

THE EFFECT OF LABOR FORCE ON THE DEVELOPMENT OF THE BORDER AREA OF THE REPUBLIC OF SERBIA

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Abstract

Issues of uneven regional development and demographic disorders have become increasingly significant in scientific literature, because the disparities in the development that were observed only at the macro level, now are reflected at the micro level. In order to present the regional disproportions in Serbia, the workforce of the border municipalities was selected. The border area is faced with limited development opportunities. In addition to the peripheral location, there are numerous development restrictions in terms of demographic and socio-economic problems. Although the most of the border municipalities are underdeveloped with adverse demographic characteristics, these municipalities can not be considered as a unified unit. The aim of this paper is to examine the structure of the labor force, as the basis for development, in order to determine the distribution and availability of labor in Serbian border areas, the potential for development. For the analysis were used the indicators of the workforce. Based on the indicators of social development the lower level of development of border municipalities is confirmed, and a significant contrasts in the border area is pointed out. The result is a comprehensive analysis of the labor force in the border area, which serves as a platform for the identification of areas with favorable demographic and developmental characteristics, and on the other side, there are underdeveloped municipalities with a disrupted demographic structure and unfavorable forecasts, which clearly confirms the existence of disproportion in the Serbian border region. Recognizing the diversity of the border area in terms of the labor force is essential for planning future development.

Key words: labour force, border area of the Republic of Serbia, inequality, unemployment, underdevelopment.

УТИЦАЈ РАДНЕ СНАГЕ НА РАЗВОЈ ПОГРАНИЧНОГ ПРОСТОРА РЕПУБЛИКЕ СРБИЈЕ

Апстракт

Питања неравномерности регионалног развоја и демографских поремећаја све више добијају на значају у научној литератури јер неравномерности у разво-

ју које су се уочавале на макро нивоу сада су изражене и на микро нивоу. Погранични простор је суочен са ограниченим развојним могућностима. Поред периферног положаја, постоје бројна развојна ограничења у погледу демографских и социо-економских проблема. Иако се за пограничне општине може рећи да су неразвијене, са неповољним демографским карактеристикама, погранични простор не можемо посматрати као јединствену целину. Циљ рада јесте да се сагледа структура радне снаге, као основе за развој, како би се утврдила дистрибуција и расположивост радне снаге пограничног простора Републике Србије, која представља потенцијал за развој. За потребе анализе коришћени су индикатори радне снаге. На основу показатеља друштвене развијености, потврђује се нижи степен развоја пограничних општина, али и указује на значајне разлике унутар пограничног простора. Резултат рада је свеобухватна анализа радне снаге у пограничном подручју, која служи као платформа за идентификацију подручја са повољнијим демографским и развојним карактеристикама, а са друге стране неразвијена подручја са нарушеном демографском структуром и неохрабрујућим прогнозама, што јасно потврђује постојање диспропорција у пограничном простору Републике Србије. Препознавање различитости пограничног простора у погледу радне снаге је од битног значаја за планирање будућег развоја.

Кључне речи: радна снага, погранични простор Републике Србије, неједнакост, незапосленост, неразвијеност.

INTRODUCTION

The complex socio-economic processes that took place in recent decades have affected the forming of a huge disparity of development in the Republic of Serbia. The problem of uneven development is explored quite a lot in the scientific literature, but this takes on greater importance only when undeveloped areas begin to affect the overall development of the country. Regional disparities in the Republic of Serbia, which were noticeable at higher territorial levels, are now noticed at lower territorial units, municipalities.

Border region of the Republic of Serbia is an underdeveloped and backward area, as confirmed by numerous studies (Grčić, 2002, p. 18; Đorđević, Todorović, Petrović, 2015, p. 20; Radovanović, Gigović, 2010, p. 126). Viewed as a whole, border municipalities have numerous limitations in the development: frontier status, adverse demographic characteristics expressed through depopulation and aging (characteristic of most municipalities), poor infrastructure and numerous constraints in the economy. However, those municipalities can't be viewed as a homogenous group, there is differentiation according to different areas.

Since the border area is an extremely sensitive space with an expressed problem of demographic aging, the subject of this paper is an economically active population of the border municipalities, with the aim to show the structure of the workforce, to determine the distribution and availability of the workforce in border areas and examine the impact of the labor force to the development of border areas of the Republic of Serbia. The study of the workforce, which is strongly influenced by unfavorable

demographic trends, determine which border municipalities have a favorable labor and provide a potential for development, and which have limitations. The population of the border municipalities is older than the population in other municipalities of the Republic of Serbia and significantly burdened with inactive population (pensioners), but the low rates of participation indicate to a great untapped potential. The main driver for the development of certain areas is population. Since people have been the core of economic activity, providing opportunities to employ people is vital for development.

METHODS

The territorial framework of research is made of the border municipalities of the Republic of Serbia (46), and the reference group consists of the municipalities that do not rely on the state border (without the territory of Kosovo and Metohija; municipalities of Preševo and Bujanovac were omitted because of incomplete census data). For the analysis of workforce, the following indicators were used: the utilization of contingent labor, activity rate, employment rate and structure of employees by sectors. The analysis of unemployment and demographic reserve of the labor force have special significance. Indicators of social development confirm a lower level of development of the border municipalities relative to the national average and point to significant differences between the border municipalities.

To test how the workforce affects to the level of development of border municipalities correlation and regression analyses were conducted in SPSS program. The level of development of border municipalities is an independent variable, while the socio-economic indicators are dependent variable: the rate of activity, the share of the population employed in the agricultural industry, the share of the population with higher education (RZS, 2013, Census 2011), the average earnings of the population (average 2013-2015), the level of investment (average 2012-2014) (RZS, 2013, 2014, 2015, Municipalities and Regions in the Republic of Serbia), the number of active and newly established companies and entrepreneurs, and the rate of risk of poverty (RZS, municipal profiles, 2015).

ANALYSIS OF WORKFORCE IN SERBIAN BORDER AREAS

The study of the workforce is important not only for demographic but also for economic research. Data on the dynamics structure and distribution of the economically active population are essential for policy formulation and efficient use of human resources in a particular area. The level of achieved development, the existence of the entire population and prospects for further economic prosperity depend on the labor supply and the level of engagement (Radivojević, 2006, p. 224).

The impact of demographic factors on the supply of labor is reflected in the size and age-sex structure of the work contingent. Since the workforce has been a demographic framework for creating labor, in terms of intensive demographic aging, the volume of working population has reduced, and therefore the supply of labor. The intensity of activation of the economically active population within the working population significantly affects the size of the labor force. On the one hand, working age population and potential labor supply have decreased, and on the other hand, labor market conditions don't favor a greater activation of the population especially in the initial and final age groups within the working population (Radivojević, 2006, p. 225).

Table 1. The rate of utilization of workforce and the activity rate in border municipalities of the Republic of Serbia by sex relative to neighboring countries, Census 2011.

Average of border municipalities relative to neighboring countries	The rate of utilization of workforce (%)			The activity rate (%)		
	Total	Male	Female	Total	Male	Female
Macedonia	75,7	80,5	69,7	48,4	56,2	40,1
Bulgaria	71,6	75,3	66,9	42,5	50,3	34,7
Romania	58,2	65,4	49,4	36,4	45,7	27,5
Hungary	62,5	69,4	54,6	40,3	49,2	31,8
The Republic of Croatia	60,3	67,6	51,6	39,1	48,4	30,1
Bosnia and Herzegovina	63,4	71,9	53,4	41,3	50,8	31,9
Montenegro	57,0	66,7	45,7	36,6	45,5	27,5
Average of border municipalities	62,6	69,2	54,9	39,8	48,8	31,0
Average of the Republic of Serbia without border municipalities	64,6	69,6	59,0	41,7	48,6	35,1

Source: RZS, 2013, Census 2011, prepared by the author.

The rate of utilization of workforce in border municipalities is 2% lower than other municipalities of the Republic of Serbia, and differences are more expressed in female population. Differences between the municipalities on this indicator range from 50% (Tutin) to 93% (Trgovište)¹. Significant differences are observed relative to the neighboring country - a minimum rate of utilization of workforce have the municipalities that border with Montenegro, respectively the greatest have the municipalities that border with Macedonia.

The division of the population according to the activity criteria, as an expression of physiological possibilities of participation of the

¹ Differences between border municipalities of the Republic of Serbia in the rate of utilization of workforce range from 59% (Plandište) to 94% (Trgovište) for men, and from 32% (Tutin) to 90% (Trgovište) for women.

population in the labor process, reflect a range of demographic, economic and social factors of the level of overall development (Vojković, 2007, p. 127). The general rate of activity in border municipalities is on average 40% (42% in other municipalities of the Republic of Serbia). 32 municipalities have a lower overall rate of activity compared to the reference group². The population is the least economically active in Tutin, Sjenica, Golubac and Sečanj (32-33%), while the largest proportion of the economically active population have the municipalities of Trgovište (62%), Bosilegrad and Bajina Bašta (56%). The reasons for the low activity rate are the young age structure (Tutin, Sjenica) and expressed aging process (Crna Trava). Areas with higher activity rates are the extremely agricultural municipalities (Trgovište, Bosilegrad, Bajina Bašta etc.) Economic activity of population is the smallest in the municipalities that border with Montenegro and Romania and the largest in the borderline with Macedonia.

The economic activity rate of men in the border municipalities (48%) was not significantly different compared to the average of other municipalities of the Republic of Serbia, while the level of economic activity of women (31%) is 4% lower compared to the reference group. In 17 border municipalities the economic activity of men is higher than in other municipalities of the Republic of Serbia, while 37 of the 46 border municipalities have a lower economic activity of women. The highest values of economic activity have the municipalities of Trgovište and Bosilegrad and minimal the municipalities of Sjenica and Tutin. The level of economic activity of men and women is the lowest in the municipalities on the borderline with Montenegro as well as Romania, and the highest on the border with Macedonia.

Many analyses confirm a decline in the number and share of the economically active population outside a workforce contingent (Radivojević, 2006, p. 231). There is no economically active population younger than 15 years according to the Census 2011, while the representation of the youngest age groups (15-19 and 20-24) in the active population is higher in border municipalities compared to other municipalities of the Republic of Serbia, in both sexes. The youngest age group is the most economically active in the border municipalities with Macedonia and Montenegro, and the least economically active in the borderlands with Bulgaria, which is about the average of other municipalities of the Republic of Serbia.

² Higher values of this indicator in relation to the reference value have the municipalities of Subotica, Šabac, Pirot, Čajetina, Prijepolje, Užice, Bajina Bašta, Ljubovija, Knjaževac, Bosilegrad and Trgovište.

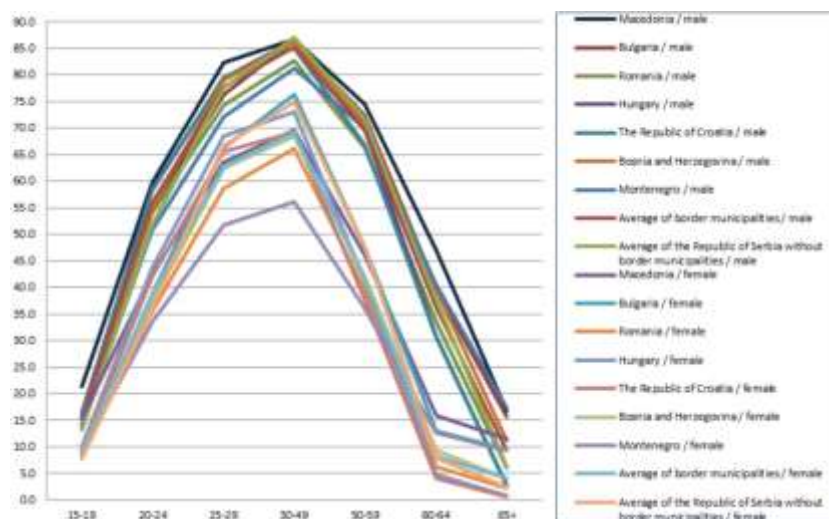


Figure 1. Age-specific activity rate in border municipalities of the Republic of Serbia by sex and age relative to neighboring countries, Census 2011.

Old people in the border municipalities are more economically active compared to the reference group (2,8% relative to 1,7%). Municipalities along the borders with the Republic of Croatia and Hungary have a smaller share of economically active people outside the reference group than other municipalities of the Republic of Serbia, while this share is about 8% on borderline with Bulgaria and Macedonia. The greatest economic activity of the elderly is in the municipalities Knjaževac, Bosilegrad (17%), Crna Trava (16%) and Trgovište (14%). This can be explained by a high proportion of the agricultural population, whose rate of economic activity is higher compared to a non-agricultural population, and the agricultural population is economically active even after leaving the working population. In all other age groups, border municipalities have a lower economic activity than other municipalities in the Republic of Serbia. Economic activity of men is higher in all age groups, and in all municipalities, and the differences in economic activity rates by sex were most pronounced in the municipalities which border with Montenegro, Bosnia and Herzegovina and Macedonia.

In conditions of intense demographic aging, which is especially noticeable in border municipalities, the question of the age structure of the economically active population becomes especially important because of the impact on the quality of the workforce (Radivojević, 2015, p. 228). The population aged 30-49 years, is on average 51% of the total number of the active population (other municipalities 53%). The rates of the economically active population are low at the beginning of the working population because of education, and also at the end of work contingent in accordance with the regulations of labor and labor relations, the share of the agricultural

population, the situation in an economy, but also the health status of those age groups (Radivojević, 2015, p. 229).

Economically Active Population that Perform Occupation

Employed persons or persons who perform occupation are the most important category of the economically active population. The employment rate in border municipalities is about 2% lower compared to other municipalities of the Republic of Serbia, minimum values have municipalities that border with Montenegro and the greatest with Bulgaria. Observed by municipalities, the employment rate of the population in the border municipalities ranges from 31% (Tutin) to 82% (Trgovište)³. The lower employment rate in border municipalities is a result of lower specific employment rates in all age groups 25-64 years except for the age groups 15-24 and over 65 years. In the age group 15-19 years, municipalities which border with Macedonia and Hungary have twice the rate of employment in relation to the reference group (4%), and in the age group 20-24 years border municipalities with Hungary (36%) have a higher rate of employment in relation to other municipalities of the Republic of Serbia (26%). The oldest population has the largest employment rate in the municipalities that border with Macedonia (26%; 4% in other municipalities of the Republic of Serbia). The oldest population has the highest specific rate of employment in Trgovište, Bosilegrad, Knjaževac, Bajina Bašta, Prijepolje, Ljubovija and Crna Trava. Men have higher employment than women in all age groups and all monitored municipalities.

Table 2. Employment rate of population in border municipalities of the Republic of Serbia by sex relative to neighboring countries, Census 2011.

Average of border municipalities relative to neighboring countries	Employment rate (%)		
	Total	Male	Female
Macedonia	57,0	62,7	49,7
Bulgaria	60,2	63,4	56,1
Romania	46,1	52,6	38,1
Hungary	50,5	56,1	44,0
The Republic of Croatia	44,2	50,2	37,1
Bosnia and Herzegovina	50,8	58,8	41,5
Montenegro	39,8	48,3	29,9
Average of border municipalities	47,9	53,7	41,2
Average of the Republic of Serbia without border municipalities	50,2	54,8	45,2

Source: RZS, 2013, Census 2011, prepared by the author.

³ From 43% (Surdulica) to 86% (Trgovište) in men; from 17% (Tutin) to 77% (Trgovište) in women.

The structure of the economically active population that perform occupation by activity in border municipalities is significantly different compared to other municipalities of the Republic of Serbia. More than a quarter of the population of the border municipality deal with agriculture (27%), while 17% of the population deal with manufacturing, and 11% with wholesale and retail trade (13%, 17% and 15% in other municipalities, respectively). Population in border municipalities also features a significantly lower proportion of employees in information and communication, professional, scientific and technical and other activities.

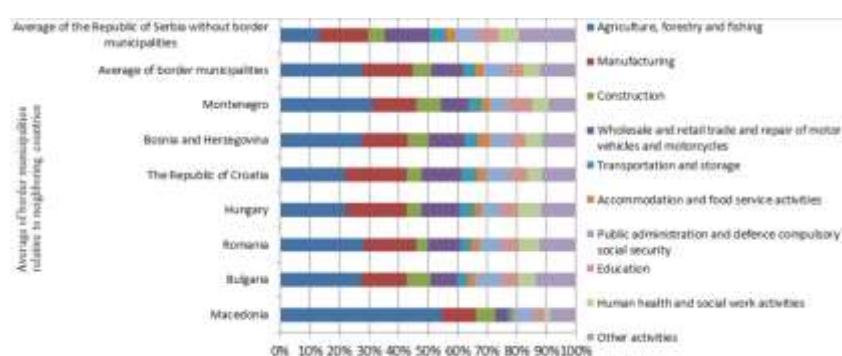


Figure 2. Structure of population by the industry in border municipalities of the Republic of Serbia by sex and age relative to neighboring countries, Census 2011.

Men are more likely to deal with agriculture and related activities, manufacturing, and transportation, while women are more likely to deal with human health, trade, art, and services activities. In the younger age groups there is a higher share of persons that deal with manufacturing, trade, public administration and other activities. About 90% of the population older than 65 years deal with agricultural and related activities, with no significant differences by gender.

The share of the population that deal with primary industry is the largest in the municipalities that border with Macedonia (54%), Montenegro (31%), Bulgaria and Bosnia and Herzegovina (27%)⁴. Agriculture and related activities are the least represented in the municipalities that border with Hungary and the Republic of Croatia (22%), in which there is a greater proportion of persons engaged in manufacturing and trade.

⁴ The high share of the agricultural population have the municipalities of Bogatić (59%), Bosilegrad (55%), Trgovište (54%), Knjaževac, Ljubovija, Zitiste (49%) and others.

Economically Active Population that do Not Perform Occupation

In addition to the economically active population that performs an occupation, labor supply makes up the economically active population that does not perform an occupation (unemployed persons). Border municipalities have a higher unemployment rate compared to the reference group. The average unemployment rate in the municipalities that border with Hungary and Romania is lower compared to other municipalities in the Republic of Serbia. It ranges from 19% in Macedonian border municipalities to 31% in Montenegrin border municipalities (from 19% in Hungarian border municipalities to 28% to Montenegrin border municipalities in male population, and from 19% to 26% in these municipalities in female population). Viewed by the municipalities, the unemployment rate is the highest in the municipalities of Preševo, Bujanovac, Surdulica (over 41%) etc, and the municipalities of Crna Trava, Bogatić, Trgovište have the least rate of unemployment (under 11%)⁵.

Table 3. Unemployment rate of population in border municipalities of the Republic of Serbia by sex relative to neighboring countries, Census 2011.

Average of border municipalities relative to neighboring countries	Rate of unemployment (%)			Structure of unemployed (%)	
	Total	Male	Female	seeking for the first job	used to work
Macedonia	27,9	24,2	33,9	53,8	46,2
Bulgaria	24,0	23,2	25,3	39,0	61,0
Romania	21,1	19,9	23,3	35,7	64,3
Hungary	19,2	19,2	19,2	29,4	70,6
The Republic of Croatia	26,7	25,9	28,1	32,7	67,3
Bosnia and Herzegovina	20,3	18,8	22,7	37,5	62,5
Montenegro	30,5	27,7	35,9	60,8	39,2
Average of border municipalities	23,5	22,1	26,0	39,6	60,4
Average of the Republic of Serbia without border municipalities	22,1	21,3	23,3	35,9	64,1

Source: RZS, 2013, Census 2011, prepared by the author.

Persons that seek their first job make up 40% of the total number of unemployed people (36% in other municipalities). The ratio of people who look for their first job and people who used to work is 61:39 in the municipalities that border with Montenegro, and 54:46 in the municipalities that border with Macedonia. The share of people that search their first job

⁵ The unemployment rates of men range from 7% in Crna Trava to 40% in Surdulica, and of women population from 8% in Crna Trava to 57% in Preševo.

make 61% of total unemployed people in municipalities that border with Montenegro.

There is a higher proportion of men to women among the unemployed (57:43 in border municipalities, respectively 55:45 in other municipalities), in both people that seek their first employment (54:46), and persons who are used to work (58:41). The higher proportion of men who have lost their job indicates that the job loss more often affected male population (Radivojevic, 2015, p. 228). Unemployment in border municipalities is the highest in the youngest age groups: 15-19 and 20-24 years, where the unemployment rate is 62% and 42%, and the first-time job seekers make 90% and 70% of total unemployed. In the higher age groups, the unemployment rate has reduced, since there are numerous persons who lost their job⁶.

The share of the economically inactive population of the total working age population makes a demographic reserve of the workforce. Dormancy of the working population in border municipalities (42%) is higher compared to other municipalities of the Republic of Serbia (42%), and in this regard, the border municipalities with Montenegro stand out (55%)⁷. Demographic reserves of the workforce have a particular importance in terms of intense demographic aging⁸ and low inflow of population in working age because it indicates the possibility of economic activation of the so far unused labor resources within the working population. This primarily refers to the female population, because they offer the greatest potential reserves of labor (Wertheimer-Baletić, 1973, p. 215).

RESULTS AND DISCUSSION

The process of transforming the economy and society pointed out regional disparities in Serbia, which are manifested in huge economic disparities (RZR, 2009, p. 75). Due to an uneven economic, demographic and social development, the four development groups of the municipalities in the Republic of Serbia have differentiated according to the level of development, compared to the national average. The border municipalities have isolated based on the level of development:

- >100%: Bačka Palanka, Vršac, Kanjiža, Subotica, Užice;

⁶ In the age group 30-49 the unemployment rate is 21% (19% men and 23% women) in the age group 50-59 years 21% (21% men, 22% women), and 60-64 years 18% (20 % men, 8% women). The share of persons who lost their job in the total number of unemployed persons by age groups is 70%, 85%, 83% respectively.

⁷ The rate of unused of the workforce in the municipalities that border with Romania is 50%, Republic of Croatia 46%, Bosnia and Herzegovina 45%, Hungary 44%, Bulgaria 42%, and at least 27% with Macedonia.

⁸ Border municipalities are faced with an advanced demographic aging, and the value of the average age of municipalities that border with Bulgaria is 47, 44 Romania, Hungary, the Republic of Croatia and Bosnia and Herzegovina 43, with Macedonia 41 years.

- 80-100%: Apatin, Zaječar, Kikinda, Majdanpek, Novi Kneževac, Pirot, Sombor, Sr. Mitrovica, Čajetina, Šabac;
 - 60-80%: Bajina Bašta, Bač, B. Crkva, Bogatić, V. Gradište, Žitište, Kladovo, Loznica, Ljubovija, Negotin, N. Crnja, Odžaci, Plandište, Sečanj, Čoka, Šid;
 - 50-60 %: Dimitrovgrad, Knjaževac, Priboj, Sjenica, Crna Trava;
 - <50% (devastated areas): Babušnica, Bosilegrad, Bujanovac, Golubac, M. Zvornik, Preševo, Prijepolje, Surdulica, Trgovište, Tutin.
- (GRS, <http://www.regionalnirazvoj.gov.rs/Lat/ShowNARRFolder.aspx?mi=171>).

To test the impact of the workforce to the level of development of border regions in the Republic of Serbia correlation and regression analysis were done.

Table 4. Results of correlation and regression analysis

The values of regression analysis			Anova	
r	r ²	1- r ²	F	Sig.
,844	,713	,287	9,378	,000
The significance of variables in the regression analysis				
Variables	T Test	Regression analysis	Correlation analysis	
	Sig.	Unstandardized coefficient B	Pearson coefficient	Sig.
The level of development	,000	1,262	1	/
The number of unemployed per 1000 persons	,000	-,007	-,638	,000
Economic activity rate of population	,000	-,022	-,076	,624
The share of the population employed in agricultural activities	,000	,020	-,348	,021
The average earnings	,000	,000	,652	,000
The number of active companies and entrepreneurs	,000	,000	,454	,002
Number of newly established companies and entrepreneurs	,000	-,001	,424	,004
The level of investment	,000	9,600E-08	,594	,000
The share of the highly educated population	,000	,016	,469	,001
Risk-of-poverty rate	,000	-,031	-,688	,000

Source: RZS, 2013, Census 2011, prepared by the author.

The coefficient of a simple linear correlation ($r = 0.844$) indicates the existence of a high positive correlation between the dependent (level of development of the municipalities) and independent variables (a group

of socio-economic indicators). The coefficient of determination ($r^2 = 0.713$) means that 71.3% of the variability of the sample variability can be explained by independent variables. The value of F in the Anova analysis $F(9,34)=9,378$, $p<0.05$ indicates that independent variables statistically well predict the dependent variable.

Based on the results of the T-test, we conclude that all variables are statistically significant for the research. Negative values of the non-standardized coefficient B determine inverse regression relationship between the level of development and independent variables: the number of unemployed persons per 1000 persons, the rate of economic activity, the number of newly established companies and entrepreneurs and risk-of-poverty rate.

The bond strength between the dependent and independent variables is determined by the correlation analysis. The high level of Pearson's coefficient indicates a strong correlation between the levels of development and variables the average earnings and risk-of-poverty rate.

Earnings in the border area are on average about 20% lower than the national average. There are differences of average earnings in relation to a neighboring country, but also between the border municipalities themselves. With the increasing of earnings and the level of development of municipalities is increased (positive correlation). The level of earnings relative to the average of the Republic of Serbia ranges from 37% (Trgovište) to 19% more than the average (Vršac). The municipalities that border with Macedonia have the lowest percentage of earnings compared to the average of the Republic of Serbia (70%), and the highest municipalities on the border with the Republic of Croatia (90%) (RZS, 2013, 2014, 2015).

With low wages, the question of poverty and quality of life is made. In this regard, most of the border municipalities have unfavorable indicators compared to other municipalities. With the increasing risk-of-poverty rate, the level of development of municipalities is reducing (negative correlation). The values of this indicator range from 18% in Užice to 66% in Tutin (average of border municipalities 36%, national average 26%). The municipalities that border with Hungary have the lowest risk of poverty (on average 29%), and the largest the municipalities that border with Macedonia (54%).

The level of the development of border municipalities is positively correlated (medium strength) with the variables regarding the number of active and newly established companies and entrepreneurs, the level of investment and share of the highly educated population.

The number of newly established companies and entrepreneurs is the highest in more developed municipalities of Subotica, Šabac, Loznica and others, where is the higher level of investment. The municipalities of Crna Trava, Bosilegrad, Trgovište, Čoka have the lowest level of investment.

The causes of underdevelopment of border municipalities could be viewed through the educational structure of the population. Existing qualifications of employees and their skills, as well as the unemployed, do not match the needs of the economy, and inefficient use of workforce further slowing the whole economy (Ristanović, Barjaktarović, 2014, p. 2). The education level of the workforce is a predisposition to quickly finding work, a better position of employees and higher earnings (Radivojević, 2015, p. 231). Border municipalities have a less favorable educational structure compared to the other municipalities of the Republic of Serbia. The difference is noticeable in a larger proportion of people without education and with primary education in border municipalities (on average 30%, relative to 23% in other municipalities), and a smaller proportion of people with secondary education (43%, respectively 49%) and a smaller proportion of highly educated people (25%, respectively 28%).

Municipalities on the borderline with Hungary have a more favorable educational structure than other municipalities in the Republic of Serbia, and the municipalities on the borderline with Montenegro have the least favorable educational characteristics. Based on the educational structure of the workforce (20-64 years) authors Jokić, Dželebdžić, and Petovar (2015, p. 52) made a classification of the quality of workforce in Serbian municipalities, where only the municipality of Užice has a more favorable quality of workforce than the national average, 10 municipalities have a relatively good quality of the workforce, 11 bad, 17 very bad, 7 municipalities have an extremely bad quality of the workforce⁹.

The level of development of border municipalities is negatively correlated (medium strength) to the variables regarding the share of the population employed in agricultural activities and the number of unemployed per 1000 persons.

The share of the population employed in agricultural and related activities ranges from 6% (Surdulica) to 59% (Bogatić), respectively, compared to the neighboring state from 22% (borderline with Republic of Croatia and Hungary) to 55% (borderline with Macedonia). More developed municipalities have a higher share of people employed in service activities.

The border municipalities have a larger share of unemployed persons in relation to the reference group of municipalities (132 compared to 110 unemployed per 1000 persons). The number of unemployed was the lowest in Čajetina (54), and the highest in Tutin (248). The number of unemployed was the lowest in the group of municipalities that border with

⁹ Good: Pirot, Vršac, Kikinda, Subotica, Sombor, B. Palanka, Sr. Mitrovica, Šabac, Loznica and Priboj; Bad: Bosilegrad, Surdulica, Dimitrovgrad, Knjaževac, Zaječar, Apatin, Odžaci, Šid, M. Zvornik, Čajetina and Prijepolje; Extremely bad: Crna Trava, Golubac, V. Gradište, Bač, Bogatić, Tutin and Bujanovac.

Hungary (87) and the highest in the municipalities that border with Macedonia (211).

The unemployment problem is not unique to the border municipalities in Serbia, the border municipalities in Bosnia and Herzegovina that border with the Republic of Serbia (entity Republika Srpska) are faced with this problem, too, where the average unemployment rate is 56%, then in Macedonian border municipalities with the Republic of Serbia, where the average unemployment rate is very high and ranges from 30% to 60% (http://www.stat.gov.mk/PublikaciiPoOblasti_en.aspx). The Bulgarian border municipalities with the Republic of Serbia have lower unemployment (13%), while the lowest unemployment rate is in the border region of Hungary with the Republic of Serbia (6%)¹⁰.

The variable rate of economic activity was not statistically significant for the correlation analysis.

CONCLUSION

The border regions are now economically peripheral, residual spaces and lagging in economic development of border areas become an obstacle to future development of the entire country (Grčić, 2002, p. 12). Most border municipalities have a lower level of development than the average of the Republic of Serbia. The development of the border area is spatially uneven as a result of various factors - historical, geographical, political and economic. Also, one of the reasons for the different development of border municipalities is the neighborhood with different states and inter-state relations and cooperation (the municipalities of the Republic of Serbia on the borderline with Hungary and the Republic of Croatia are more developed than the municipalities on the borderline with Macedonia and Montenegro).

Also, most of the border municipalities have adverse demographic characteristics that affect the workforce, which is substantial for the development of this strategically important area. Compared to other municipalities of the Republic of Serbia, the population of border municipalities has lower economic activity and employment, and higher unemployment. An average economically active person is a man, aged 30-49 years, engaged in agriculture or other related professions, but also a high economic activity of persons aged over 65 years, compared to other

¹⁰ Unemployment rates: Bosnia and Herzegovina: Čajniče (59%), Rudo (75.8%), Višegrad (51%), Srebrenica (65%), Bratunac (61%), Zvornik (39%), Bijeljina (41%) (http://www.rzs.rs.ba/front/article/1778/?left_mi=287&add=287). Bulgaria: 19% Vidin, Montana 8%, Pernik 14%, 13% Kyustendil (<http://www.nsi.bg/en/content/6704/population-districts-municipalities-place-residence-and-sex>). Hungary: Baranya 6,6%, Csongrad 4,9%, Bekes 6,1 Bacs Kiskun 5,8 (http://www.ksh.hu/nepszamlalas/tables_regional_00).

municipalities of the Republic of Serbia. Also, unfavorable qualification structure of the population and a large share of the employed in primary activities in these municipalities have a major impact on the lower level of earnings and the level of development.

Correlation and regression analysis confirmed that there is an influence of the workforce to the level of the development of border municipalities. Two-thirds of the variability of the level of development has been explained by independent variables, a set of socio-economic indicators (economic activity rate, the share of the population employed in agricultural activities, the share of the highly educated population, the average earnings, the level of investment, the number of active and newly established companies and entrepreneurs, risk-of-poverty rate). The variables are statistically significant for the correlation and regression analysis, and a high level of correlation is established. The level of earnings has the greatest impact on the level of the development of border municipalities and the risk-of-poverty rate, while other variables have an intermediate level of correlations.

The municipalities with larger urban centers have more favorable characteristics of the workforce, which can represent a potential for future development. In the population of smaller municipalities, with impaired demographic structure and numerous socio-economic problems, the workforce can be a limiting factor to development. Compared to other municipalities of the Republic of Serbia border municipalities have a large share of inactive population, which primarily relates to the female population because they offer the greatest potential reserves of labor. Demographic trends, which means the process of population aging, will make the necessary strong involvement of women and older people as a source of labor and knowledge (RDB, 2009, p. 108). Increased activity and employment of the border municipalities could contribute to the development of this area and reduce differences between the municipalities located in the border area of the Republic of Serbia.

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УТИЦАЈ РАДНЕ СНАГЕ НА РАЗВОЈ ПОГРАНИЧНОГ ПРОСТОРА РЕПУБЛИКЕ СРБИЈЕ

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Резиме

Имајући у виду неповољне демографске карактеристике пограничног простора Републике Србије, у овом раду је анализирана радна снага становништва пограничних општина. Основне карактеристике активног становништва су нижа економска активност, самим тим и нижа запосленост, а већа незапосленост у поређењу са осталим општинама Републике Србије, које представљају референтну групу. Такође, у овим општинама већи је удео запослених у примарним делатностима, што има велики утицај на ниво зарада и степен развијености ових општина. Просечно економски активно лице је мушкарац који има 30–49 година, бави се пољопривредом или неким другим сродним занимањем. Оно што такође карактерише пограничне општине је веће активирање лица старијих од 65 година у односу на остале општине Републике Србије. То се објашњава високим уделом пољоприв-

вредног становништва, које је економски активно и по изласку из радног контингента.

Пограничне општине су неразвијеније у односу на остале општине Републике Србије, али се међусобно значајно разликују. Разлике постоје и у односу на државу са којом се граниче (развијеније су општине на граници са Мађарском и Републиком Хрватском од општина које се граниче са Македонијом и Црном Гором). Значајне разлике постоје и унутар наведених група пограничних општина (Шабац – Сјеница – Чајетина; затим Трговиште-Прешево; Црна Трава – Сурдулица итд). Један од значајнијих основа диференцијације пограничних општина јесте величина самих општина, као и градских насеља (на пример, Суботица и Трговиште, општина која нема градски центар). Развијеније општине са повољнијом демографском структуром представљају потенцијал за развој, док су неразвијене општине често са нарушеном демографском структуром препрека за развој.

Утицај радне снаге на ниво развијености општина утврђен је регресионом и корелационом анализом, где постоји висока корелација између нивоа развијености као зависне варијабле и групе социо-економских показатеља. Ниво развијености општина је највише условљен висином зарада и стопом ризика од сиромаштва, док се висока незапосленост становништва неповољно одражава на ниво развијености општина.

Ипак, пограничне општине имају велики удео неактивног становништва, што се првенствено односи на становништво женског пола, јер се ту крију највеће потенцијалне резерве радне снаге. Демографски индикатори показују да је процес демографског старења утицао и на промене структуре активног становништва према старости. Смањује се удео млађих, а повећава удео старијих старосних група. Може се закључити да ће управо демографски развој учинити неопходним јаче укључивање жена и старијих људи као извора радне снаге и знања (РЗР, 2009). Већа активност и запосленост становништва пограничних општина допринели би развоју овог простора и смањењу разлика између општина које се налазе у пограничном подручју Републике Србије.