population, with a larger proportion of the urban population, but also have a favorable geographical position. The third group consists of the municipalities that were developed, while precisely municipalities which have a low level of development have the least favorable educational structure. Municipalities with the least favorable educational characteristics are Crna Trava, Bač, Bogatić, Bujanovac, Golubac, Veliko Gradište and Tutin.

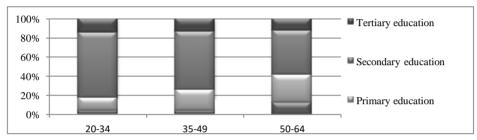


Figure 1. Population of border municipalities, by educational attainment and age, Census 2011 (Source: Statistical Office of the Republic of Serbia, 2011, Special Data Processing)

For the purposes of this analysis, the population of border region aged 20–64 is grouped into three age groups, which indicate differences in their level of education. The younger working-age population has a much more favorable educational structure in relation to the population that is leaving the working group, in all types of municipalities. Group aged 20-34 years has the best educational structure and represents a potential for development. Most of the people in this group have a secondary school, and share of people with primary or tertiary education is, respectively, lower or bigger than Serbian average. It should be borne in mind that part of the population still attending school. In the next group aged 35-49 years, there are smaller shares of secondary and tertiary education, and bigger share of people with primary education compared to the previous group. This category is important because of the work experience acquired, which in combination with the knowledge can represent a significant mover of growth. In the last age group, 50–65 years, there are more people with primary education than in other groups, while there are significantly lower shares of people with secondary and tertiary education.

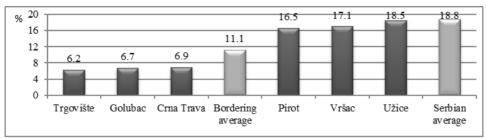


Figure 2. Share of people with tertiary education in population aged 25 years and more, in selected Serbian border municipalities, Census 2011 (Source: Statistical Office of the Republic of Serbia, 2011, Special Data Processing)

The share of the population with tertiary education in the population older than 25 years is an indicator that tells us about the available human resources as well as potential drivers of the development of a particular area (Nejašmić & Mišetić, 2010). In addition to other factors that influence the educational structure, there is also the influence of the availability of higher education institutions. The population of border region has 11.1% on average with tertiary education, in the population older than 25 years (Serbia 18.8%).

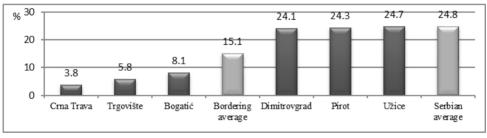


Figure 3. Share of people with tertiary education in population aged 30—34 years, in selected Serbian border municipalities, Census 2011 (Source: Statistical Office of the Republic of Serbia, 2011, Special Data Processing)

One of the goals of the Strategic Document "Serbia 2020" (Government RS, 2010) is to increase the share of people with tertiary education in the group aged 30–34 years to 30%, until 2020. According to Census data (2011), a share of people aged 30–34 years with tertiary education were 25% in Serbia, while that value in border area was 15%.

Lower educational competence of border region population is confirmed by calculation of modified Laeken indicator. The lowest educational attainment has municipalities Golubac, Veliko Gradište, Trgovište, Ljubovija and Tutin, while the most favorable education qualification has municipality Užice, which has a value of the Laeken indicator above the national average.

Table 2. The value of the modified Laeken indicator in Serbian border municipalities, according to

Type of municipality based on educational level	Value of the modified Laeken indicator (%)		
The I group	54.5		
The II group	59.6		
The III group	63.0		
The IV group	68.8		
The V group	72.6		
Average bordering municipalities	65.7		
Serbian average	53.7		

Source: Statistical Office of the Republic of Serbia (2011), Special Data Processing

The level of education of women is lower in relation to men, as in border region so on the state level. Women with primary education are twice more numerous than men, because they are mainly concentrated in the old population and women live longer than men. The relationship between men and women with primary education is approximately equal, while men have a higher proportion among those with secondary education, and women in a group of people with tertiary education, especially in the younger age groups. The urban population has better educational achievements than rural population, which is the characteristic of other municipalities in Serbia too. The biggest difference is in the category of highly educated, whose share is three times higher in urban areas. Border municipalities in Vojvodina Region have favorable educational level than municipalities in Šumadija and Western Serbia Region, which is much more favorable compared to the municipalities in Southern and Eastern Serbia Region. The share of highly educated is equable across regions (about 10%), while the share of people with secondary education in Southern and Eastern Serbia Region (48%) is lower than in other regions (54%), but the share of people with primary education is higher (39% compared to 34%).

Table 3. General and computer literacy of the population in Serbian border municipalities, according to types of municipalities, Census 2011.

Type of municipality based on	Literacy of the border municipalities (%)		
Type of municipality based on educational level	Illiterate persons	Computer literate persons	
The I group	1.4	36.3	
The II group	1.9	30.8	
The III group	2.5	25.7	
The IV group	3.6	22.4	
The V group	4.5	18.9	
Average bordering municipalities	3.1	24.7	
Serbian average	2.0	34.2	

Source: Statistical Office of the Republic of Serbia (2011), Special Data Processing

The illiteracy in Serbian border area is constantly decreasing, primarily due to demographic reasons (mortality of population). The average share of illiterate persons decreased from 8.4% (1991) to 5.9% (2002) and 3.1% (2011), over the last three censuses. However, on average the population in border areas still has a higher proportion of illiterate persons in relation to Serbia (2.0%), primarily due to the age composition of the population. Most of the border municipalities (32 of 46) have a higher share of illiterate persons than the national average (SORS, 2013). Border municipalities in Southern and Eastern Serbia Region have the biggest share of illiterate persons: Bujanovac, Crna Trava, Trgovište, Babušnica, Kladovo, Preševo and Surdulica. Illiterate persons are more numerous in municipalities with an advance in process of population ageing. In this sense, illiteracy is undeniably an obstacle to development, but it is also a consequence of past times and traditional forms, concentrated in the old population. The made classification of border municipalities shows the differences of literacy, too.

The share of a computer literate person in border area is about 10% on average lower than Serbian average value. Computer literate persons are often men, concentrated in urban settlements.

Problems and questions of education in border municipalities

Based on the analyzed indicators of education, it has been confirmed that border municipalities have a lower level of education in relation to the Serbian average. with significant inter-municipal and regional differences. Border municipalities in Vojvodina Region have more favorable educational level than municipalities in Šumadija and Western Serbia Region, which is much more favorable compared to the municipalities in Southern and Eastern Serbia Region. Larger municipalities and urban centers in the border region have more favorable educational characteristics, which can contribute to the future development of this area. The length of a frontier status of the municipality has great importance, as well as the relations with the neighboring country. For example, the municipality of Užice today relies on "a new frontier", and it was an important regional centre in the former Yugoslavia, therefore has a more favorable educational structure of the Serbian average. Subotica is an example of border municipality with a long tradition and stable cross-border cooperation. On the other hand, municipalities with a smaller number of the population, often with the problem of demographic ageing, have unfavorable educational structure and they represent the limit of future development.

Then, there are significant differences of bordering municipalities in relation to the development and economic functions, which is reflected directly in the educational structure of the population. This is corroborated by the fact that municipalities with developed educational function have a more favorable educational achievement. Some border municipalities (Golubac, Plandište and Žitište) have no secondary schools, while developed municipalities have several secondary schools: Sombor, Vršac, Kikinda, Subotica, Sremska Mitrovica, Užice, Šabac, Zaječar and Pirot (SORS, 2013). In these municipalities, there is the biggest share of persons with a tertiary education. Young people emigrate from the underdeveloped area, in order to acquire education and employment. All border municipalities except Subotica, Vršac and Čajetina have negative values of the average net migration rate (in period 2002–2011), and age profile of migrants indicates the emigration of young people. The population aged 15-24 years makes 22% of the emigrant people, and people aged 30-34 make 30% (SORS, 2014).

Unfavorable educational structure complicates employment of population in border areas, which confirms the significance of education and investment in human resources. This region has a high level of unemployment, and long-term unemployed population includes lower educated persons, which further exacerbates their position in the labor market⁷. Based on data from the National Employment Service of the education level of unemployed persons for the year 2012, in some border municipalities, there were 37% persons with primary education in total unemployed people, 26% with secondary and only 6% with tertiary education (National Employment Service [NES], 2012).

As in most municipalities, it is difficult for young qualified people in border region to get a job. The problem of unemployment is a result of economic heritage, low economic activity, but also the impact of the global crisis (Ristanović & Barjakarević, 2014). A disharmony between supply and demand of labor increases the average waiting time for employment, knowledge and acquired skills expire, and the quality of workforce has reduced. One of the serious problems in education is the quality of education, and (in) applicability of the acquired knowledge in practice (Pavlović & Šabić, 2004). The education system must be adapted to the needs of the local economy and provide constant retraining opportunities (Jovanović, 2011). A modern society characterized by a

⁷ The unemployment rate points to the heterogeneity of border municipality (24% on average, from 7% in Crna Trava, to over 40% in Bujanovac, Preševo and Surdulica) and several specific features. For example, the municipality of Crna Trava has the oldest population and the lowest unemployment rate (about the EU average), which is explained by the structure of employees by activity (high proportion of persons engaged in agricultural activities).

rapid transition to "knowledge society" is faced with an ageing workforce, while economic growth requires a constant training and further education of adults. Bearing in mind the demographic situation in Serbia there are challenges with the new approach to learning and education. Depopulation trends disable quantitative increase of resources in the working age population. It is, therefore, important to raise the creative and production quality of human resources based on education. Due to the increasing development of society, there is talk about lifelong learning with the aim of improving knowledge, skills and abilities of the population (Ralević, Đaković, Sujić, Kiurski, & Nedović, 2012). Adult education is a key driver of economic growth and social development based on knowledge. In this sense, improving the knowledge and skills of adults in border municipalities, which are usually in the later process of demographic ageing, can favorably affect their development.

Conclusion

The peripheral geographical position largely determines the lower level of development of border municipalities in the Republic of Serbia. However, numerous factors have contributed to the diversity of these municipalities in terms of the level of economic development and demographic characteristics, but this heterogeneity is reflected on the level of education of the population. Given that border municipalities cannot be seen as a homogeneous whole, the typology of these municipalities based on the index of educational level is made. This index places in relation shares of persons with primary, secondary and tertiary education, and clearly differentiates municipalities in terms of education level. The results show that these municipalities are characterized by a lower level of education than Serbian average, and that there are significant regional and inter-municipal differences. Developed border municipalities with larger urban centers and developed economic functions can count on education as a development resource. Men and urban population have more favorable educational structure. This is corroborated by the fact that municipalities that have not urban settlements belong to the group of municipalities with unfavorable educational characteristics. Also, younger people have a more favorable educational structure, which represents a potential for development. But, in the border region, there is a large proportion of younger and middle-aged people with lower levels of education, especially in rural areas and underdeveloped areas. Although younger people have a more favorable educational structure in comparison to the older population, high proportion of young persons with a primary level of education than the Serbian average shows that there is considerable scope for encouraging the development of education in the future. A greater proportion of illiterate persons in relation to the national

average represent an obstacle to the development of these municipalities. The illiterate population is mostly middle-aged or old. However, the proportion of the illiterate population in the younger age groups is higher in the border municipalities compared to the national average. The illiterate persons are usually women and persons who live in rural border areas. Despite progress in the formal education process, demographic old municipalities further have unfavorable educational characteristics. There is a third of the population in border municipalities on average with unfavorable educational structure, and these municipalities cannot count on education as a resource. The low share of the population with tertiary education does not contribute to the economic and cultural development, but also represents a risk factor of social exclusion and poverty. Just persons with lower levels of education constitute the long-term unemployed people, which further exacerbate their position in the labor market. That is why is very important the role of non-formal education and lifelong learning. Decentralization of educational institutions and retraining of older workers can give a large contribution to improving the level of education and qualification structure of the population (Jokić & Petovar, 2009). Bearing in mind the demographic structure of the border municipalities, improvement of existing human resources is crucial for the overall development of border areas.

References

- Branković, J. (2011). Education, Guide to the Strategy Europe 2020. Belgrade: European Movement in Serbia.
- Gigović, Lj. (2010). The ethnic composition of the population of border regions of Serbia and Bulgaria. *Globe, Serbian Geographical Society*, 35(4), 31–42.
- Government of the Republic of Serbia (2010). *Koncept razvoja Republike Srbije do 2020. godine.*Nacrt za javnu raspravu. Belgrade. Retrieved from http://www.srbija.gov.rs/extfile/sr/145381/koncept_razvoja_srbije_do_2020.pdf
- Government of the Republic of Serbia (2012). *Monitoring Social Inclusion in Serbia*. Belgrade: Social Inclusion and Poverty Reduction Unit and Republic Statistical Office. Retrieved from http://www.inkluzija.gov.rs/wp-content/uploads/2013/07/Monitoring-Social-Inclusion-in-Serbia-Aug-2012-ENG-revizija.pdf
- Gvozdenović, S. (2005). Filozofija, obrazovanje, nastava. Podgorica: Institute for textbooks and teaching aids.
- Derčan, B., Lukić, T., & Bubalo-Živković, M. (2011). Regional importance, problems and potentials of the border area of Srem. *Collection of papers Faculty of Geography at the University of Belgrade*, 59, 131–156. Retrieved from http://zbornik.gef.bg.ac.rs/pdf/radovi/27.pdf
- Hachmöller, G. (2001). Marginality in East Germany: a case study. 2001 Annual Conference of IGU Commission on Evolving Issues of Geographical Marginality in the Early 21st Century

- *World*, Stockholm, June 25th July 1st 2001. Retrieved from http://literatur.vti.bund.de/digbib_extern/zi025321.pdf
- Ivkov-Džigurski, A., Bubalo-Živković M., & Pašić, M. (2010). Changes in the number of the population of Banat at the end of 20th century with a review on the border municipality. *Zbornik Matice srpske za društvene nauke*, 131, 305–317. doi: http://dx.doi.org/10.2298/ZMSDN1031305I
- Jokić, V., & Petovar, K. (2009). Social Exclusion and Education. Arhitektura i urbanizam, 27, 46–56. Retrieved from http://iaus.ac.rs/upload/download/arhitektura_i_urbanizam/AU%2027.pdf
- Jokić, V., Dželebdžić, O., & Petovar, K. (2015). Human capital and its spatial distribution as limiting factors for the balanced development of Serbia. *Spatium*, *34*, 46–55. doi: http://dx.doi.org/10.2298/SPAT1534046J
- Jovanović, N. (2011). Changes in educational profiles and modernization of Serbia. *New Serbian Political Thought, Special edition, XIX*(2), 151–162.
- National Employment Service (NES) (2012). Izveštaj o radu Nacionalne službe za zapošljavanje za 2011 godinu. Belgrade: National Employment Service. Retrieved from http://www.nsz.gov.rs/live/digitalAssets/0/937_izve_taj_o_radu_nsz_za_2011._godinu.pdf
- Nejašmić, I., & Mišetić, R. (2010). A Synthetic Indicator of Demographic Resources: Contribution to the typology of the Croatian State. *Croatian Geographical Bulletin*, 72(1), 49–62. Retrieved from http://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=85360&lang=en
- Official Gazette of the Republic of Serbia (OGRS) (2012). *Strategija razvoja obrazovanja u Srbiji do 2020. godine*. Belgrade: Official Gazette of the Republic of Serbia (107/2012). Retrieved from http://www.ff.uns.ac.rs/Files/StrategijaObrazovanja.pdf
- Official Gazette of the Republic of Serbia (OGRS) (2014). *Uredba o utvrđivanju jedinstvene liste razvijenosti regiona i jedinica lokalne samouprave za 2014. godinu*. Belgrade. Official Gazette of the Republic of Serbia (104/2014). Retrieved from http://gradjevinskedozvole.rs/Files/00039/Uredba-o-utvrdjivanju-jedinstvene-listerazvijenosti-regiona-i-jedinica-lokalne-samouprave-za-2014-godinu.pdf
- Pavlović, M., & Šabić, D. (2004). Obrazovna struktura stanovništva kao faktor razvoja stare Raške. *Ekonomika*, 50(4–5), 429–435. Retrieved from http://scindeks.ceon.rs/article.aspx?artid=0350-137X0405429P
- Pastuović, N. (2012). Obrazovanje i razvoj: Kako obrazovanje razvija ljude i mijenja društvo, a kako društvo djeluje na obrazovanje. Zagreb: Institute for Social Research in Zagreb, The Faculty of Teacher Education, University of Zagreb, 18–23. Retrieved from http://www.idi.hr/wp-content/uploads/2014/03/oir_uvod.pdf
- Petrović, J. (2011). Literacy level and the educational structure of the population living in the border municipalities in Eastern and Southeastern Serbia: A potential for development or a factor of social exclusion? *Teme*, 35(4), 1495–1520. Retrieved from http://teme2.junis.ni.ac.rs/public/journals/1/previousissues/teme4-2011/teme%204-2011-19.pdf

- Pešikan, A., & Antić, S. (2011). Analysis of the characteristics and problems of primary education in Serbia in the light of the future development of the country. *New Serbian Political Thought, Special edition, XIX*(2), 69–94.
- Predojević-Despić, J. (2011). Prostorne karakteristike emigracije iz Srbije: od gastarbajtera do migrantskih mreža. *Demografski pregled*, 42/2011. Retrieved from http://www.minrzs.gov.rs/files/doc/porodica/Demografski%20pregled/2011/42%20Prostorne %20karakteristike%20emigracije%20iz%20Srbijeod%20gastarbajtera%20do%20migranstkih%20mreza.pdf
- Ralević, N., Đaković, V., Sujić, M., Kiurski, J., & Nedović, Lj. (2012). Place, role and importance of education and learning throughout life Sustainable Development Strategy of the interactive environment. XVIII Collection development trends: "The internationalisation of the University'". Kopaonik, February 27th–March 1st 2012.
- Radovanović, S., & Gigović, LJ. (2010). Demographic processes in the border region of Serbia to Bulgaria. *Demography*, *VII*, 105–128. Retrieved from http://www.gef.bg.ac.rs/wp-content/uploads/2013/04/Demografija-7.pdf
- Republic Development Bureau (RDB) (2009). Regional development of Serbia. Belgrade: RDB.
- Ristanović, V., & Barjaktarević, S. (2014). The dynamics of the labour market in Serbia. Economics, *Journal of Economic Theory and Practice*, 16(3), 1–26.
- Rodríguez-Pose, A., & Tselios, V. (2011). Mapping the European regional educational distribution. *European Urban and Regional Studies*, 18(4), 358–374. doi: http://dx.doi.org/10.1177/0969776411399345
- Săgeată, R., Dumitrescu, B., & Damian, N. (2010). Cross-Border Cooperation in the Danube Lined Romanian-Bulgarian Border Space. Geographical Considerations. *Geographica Pannonica*, 14(2), 67–75. Retrieved from http://www.dgt.uns.ac.rs/pannonica/papers/volume14_2_4.pdf
- Schmidt, M. (2007). The effects of the argentine national crisis. Challenges to face new socio-economic marginalization processes. *Issues in Geographical Marginality Regional Examples*. South Africa, Grahamstown: Rhodes University, 48–57.
- Statistical Office of the Republic of Serbia (SORS) (2013). *Municipalities and regions of the Republic of Serbia 2012*. Belgrade, Serbia: Statistical Office of the Republic of Serbia. Retrieved from http://pod2.stat.gov.rs/ObjavljenePublikacije/G2012/pdfE/G20122008.pdf
- Statistical Office of the Republic of Serbia (SORS) (2014). *Demographic statistics of the Republic of Serbia*. Belgrade: Statistical Office of the Republic of Serbia.
- Statistical Office of the Republic of Serbia (SORS). 2011 Census of population, households and dwellings in the Republic of Serbia. Belgrade: Statistical Office of the Republic of Serbia.
- Vuković, D. (2009). Low competitiveness of undeveloped areas: "narrow throat" of Serbian economy, Geographic Institute "Jovan Cvijić" SASA, 59(2), 189-204. Retrieved from http://www.gi.sanu.ac.rs/site/media/gi/pdf/en/journal/059_2/gijc_zr_59_2_012_d_vukovic.pdf