Living on the border: social indicators of life quality in Srem border region (Vojvodina, Serbia)

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Abstract

This paper presents the results of empirical research on quality of life of rural residents in the border region of Srem. Purpose of this work was to establish attitudes to social factors which determine everyday life of local population, and to establish the general perception of their standard of living. The results presented here are based on statistical analysis in which four types of analysis were applied: descriptive statistical analysis, application of chi-square test, t-test for independent samples and factor analysis of variance ANOVA. In order to determine the significance of differences between groups, post-hoc Scheffe's test was used. The research has come to the conclusion that the population of the border region of Srem is not satisfied with their living standards, and the main issues are unemployment and low income.

Keywords: subjective well-being, life satisfaction, social indicators, border settlements, Serbia

Introduction

Borders and border regions as dividing lines, but also zones of connection and permeation, zones of ethnic mixing up of the population, lines on maps, which often are presented in the form of stylised barbed wire, have always attracted the attention of researchers from different disciplines. Seemingly, geographers have a special place in it. The study of boundaries is not a novelty. It has a fruitful history, and since it has grown into an interdisciplinary field over the last few decades, the future is certain as well. Geography was the first scientific discipline that studied the borders and border areas. Shortly thereafter borders have become the subject of interest of other scientific disciplines and nowadays they are studied by psychologists, lawyers, anthropologists, economists, ethnologists and others. However, geography has played and continues to play a pioneering role in studying boundaries. Therefore, borders can be seen as one of the most important research problems in contemporary geography (Konrad, 2015).

Geographers are still experts in issues relating to setting boundaries. Ironically, despite the propagation of "borderless world", studies on borders have experienced a renaissance over the past few decades. The border is not seen anymore only as an independent line, a physical manifestation of separation, the border has become recognized as a process (Bauder, 2011; Van Houtum, 2000). The main issue in contemporary perspective of consideration of the border is not the border location, but what is the border and what are its functions in practice. In other words, borders are now understood as a verb, we do not talk so much about borders, but the bordering. One of recent approaches in studying borders is the policy-practice-perception approach. This approach views the border as a product of social practice, through analysis of practices and ongoings at the border, through the type of activities and the people involved in these activities. This approach considers the policy, state strategies and measures of regional and local authorities.

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Finally, this approach considers the perception of the border itself. This is postmodern and post-structuralist way of consideration of borders where the issues of identity, belonging and identification are very important (Van Houtum, 2005).

In integrating Europe, the nature of the borders is constantly changing. There is a clear difference between internal or secondary borders, and external European borders. Internal borders generally have been soften with a perspective of total abolition, while external have been reinforced, or strengthened. At the edges of the European Union, new border regions are appearing (Perkmann, 2003). The traditional function of borders, to create barriers, in some cases is replaced with bridging function that allows the contact. Combined with the increasing flow of goods, people and information, as a result of globalization, definition of borders and border areas has become a very difficult task (Blatter, 2001; Eder, 2006). Therefore, the meaning of borders must be reworded and reconsidered. Sovereignty and territoriality of countries are not threatened by new concept of borders but they are transformed by these processes (Agnew, 2002). The question is whether states are still the primary actors, and whether the power and influence of states stop at their borders?

Theoretical background

When we talk about life in border settlements it is necessary to analyse two problems: the phenomenon of the border and characteristics of the border area on the one side and the indicators of quality of life on the other side.

Borders represent limits where the sovereignty of a country ends and where the sovereignty of another country begins. In the past, countries spread to insurmountable natural barriers so that natural factors represented wide borders between two sovereign countries, not allowing a direct physical contact among these countries. In modern countries, borders are thin lines that follow certain spatial forms on the land. Borders can also be defined as lines and zones that divide areas of different political, economic, ethnic, religious and other characteristics (Brunet-Jailly, 2005).

Traditional geography has for a long time distinguished good from bad borders. As good borders are considered natural boundaries formed by mountains or rivers, while as bad borders are considered those which are artificially constructed. Today it is generally accepted that there are no natural borders. They are always constructed, a product of social practice and often a result of the conflict (Anderson, O'Dowd, 1999; Newman, 2006). In this way borders have be-

came lines that have administrative, military, monetary, legal and linguistic functions. Borders have transformed the previous undefined and heterogeneous spaces into territories. Borders are formally dividing lines of two or more collective subjects and often have the effect of spreading of geographical and mental distances. Also, borders may be less formal and they are not necessarily tangible. Borders can be cognitive, dividing walls in people's minds, separating "them" from "us". Identities are a product of borders (Keith, Pile, 1993).

The meaning and significance of state borders, as well as their geographic position, may drastically change in time and space. Their specificities require localised studies, as well as broader contextuality. As a general response to peripherality, borders tend to generate controversial arbitration activities and their importance at the end stems from the territoriality as a general principle of organizing political and social life. Borders and border regions are therefore very actual spaces for social research, especially in today's era of rapid globalization, the end of the "Cold War" and the growth of transnational regions such as the European Union (Burgess, Vollaard, 2006).

The major part of the research literature indicates the decline in the importance of bounded territorial units with increase in flow of capital, goods, information and people across national borders (Rumford, 2006; Sohn, 2014; Walters, 2002). In this way, key requirements of countries to control the output and input on the borders and to take economic advantages come into question.

Finally, all borders and border regions should be studied at the local level, because all are in certain contexts and positions and a part of discursive landscape. Borders are vivified through narratives, anecdotes and communication, through daily experiences of individuals. Notion of borders is constantly changing. As people cross the border, they cross from one dimension to another, from cultural to symbolic one. Borders are geographical, historical and psychological process still developing, a compound of various discursive and non-discursive practices and regimes, which have a general consistency without response to any decisive principle (Kolosov, Mironenko, 2001; Nicol, Minghi, 2005; Rumley, Minghi, 1991).

During the Cold War the Balkan was intersected by ideological border, so-called "Iron Curtain" between NATO and the Warsaw Pact. The border zone 10-20 km wide was strictly controlled and practically frozen for economic development and movement of people. Frontier zones along the border were exposed to drastic depopulation process (Radivojević, et al., 2016). Heritage of "front borders" (Foucher, 1991), is still kept in the identity of the people, in division between "We"

and "They". Their function is still dividing, defensive. The concept of cross-border regions should accelerate defunctionalization of borders. Barrier function of borders becomes the cause of economic depression and depopulation of border regions. Cross-border region occurs in conditions of filtering and contact functions of the border. In conditions of peace and open borders, benefits of border region increases, inducing the effect of attracting development impulses and connecting two or more borders in a cross-border region (Grčić, 2002; Kolosov, 2005).

Border areas of Serbia mostly have characteristics of significant backwardness (Koroutchev, 2012). These areas are characterized by depopulation, lower production effects in the industry, limited material resources, mostly extensive agriculture, poor infrastructural equipment and modest equipment of public services and, due to the proximity of the border, limited opportunities for development of tourism, compared to the average national values (Lukić, et al., 2014).

Level of economic development of some regions in Serbia comes from their geographical position, which is in number of cases the cause of functional isolation in relation to economic development centers and axles, which often results in slow development. Therefore, the balanced regional development has been an increasingly important topic in recent years, not only in Serbia (Miljanović, et al., 2010) but also in other parts of Europe (Balaguer-Coll, et al., 2010; Lampič, Potočnik Slavič, 2007; Ni Laoire, 2000; Shishmanova, 2010; Stockdale, 2002, 2006).

The main feature of regional development in Serbia is uneven (Đorđević, Todorović, 2006). Undeveloped areas of Serbia are mostly characterized by a high degree of isolation when compared to neighboring regions and unfavorable demographic and economic image (Đorđević, 1994, 2002; Todorović, Tošić, 2006). It is estimated that situation is the worst in bordering areas of Serbia. Border areas in Serbia differ from border areas of EU member countries. Whereas in EU countries these regions are treated as regions of connecting people, in Serbia they are still emigration areas with ageing population and negative economic trends.

In Serbia, a significant depopulation of certain areas is evident, together with large concentration of population and industry in few cities. These trends have a negative impact on the economic, social, spatial and environmental spheres. According to the index of developmental vulnerability, the ratio between the most developed and the least developed districts is 1:7, and the ratio between the most and least developed municipalities is 1:15 (Đerčan, et al., 2010a). However, an even more serious problem is the overall decline

of Serbia in relation to the EU average, and the average income per capita in Serbia, 2014, was only 360 Euros. Unemployment in Serbia (2013: 25.5%, age 15 – 64: 26.1%) is still one of the highest in the region, and there is a very strong trend in negative natural growth (2011: n=9.0‰, m=14.2, j=-5.2 ‰) (Statistical Office of the Republic of Serbia, 2012).

Measurement of happiness and Subjective well-being (SWB) is used in an increasing number of investigations. Life quality indicators incorporate both objective and subjective elements, thus worldwide studies use two concepts of quality of life (Millar, Hull, 1997). Objective indicators are the data obtained by the observer and can be directly measured (e.g. a number of people living below the minimum living standard), while subjective indicators are those that are formed based on questions that can have different answers depending on the person being interviewed (Alexandrova, 2005). Since the objective circumstances of the quality of life for individuals are often hard to measure, these parameters have to be added by subjective judgments. These are primarily issues that determine an individual's personal opinion. The most commonly asked questions are those related to the individual's life circumstances, but often asked questions are also those about the general level of happiness. Such questions measure fears, confidence, feelings about the future (Utasi, 2007). Self-report questions about happiness and life satisfaction are typically included in a survey and are used as an indicator of SWB (Royo, Velazco, 2006).

SWB refers to how people evaluate their lives, and includes variables such as life satisfaction, positive mood and emotions, and absence of depression and anxiety (Diener, et al., 1993). People who have higher dimension of subjective well-being, are more satisfied with their lives and thus have more enjoyable experience, and less unpleasant emotions (Đerčan, et al., 2014; Vukasović, et al., 2012).

Many sociologists have examined the relationship between individual satisfaction and satisfaction with life in general. Diener and Suh (1997) speak highly on indicators of economic, social and subjective well-being of human. According to Diener's definition, subjective quality of life is actually how people evaluate their lives, including happiness, life satisfaction, pleasant feelings as well as the relative lack of unpleasant feelings and moods (Diener, et al., 1985).

Some authors (Tsou, Liu, 2001) studied the ways in which individual characteristics have an impact on life satisfaction. Happiness is the level at which an individual evaluates the overall quality of his life as favorable, which is generally considered as the ultimate goal in life (Runcan, Iovu, 2013). Happiness depends on many things, including income, labor market, job

characteristics, health, home, family, social relations, security, freedom, moral values, and many others (Ahn, et al., 2004; Ghasemzadeh, Toofan 2014). Regarding this, it is the aim of this work to find how the satisfaction domain influences overall satisfaction of inhabitants.

Main goal is to show quality of life in a country or within a particular social group using the data on satisfaction with life circumstances. In this way, social problem level is usually estimated and possible interventions are recommended by government service. A high level of satisfaction suggests that quality of life is good. Low satisfaction indicates serious flaws in society (Veenhoven, 1996a; 1996b).

However, there are significant cross-national differences in the perception of happiness and satisfaction (Kalmijn, Veenhoven, 2005; Orviska, et al., 2014). Those differences come to the fore through economic and cultural factors (Sibel, 2008). Satisfaction with living conditions is closely linked to economic prosperity and cultural level in some countries. Peiró (2002), while studying the relationship between socio-economic conditions and unemployment had found that unemployment does not have to be associated with happiness, although it is clearly associated with satisfaction. Similarly, revenues are closely associated with satisfaction, but the relationship with happiness is weaker. Long-term studies show that SWB is not growing at the same pace in the U.S., UK or Germany (Blanchflower, Oswald, 2004; Layard, et al., 2009). Bartolini, et al. (2013) raises the question why does SWB not grow if revenue increases. They are citing two explanations as possible reasons: one is based on hedonic adaptation, and the other one is based on social comparisons. Changes in living conditions among people have only a transitory effect on their well-being, because people tend to adapt to their past experiences (Bartolini, Bonatti, 2008). This theory assumes that, as time passes, there is a process of adaptation that sooner or later erodes the benefits resulted by increase in revenues (Blanchflower, 2009; Clark, et al., 2008). Another theory, based on social comparison, assumes that what is important for people is not the absolute level of their income, but their level of income compared to the income levels of selected groups of individuals with whom they are compared (Diener, et al., 1993; Di Tella, et al., 2010; Ferreri-Carbonell, 2005; Layard, 2005).

Veenhoven (1996c) studied satisfaction with life in general and life satisfaction with three aspects (financial, housing, social contacts) in ten European countries. He concluded that the average satisfaction varies significantly across countries. He also noted that satisfaction with life in general and satisfaction with specific aspects of life is the highest in northern and western Europe, middle in southern Europe, and is lowest in the Eastern states (Veenhoven, 2005).

Questions about happiness and life satisfaction are standard component of databases such as the World Values Survey (WVS), the European Values Study (EVS), and the Eurobarometer. Costs of development of complex indicators consisted of a large number of subindices and subgroups are very large, and their reliability is too low. In terms of their further development, among complex indicators, the steadiest is UNDP human development index (HDI), which beside GDP per capita, takes into accounts the life expectancy of the individual at the time of his birth, literacy level and education level. In appendix to Human Development Report for 2011 made by the UNDP, the HDI indicators for Serbia are listed. Among the 187 countries with an HDI index at 0.766 Serbia is on 59th place. Bearing in mind that the Very High Human Development countries have the lowest index of 0.793 and higher, we can say that Serbia is in higher category of High Human Development countries (Vujnić, 2014). According to life expectancy, Serbia is on 73rd place, according to literacy and education is at 62nd place, while according to GDP index, Serbia ranks to 107th place (UNDP, 2011). From all this follows that quality of life development is conditioned by economic development.

The position of the villages along the border, or in its immediate vicinity, dictates very specific conditions of development (Dołzbłasz, 2015). Borders are usually considered with the negative connotation as dividing lines. However, the position of settlements along the border may have some development potentials. This paper, respecting the principle of local specificity, discusses the causes, current situation and prospects of the Serbian settlements located along the border between Serbia and Croatia.

The main aim of this study is to analyse the factors that affect the quality of life in border areas. Throughout the whole set of social indicators tested by survey research in the field, the goal was to determine how some specific factors affect the perception of residents' satisfaction. The paper is focused on determination of differences in the degree of satisfaction conditioned by gender, age, education, occupation, monthly income and household size.

Research design

The border region of Srem has been established after disintegration of the Socialist Federal Republic of Yugoslavia and after the establishment of new borders, including border settlements. It occupies the western part of Vojvodina's part of Srem and has, in relation to Vojvodina, south-western, peripheral position. The
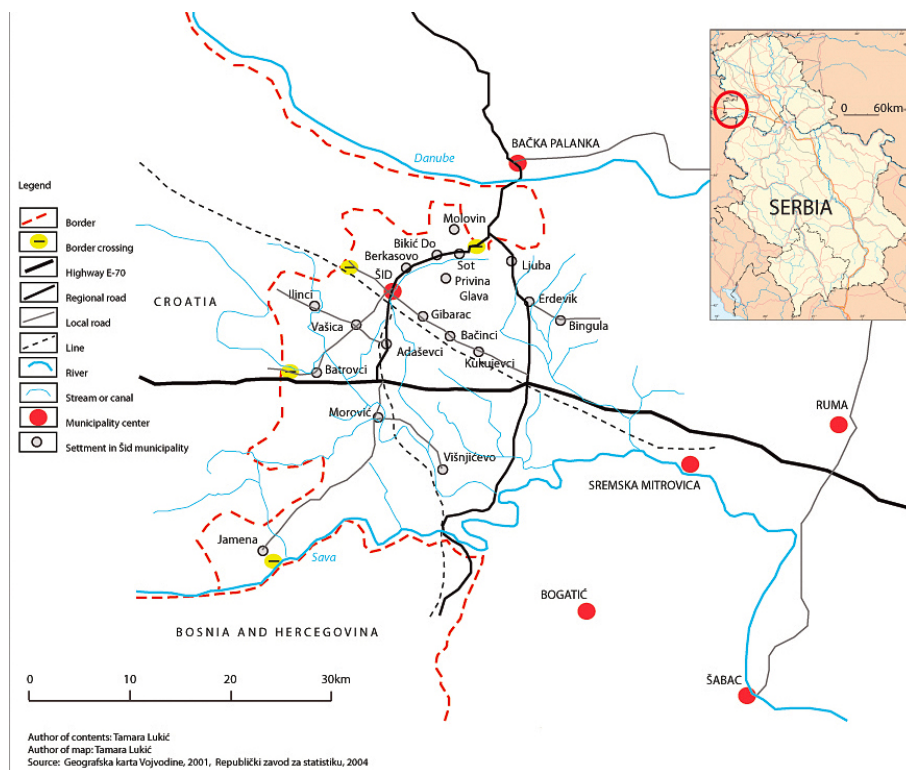
Figure 1. Area under study
Sources: Statistical Office of the Republic of Serbia, author's processing

border region is composed of eleven settlements in the municipality of Šid: Ljuba, Sot, Molovin, Bikić Do, Berkasovo, Šid, Ilinci, Vašica, Batrovci, Morović and Jemena (Ćurčić, 2010).

Area of eleven settlements of municipality of Šid (Figure 1) in the border area is 393.7 km² (Department of Real Estate Cadastre, 2010), representing 10.7% of Srem, and 1.8% of Vojvodina. These eleven settlements represent 9.4% of total settlements of Srem district or 2.4% of settlements in the Province. According to the Census of 2011, 22,692 residents were living in eleven settlements of the border area, which represents 7.3% of the population of Srem, or 1.2% of the provincial population.

In order to obtain more credible view of living in the border area, a field survey was conducted, results of which served as a supplement to the conclusion accurately derived from official statistical results. The field study was conducted from 10th to 20th of June 2015.

Research was done by a questionnaire , and the settlements were chosen according to the criteria of geographical bordering positions. The research was done by the authors of the questionnaire, using face to face method. This was the pilot research and no similar researches have been done till now. Certain problems which appeared during the construction of the questionaire and the choice of samples will be corrected in following researches. In total, 200 questionnaire leaflets were shared, out of which 140 were successfully completed. Most common mistakes were incomplete questionnaires or giving more than one answer to one question.

Population being investigated consists of local population that lives in border settlements of county of Srem. Given the fact that it was imposible to cover the entire population by the research in this study, sample was intentional and is consisted by the people who live in the central part of the settlement At the same time, the sample is appropriate since the questionnaires were completed only by individuals who were willing to take part in research.

Socio-demographic profile of respondents has been shown in Table 1. In the demographic structure of the sample, there is a slightly higher number of women (51.4%) than men (48.6%). Most of respondents (65%) age 18-45. This population represents younger working age population which is supposed to be the developing potential of the region. If it is taken into consideration that the majority of population consists of unemployed people (62%), despite the fact that lots of them are highly educated (22%), and that most of them (52%) earn up to 200 Euros, extremely bad economic situation in this border region can be anticipated.

Most of the respondents come from four member households, followed by respondents from households with three members. It is interesting that a significant proportion of respondents (15%) come from households with five or more members.

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Instrument used for the research is a non-standardized questionnaire created by authors- researchers themselves. Modified Satisfaction with Life Scale (Diener, et al., 1985) was used. Rest of the questionnaire is modeled after similar investigations which were done in Serbia (Gabrić-Molnar, 2010) and in neighbouring Hungary (Sebestyén, 2005), as well as after the recommendation of international experts (Dolan, et al., 2011; Veenhoven, 1996b) and consulatations with experts for social and regional geography from the Department of Geography of Faculty of Science in Novi Sad. Authors-researchers printed anonymous questionnaires and did the research individually.

Questionnaire is consisted of three parts The first part is related to socio-demographic features of respondents (gender, age, occupation, level of education, household incomes and number of household members). The second part is related to constatations (seven claims) which are thought to be able to influence on improvement of life quality. In the third part respondents are supposed to rank the importance of 20 given claims, which influence on quality and satisfaction with life circumstances. In this part respondents are supposed to indicate level of their own satisfaction with each of 20 stated elements of life standard. In this way, current quality of life in border settlements of Srem is perceived.

All the questions in the questionnaire were closed. Questions were asked in the form of sentences, and responses were measured using a Likert scale. Respondents were, based on personal views, circling one of the following numbers (five - strongly agree with the statement / completely satisfied, four - partially agree with the statement / partially satisfied, three - I have no position, two - partially disagree with statement / partially dissatisfied, one - completely disagree with the statement / I'm not completely satisfied). Authors-researchers sorted out properly completed questionnaires, and then entered and processed the obtained data in SPSS 17.0. for Windows.

The results presented are based on several different statistical analyses that are used in similar studies (Jovanović, Gavrilov-Jerković, 2013): chi-square test application, descriptive statistical analysis, t-test for independent samples and ANOVA. In order to determine the significance of differences between groups, post-hoc Scheffe's test was used.

Based on the chi-square test we determine whether there are deviations of obtained (empirical) frequency compared to expected (theoretical) values (Turjančanin, Čekrlija, 2006).

T-test for independent samples is used for comparison of mean values of results and definition of statistical significance of their differences. Independent samples are samples that do not have any correlation after

Table 1. Socio-demographic features of respondents

Socio-demographic features of respondents		Percentage of respondents
Gender	male	49%
	female	51%
Age	18-31	35%
	32-45	30%
	46-59	29%
	60+	6%
Education	Primary school	16%
	Secondary school	62%
	Higher school	4%
	Faculty	18%
Occupation	unemployed	62%
	employed	25%
	student	7%
	pensioner	6%
Monthly income	up to 200 €	52%
	200-400 €	35%
	400-600 €	11%
	over 600 €	2%
Number of household members	one	5%
	two	14%
	three	29%
	four	37%
	Five and more	15%

Sources: field survey; author's processing

the measurement (Coakes, 2013). Risk possibility level of 5% and 1% was taken into account in the process of definition of statistical significance of obtained results, whereas limit based on freedom degrees were interpreted according to t-tables.

At examined sample at significance level of 5% ($p<0.05$) or less, t value must be at least 1.96, whereas at significance level of 1% ($p<0.01$), t must be at least 2.58. T-test for independent samples was used in order to compare the arithmetic means of two groups - male and female respondents (Petz, 1981).

ANOVA examined whether between the dependent variables (factors that can affect the quality of life in border areas of Srem) and independent variables (socio-demographic characteristics of the respondents) there was a statistically significant correlation. Independent variables included in the study were: age structure, occupation, educational level, monthly income and number of members of the household.

One-way analysis of variance is statistical procedure which ensures difference testing between several arithmetic means. If certain result deviations from total arithemtic mean are squared (squared deviations), and these squared are summed ("square

sums" in variance analysis), total square sum (SS) is obtained, which can be divided in two square "sub-sums": square sums within the group and square sum between the groups.

However, definition of SS within and between the groups does not enable us to conclude if variability is greater within or between the groups, since square sum amount depends upon the number of results. Therefore, variance is taken as variability measure. Variance value is obtained when each SS value is divided by corresponding number of freedom degrees. This expression is called middle square (MS).

Freedom degrees for SS within groups are calculated when number of groups is substracted from general number of results (since there are N-1 freedom degress in each group). Freedom degrees for SS between groups are calculated when 1 is substracted from number of groups.

Post-hok Scheffe test: If F-test proves there are statistically significant differences, it is important to define the groups among which there are statistically significant differences. The results of F-test can only prove significance of difference between the groups with the lowest and highest arithmetic means.

Difference significance between particular groups can be defined according to post-hok test, i.e. technique for systematic error risk lessening, whereas the error can be caused by greater number of comparisons between two arithemtic means. Scheffe post hok test, as one of the most strict and most often applied tests, was used in this research. Procedure included following steps (Petz, 1981):

1. After F values in variance analysis has been defined, following formula is applied for each pair of arithemtic means:

$$F = \frac{(M_{ai} - M_b)^2}{MS_{wg}(N_a + N_b)/N_aN_b}$$

2. F value for needed significance level for freedom degrees ((k – 1) and (N – 1)) is read from F table.
3. Set F value is multiplied with (k – 1), and new limit value (F') is obtained.
4. F is calculated according to above-mentioned formula for all pairs of arithmetic means and obtained value is compared with F'. If F is higher than F', that difference can be considered to be statistically significant at significance level set in step two.

The sample fulfills basic conditions for parametre test application, i.e. data used in analysis originate from interval scale and they are normally distributed.

Research started from the hypothesis: (H1) the population of border region of Srem were not completely satisfied with the basic elements of living standards, (H2) the population of border region of Srem were not completely satisfied with the quality of life on the border.

ArcGIS 9.2. software by ESRI company has been used in the paper.

Results and Discussion

In studying of the quality of life in a given area both objective and subjective elements must be taken into account. Conducting research survey, subjective personal opinions of individuals are obtained. Frequently asked questions are related to environmental conditions, as well as issues related to the overall level of satisfaction.

In the first group of questions, respondents were asked to rate importance of some elements for improving the quality of life on a scale from one to five. They were offered seven elements shown in Table 2.

Since this is the region where more than half of population is employed in the primary sector, the first two questions are related to the development of agriculture and rural areas support. Most respondents (42.9%; M=4.00) are in total agreement that it is very

Table 2. Elements that can affect the quality of life

Elements of quality of life	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	M	σ
Sustainable and efficient agricultural sector development	2.9	5.7	22.9	25.7	42.9	4,00	1,073
Sustainable rural development support	1.4	5.0	18.6	28.6	46.4	4,14	0,983
Starting the businesses for Local Community Development	3.6	3.6	14.3	23.6	55.0	4,23	1,055
Corporate lending	5.0	7.9	15.7	26.4	45.0	3,99	1,175
Tax incentives	4.3	2.9	12.9	18.6	61.4	4,30	1,078
Cross-border cooperation development	4.3	2.9	17.9	23.6	51.4	4,15	1,086
Attracting foreign investors	7.1	2.9	9.3	23.6	57.1	4,21	1,178

Sources: field survey; author's processing
Note: M- arithmetic mean, σ - standard deviation

important to build sustainable and efficient agricultural sector, while agriculture is not important for just 2.9% of respondents. Sustainable rural development support has proven to be extremely important (46.4%, M=4.14) to improve the living conditions of human survival in rural border areas.

Real possibilities for faster development of the border regions of Serbia lie in the multifunctional agriculture development (Todorović, Bjeljac, 2009). This means that part of agricultural resources is used in the conventional manner by intensification of agricultural production to the point of sustainable development, part of the resources are used for non-agricultural purposes (agro-eco-tourism, hunting, fishing, sports and recreational tourism and hospitality, and other services) and part of resources are used for organic and safe food (Đerčan, et al., 2010b). Agricultural production activation through tourism industry achieves positive effects on rural communities, rural economy and environment (Kalenjuk, et al., 2012). However, agricultural production is not the only function of rural areas, but there can be a whole range of other activities aimed at promoting the growth of rural economy, reducing the gap of urban and rural areas and improvement of living standards in rural areas (Šuvar, 2004). In this way, there is reduction of dependence of farmers on farming as a source of income.

More than half of respondents (55.0%; M=4.23) are in total agreement that it is extremely important to start business for local community development and lending to the economy (45.0%; M=3.99) and tax cuts (61.4%; M=4.30) are in the foreground, as by farmers as by those employed in other sectors of the economy. Even 75% of respondents agree that it is very impor-

tant (51.4%; M=4.15) or most important (23.6%) to establish cooperation with regions in neighboring states. The fact that Srem has border with Croatia, which is a member of EU, is the opportunity to establish direct cooperation in order to achieve mutual development priorities. Cross-border cooperation programs provide opportunities not only for fostering good neighborly relations, but also for establishing long-term partnerships and for the development projects based on the real needs of society, which will improve the competitiveness of the region. Furthermore, a large proportion of respondents (57.1%; M=4.21) are in total agreement that the way out of the difficult economic situation is in attracting foreign investors.

Using a t-test we have determined a statistically significant difference in perception of different sexes (Table 3).

Based on these results, we can see that the female respondents give to all claims a higher score than the male population does. These differences were small and not significant. The only statistically significant difference in the level of significance of $p<0.05$ (F =-2.378, p=0.019) is present in claims related to the development of cross-border cooperation, where female respondents give significantly higher ratings to this claim when compared to the male population and believe that the development of cross-border cooperation is extremely important for the development of the local community.

When analysing the attitudes of respondents of different ages, based on ANOVA, we also noted the absence of major statistically significant differences in perception. Generally, people older than 60 years give priority to agricultural development and sustain-

Table 3. Elements that can affect the quality of life - Analysis of t-test – attitudes of the respondents of different genders

Elements of quality of life	Gender	Mean	σ	t-test	p
Cross-border cooperation development	M	3.93	1.285	-2.378	0.019*
	F	4.36	0.810		

Sources: field survey; author's processing
Note: *p < 0.05; M-male; F-female; The table shows only the results indicating statistical significance

Table 4. Elements that can affect the quality of life - the Analysis of Variance ANOVA – attitudes of the respondents of different structures

Elements of quality of life	Age	Mean	σ	F	p
Starting the bussinesses for Local Community Development	18-31	4.27	1.036	8.607	0.000*
	32-35	4.48	0.773		
	36-59	4.28	0.987		
	60+	2.67	1.414		

Sources: field survey; author's processing
Note: *p < 0.01; p<0.05; The table shows only the results indicating statistical significance

able rural development, while the younger categories of respondents believe that quality of life would be improved by creating new companies, loans, tax incentives, development of cross-border cooperation and attracting foreign investors. The only claim that can stands out in this group is the claim related to creating new businesses as a condition of community development (Table 4).

In fact only in this claim is noticeable the statistically significant difference between respondents of different ages at the level of significance $p<0.01$. Application of post-hoc Scheffe's test confirmed that there were statistically significant differences ($F=8.607$, $p=0.000$) and that the difference is the highest between respondents in the age group of 32-45 years, which gave the highest ratings, and patients over 60 who estimate this claim at lowest rang. It is expected that persons older than 60 years have such attitudes because these are mostly retired people and not belong to working generation.

The analysis of the attitudes of respondents with different education levels reveals that highly educated people considered to a greater extent improving the quality of life in the community to contribute building a sustainable and efficient agricultural sector, sustainable rural development and attract foreign investors, while those at lower education level find opening new businesses, credit, tax breaks and cooperation with neighboring countries most important. These differences in perception are small and not statistically significant at the significance level of $p<0.01$ or $p<0.05$.

Based on the results on attitudes of respondents of different occupations, different monthly income and household size, we note that there are no statistically significant differences but some conclusions can still be noted.

Unemployed people believe to a greater extent that the establishment of a sustainable and efficient agricultural sector and sustainable rural development can improve the quality of life in local community, while employees feel that improvement is in starting new business, loans, tax incentives, development of cross-border cooperation and attracting foreign investors.

When analysing the attitudes of respondents who have different monthly payments, the only exceptions are those with incomes higher than 600e per month. In fact we can see their very positive attitude when it comes to attracting foreign investors and they feel that this factor can greatly affect the quality of life in the local community. Also their strongly negative attitude is noticeable, when it comes to lending to the economy. Aware of the difficult economic situation, they believe that borrowing is not the way to improve the quality of life.

Respondents with single-member households show lower level of agreement with all given statements, while respondents with multi-member households show a higher degree of agreement and to a greater extant believe that the statements may influence the quality of their lives.

In next group of questions, respondents were surveyed about satisfaction with life circumstances. They were offered twenty elements shown in Table 5.

Traffic connections proved to be one of the main problems because half of the respondents (50.7%; M=1.87) expressed complete dissatisfaction, while the least respondents (2.1%) expressed complete satisfaction. Despite the fact that through this area important corridors are passing, population perceives its position as a peripheral with insufficient number of bus and rail lines and a bad reconnection of village with the municipal center.

Satisfaction with infrastructure network can be regarded as positive when it comes to village electrification, water supply, sewerage network and mobile phone networks, because about 70% partially or fully expressed their satisfaction. Population is not satisfied with the infrastructure, and this dissatisfaction is related to availability and quality of the gas pipeline network (69.3%; M=1.59) and road quality (over 65% dissatisfied respondents; M=2.14). These results are expected if one knows that there is no gas supply network in the municipality of Sid and the roads are in poor condition. Utility equipment ranges from neutrality (27.1%), to medium (22.9%) and extreme dissatisfaction (23.6%). The smallest proportion of respondents (6.4%; M=2.63) was satisfied with public utilities and hygiene in rural areas (7.9%; M=2.49).

Respondents expressed their satisfaction regarding the number and availability of pre-primary and primary schools (over 50%), but were very dissatisfied with the availability of secondary and post-secondary schools and colleges (55.7%; M=1.81).

Provision of medical services in the majority of cases (27.1%; M=2.84) was rated three, which means that the respondents were not able to determine accurately the level of satisfaction with medical services. Reasons for such mood can be found in the fact that there are no hospitals in Šid, and in some rural areas, doctors prescribe only two or three times a week.

Interviewed residents have also expressed their dissatisfaction (50%; M=2.36) in terms of diversity of content for children and adults. The difficult economic situation and decreasing number of young people have caused the closure of community centers in villages. Children and young people in rural areas gather around school clubs and football clubs, or look for some more versatile offers in community center, while the older gather in rural pubs.

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Table 5. Elements that affect the quality and satisfaction with life circumstances

Elements of satisfaction	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	M	σ
Traffic connection (sufficient number of bus and rail lines)	50.7	22.9	17.1	7.1	2.1	1.87	1.072
Quality of roads in the neighborhood	37.9	28.6	17.1	15.0	1.4	2.14	1.127
Electrification of villages	13.6	7.9	20.7	30.7	27.1	3.50	1.333
Water network	13.6	11.4	22.1	28.6	24.3	3.39	1.333
Sewerage network	23.9	10.7	15.7	22.9	26.8	3.18	1.529
Pipeline network	69.3	11.4	12.1	5.0	2.1	1.59	1.024
Mobile phone networks	10.7	7.9	18.6	24.3	38.6	3.72	1.336
TV signal	22.1	15.0	26.4	15.0	21.4	2.99	1.434
Internet	27.1	9.3	22.1	22.1	19.3	2.97	1.479
Utility services	23.6	22.9	27.1	20.0	6.4	2.63	1.225
Hygiene in the villages	28.6	25.0	23.6	15.0	7.9	2.49	1.267
Preschools	10.7	15.7	35.7	22.9	15.0	3.16	1.183
Elementary school	11.4	11.4	25.7	28.6	22.9	3.40	1.274
Secondary schools	19.3	22.1	29.3	23.6	5.7	2.74	1.184
High schools and colleges	55.7	18.6	15.0	10.0	0.7	1.81	1.070
Diversity of content for children and adults	31.4	22.1	29.3	12.9	4.3	2.36	1.177
Safety in border area	9.3	8.6	25.0	33.6	23.6	3.54	1.208
Provision of medical services	18.6	25.0	27.1	12.1	17.1	2.84	1.337
Prices of products and services	40.0	31.4	20.0	8.6	0.0	1.97	0.974
Quality of products and services	25.7	29.3	23.6	15.0	6.4	2.47	1.208

Sources: field survey; author's processing
Note: M- arithmetic mean, σ - standard deviation

When studying the quality of life at the border, there is a constant question of living safety. Most of the respondents (57.2%; M=3.54) feel safe in the area where they live. A smaller portion (9.3%) feels threatened due to proximity of the border.

Generally, population of border area of Srem is not satisfied with the quality and prices of products and services. Dissatisfaction with the quality of products and services was reported by more than 50% (M=2.47) of respondents and dissatisfaction with prices by about 70% (M=1.97) of the respondents. It is interesting that no respondent expressed his or her complete satisfaction with the prices. In this study the first hypothesis H1 has been confirmed, the population of border region of Srem was not completely satisfied with the basic elements of living standards.

Analysing the attitudes of the respondents on the basis of various sociological structures, we can see that there are some differences, but they are usually small and have no statistical significance.

On the basis of results of t-test it is noted that the male population is satisfied with certain elements of the standard of living, such as traffic connections, quality of roads, water and sewerage networks to a greater extent, while the female population expresses its satisfaction to a greater extent when it comes to availability of education and institutions for children. Also women are more satisfied with the prices and quality of products and services in their neighborhoods.

Among the respondents of different age groups one can notice statistical importance, on the level of significance of p<0.05, in the attitude of respondents when it comes to the versatility of contents for children and adults (Table 6). Based on factorial analysis and post-hoc Scheffe's test (F=3.685, p=0.014) the biggest differences were found between the respondents in the age group of 18-31 years, who are not satisfied with the quality and availability of these facilities and elderly in category of 46-59 years, who have a positive attitude towards these events. These results are somewhat expected, because the younger population, aged up to 31 years, are people who start their families, have small children, and they themselves are still young and want more facilities for enjoyment. As the border areas are mainly villages with small number of cultural institutions, such as cinemas, theaters, galleries and museums, it is justified that the attitudes of younger respondents are negative. Generally, the older categories of persons over 45 years are more satisfied with studied elements of living when compared to younger respondents. The younger categories of population are active working and want better living conditions in their neighborhoods.

Table 6. Elements that affect the satisfaction with life circumstances - the Analysis of Variance ANOVA – the attitudes
of the respondents of different structures

Elements of satisfaction			Mean	σ	F	p
Traffic connection (sufficient number of bus and rail lines)	Number of household members	one	3.00	1.000	4.445	0.002*
		two	2.05	1.268		
		three	1.70	0.966		
		four	2.02	1.075		
		Five and more	1.32	0.716		
The quality of roads in the neighborhood	Household incomes	Up to 200e	1.93	1.110	5.376	0.002*
		200-400 €	2.24	1.090		
		400-600 €	3.00	0.926		
		More than 600 €	1.00	0.000		
Sewerage network	Number of household members	one	4.43	0.787	4.335	0.002*
		two	2.47	1.389		
		three	3.45	1.568		
		four	3.37	1.372		
		Five and more	2.43	1.660		
Pipeline network	Level of education	Elementary school	1.04	0.209	2.849	0.040
		Secondary school	1.67	1.111		
		Higher school	1.67	1.033		
		Faculty	1.80	1.041		
Internet	Level of education	Elementary school	2.30	1.636	3.464	0.018
		Secondary school	3.02	1.463		
		Higher school	2.33	1.751		
		Faculty	3.56	1.044		
	Number of household members	one	3.00	1.528	3.786	0.006*
		two	3.00	1.491		
		three	3.28	1.502		
		four	3.17	1.354		
		Five and more	1.91	1.342		
Utility service	Number of household members	one	3.57	0.787	2.488	0.046
		two	2.63	1.212		
		three	2.75	1.256		
		four	2.65	1.251		
		Five and more	2.05	1.046		
Hygiene in the villages	Number of household members	one	3.57	1.397	2.724	0.032
		two	2.84	1.302		
		three	2.35	1.189		
		four	2.52	1.336		
		Five and more	2.00	0.926		
High school and colleges	Level of education	Elementary school	1.35	0.775	4.31	0.006*
		Secondary school	1.78	1.056		
		Higher school	1.67	0.816		
		Faculty	2.40	1.190		
	Number of household members	one	2.71	1.604	2.502	0.045
		two	2.11	1.197		
		three	1.78	0.947		
		four	1.79	1.073		
		Five and more	1.41	0.796		

Elements of satisfaction			Mean	σ	F	p
Diversity of content for children and adults	Age structure	18-31	2.00	1.061	3.685	0.014
		32-45	2.33	1.203		
		46-59	2.80	1.181		
		60+	2.56	1.130		
Provision of medical services	Number of household members	one	3.43	1.272	2.65	0.036
		two	2.42	1.121		
		three	2.73	1.339		
		four	2.71	1.319		
		Five and more	3.55	1.371		

Sources: field survey; author's processing
Note: *p < 0.01; p<0.05; The table shows only the results indicating statistical significance

As for the attitudes of respondents of different education levels, statistically significant differences in the level of significance of $p<0.01$ or $p<0.05$ are observed for several elements of the standard of living. These are the development of the gas pipeline network (F=2.849, p=0.040), internet access (F=3.464, p=0.018) and the availability of high schools and colleges (F=4.310, p=0.006), where respondents with higher levels of education consider that these very important elements for their lives are sufficiently available and respondents with completed primary school, who are not satisfied with the availability of these elements in their neighborhoods, do not share that opinion. As for the other elements that affect the living standards of the population, respondents with higher education are generally more satisfied than those with lower education.

Analysis of the results obtained from respondents of different occupational positions indicates an absence of significant differences in attitudes among these groups. Generally, retired people, in somewhat bigger extent, are satisfied with living standards of certain elements in their neighborhoods.

When analysing the attitudes of respondents who have different monthly incomes, statistically significant differences in the level of significance of $p<0.01$ are observed for questions related to the quality of roads in the village (F=5.376, p=0.002). In this element, people with incomes higher than 600e per month stand out, and are very dissatisfied, while persons with lower monthly incomes are satisfied with the quality of roads in the neighborhood. As for the other elements of the standard of living, those with higher monthly incomes are dissatisfied to a greater extent than those with lower incomes.

For respondents with multi-member households, lower levels of satisfaction with all aspects of living standards are observed, while respondents whose households count one or two members show a higher level of satisfaction. Statistically significant differences in the level of significance of $p<0.01$ or $p<0.05$ are

observed for several elements of the standard of living. These are traffic connections (F=4.445, p=0.002), sewerage (F=4.335, p=0.002), internet access (F=3.786, p=0.006), utility (F=2.488, p=0.046), hygiene in the village (F=2.724, p=0.032), availability of high schools and collages (F=2.502, p=0.045) and medical services (F=2.650, p=0.036). In these elements stand out respondents with multi-member households (five or more members) and those who believe that these for life very important elements are not sufficiently available and respondents with a small number of family members, who are satisfied with the availability of these elements in their neighborhoods.

For questions about satisfaction with the quality of life, responses were embarrassing. Most of respondents (45.7%) are partially satisfied with their lives, followed by citizens who are not satisfied (44.3%), and least of respondents are satisfied (10.0%).

This study has confirmed the second hypothesis H2 that the population of border region of Srem is not completely satisfied with the quality of life. Low income and lack of employment are cited as the biggest problems. The analysis of the sample revealed that the majority of respondents (52.1%) have incomes up to 200 Euros, which is below the average for Serbia. Closing the factories in Šid and poverty in the village has left uncertain economic and demographic future of the border region of Srem. Long-term unemployment can have very negative consequences that affect the ability of workers (Pantelić, et al., 2011). An unemployed person eventually loses his or her working skills and his skills and work experience become obsolete (Van Ours, Vodopivec, 2008). A large percentage of unemployment should cause serious concern, because it undermines the economic well-being, reduces economic production, reduces human capital, leads to an increase in crime and causes social instability (Kingdon, Knight, 2006).

The data obtained using the *Chi-square* test (Table 7) in terms of answers gotten from respondents of opposite sex show that a slightly higher percent of wom-

Table 7. Descriptive statistics and application of Chi-square test on questions related to the respondent's answers about the satisfaction with life in the border region

Are you satisfied with life in the border region?			Yes	No	Partially	Pearson Chi-Square - Value	Pearson Chi-Square - p
Sex	M	%	4.3	22.1	22.1	0.234	0.890
	F	%	5.7	22.1	23.6		
Age	18-31	%	2.1	15	17.9	3.841	0.698
	32-45	%	2.9	15.7	11.4		
	46-59	%	4.3	11.4	12.9		
	60+	%	0.7	2.1	3.6		
Occupation	Employed	%	4.3	28.6	29.3	4.593	0.597
	Unemployed	%	4.3	11.4	9.3		
	Student	%	0.7	2.9	3.6		
	Retired	%	0.7	1.4	3.6		
Level of education	Primary school	%	2.9	7.1	6.4	3.813	0.702
	High school	%	6.4	27.9	27.1		
	College	%	0.0	2.1	2.1		
	Faculty	%	0.7	7.1	10.0		
Monthly income	Less than 200 €	%	5.0	26.4	20.7	7.692	0.262
	200-400 €	%	3.6	11.4	20.0		
	400-600 €	%	0.7	5.0	5.0		
	More than 600 €	%	0.7	1.4	0.0		
Number of household members	One	%	0.7	0.0	4.3	7.135	0.522
	Two	%	1.4	5.0	7.1		
	Three	%	2.9	12.9	12.9		
	Four	%	3.6	18.6	15.0		
	Five and more	%	1.4	7.9	6.4		

Sources: field survey; author's processing

en are satisfied with the standard of living in comparison to men.

If we look at the age structure, the most dissatisfied is the younger population, in the age groups from 18 to 31 and from 32 to 45. When it comes to employment, employed population is just the category of respondents that is most satisfied with their living standards. Based on the level of education, the most dissatisfaction is expressed by the people with high school education. When we talk about monthly income, mostly dissatisfied are those respondents that earn less than 200 Euro per month. In multi-member households, with three and four members, the level of satisfaction with the standard of living is lower compared to the households that counted only one or two members. Based on these findings we can conclude that the differences in perception among the respondents exist but that they are small and not statistically significant.

Conclusion

A comprehensive understanding of the quality of life requires knowledge of how the objective environmental conditions affect the life satisfaction of individuals. For the right interpretation of objective indicators it is necessary to have the knowledge about the experiential dimensions of individuals and what they think is important. In other words, the objective indicators reflect the objective conditions and changes independently from personal evaluations; subjective indicators emphasize the individual perception and the evaluation of external conditions and show to what extent are the subjective expectations filled. The joint application of both indicators can provide more reliable information about the level of life quality in a particular area.

The empirical study of quality of life provides the conclusion that the citizens' views are mostly affected by material resources. Positive or negative attitude on perception of their living standards, respondents

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formed primarily based on average incomes and employment.

The analysis shows that the population in the border region of Srem is not completely satisfied with life circumstances and is poorly or moderately satisfied with the basic elements of living standards. These findings confirm the initial assumptions.

Actions that have to be taken to improve the living conditions are: creating opportunities for off-farm employment through small manufacturing units, service centers in rural areas and related infrastructure improvements. In this way, certain advantages of rural economy such as decreased unemployment, exploitation of comparative advantages of rural areas, accelerating economic development in rural areas and improvement of the quality of life in rural areas would be gained.

Revitalization of developing areas is emphasized as a key factor in the integration of the Republic of Serbia into the European regional space. Key measures for the revitalization of some regions are based on the possibility of promoting certain landscape units in accordance with professional development plans.

Economic development of rural peripheral areas must be accompanied by the general social development and general education of the rural population and education in technical, technological, educational, cultural, environmental and economic sense. Reaffirmation of developing regions would have favorable economic and demographic consequences, which would at least partially prevent emigration from these areas and increase life satisfaction.

Acknowledgments

References
Agnew, J. 2002. Making political geography. Oxford University Press Inc, New York.

Ahn, N., García, J.R., Jimeno, J.F. 2004. The impact of unemployment on individual well-being in the EU. Working paper, No. 29, Brussels. European Network of Economic Policy Research Institutes.

Alexandrova, A. 2005. Subjective well-being and Kahneman's 'Objective Happiness'. *Journal of Happiness Studies* 6, 301–324. DOI. 10.1007/s10902-005-7694-x

Anderson, J., O'dowd, L. 1999. Borders, border regions and territoriality: contradictory meanings, changing significance. *Regional Studies* 33-7, 593-604.

Balaguer-Coll, M.T., Prior, D., Tortosa-Ausina, E. 2010. Decentralization and efficiency of local government. *The Annals of Regional Science* 45, 571-601. DOI: 10.1007/s00168-009-0286-7

Bartolini, S., Bilancini, E., Sarracino, F. 2013. Predicting the Trend of Well-Being in Germany: How Much Do Comparisons, Adaptation and Sociability Matter? *Social Indicators Research* 114-2, 169-191. DOI: 10.1007/s11205-012-0142-5

Bartolini, S., Bonatti, L. 2008. Endogenous growth, decline in social capital and expansion of market activities. *Journal of Economic Behavior & Organization* 67, 917–926. DOI: 10.1016/j.jebo.2008.01.003

Bauder, H. 2011. Toward a Critical Geography of the Border: Engaging the Dialectic of Practice and Meaning. *Annals of the Association of American Geographers* 101-5, 1126–1139.

Blanchflower, D. 2009. International evidence on well-being. In Krueger, A. (coord.), Measuring the subjective well-being of nations: National accounts of time use and well-being, Chicago: University of Chicago Press, 155-226 pp.

Blanchflower, D., Oswald, A. 2004. Well-being over time in Britain and the USA. *Journal of Public Economics* 88-7(8), 1359–1386. doi:10.1016/S0047-2727(02)00168-8

Blatter, J.K. 2001. Debordering the World of States: Towards a Multi-level System in Europe and a Multipolity System in North America: Insights from Border Regions. *European Journal of International Relations* 7-2, 175–209.

Brunet-Jailly, E. 2005. Theorizing Borders: An Interdisciplinary Perspective. *Geopolitics* 10, 633–649. DOI: 10.1080/14650040500318449

Burgess, M., Vollaard, H. 2006. State territoriality and European Integration. Routledge, United Kingdom.

Clark, A.E., Frijters, P., Shields, M.A. 2008. Relative income, happiness, and utility: An explanation for the Easterlin paradox and other puzzles. *Journal of Economic Literature* 46-1, 95–144. DOI: 10.1257/jel.46.1.95

Coakes, J.S. 2013. SPSS 20. Analysis without Anguish, Belgrade, Computer Library (in Serbian)

Ćurčić, S. 2010. Settlements of Vojvodina, geographic synthesis. Novi Sad: Matica srpska (in Serbian)

Department of real estate cadastre 2010. Šid: Municipality of Šid (in Serbian)

Đerčan, B., Bubalo-Živković, M., Lukić, T. 2010a. Demographic changes in the border settlements of Srem in the case of Vašica. *Zbornik radova Geografskog fakulteta* 58, 63-80 (in Serbian with English summary)

Đerčan, B., Bubalo-Živković, M., Lukić, T. 2010b. Agriculture as a factor of economic development of Srem border region – Case study of village Vašica. *Researches Review of the Department of Geography, Tourism and Hotel Management* 39, 19-35 (in Serbian with English summary)

Đerčan, B., Bubalo-Živković, M., Lukić, T., Solarević, M. 2014. Demographic characteristics and life satisfaction in settlements of Fruška gora mountain region: Bešenovo case study. *Zbornik Matice srpske za društvene nauke* 148, 559-570. DOI: 10.2298/ZMSDN1448559D

Di Tella, R, Haisken-De New, J., Macculloch, R. 2010. Happiness adaptation to income and to status in an individual panel. *Journal of Economic Behavior & Organization* 76-3, 834–852. DOI: 10.1016/j.jebo.2010.09.016

Diener, E., Emmons, R. A., Larsen, R. J., Griffin, S. 1985. The Satisfaction with Life Scale. *Journal of Personality Assessment* 49, 71-75. DOI: 10.1207/s15327752jpa4901_13

Diener, E., Sandvik, E., Seidlitz, L., Diener, M. 1993. The relationship between income and subjective well-being: Relative or absolute? *Social Indicators Research* 28-3, 195–223. DOI: 10.1007/BF01079018

Diener, E., Suh, E. 1997. Measuring quality of life: Economic, social, and subjective indicators. *Social Indicators Research* 40-1(2), 189-216.

Dolan, P., Layard, R., Metcalfe, R. 2011. Measuring Subjective Wellbeing for Public Policy: Recommendations on Measures, Special Paper No. 23, London: Centre for Economic Performance, London School of Economics and Political Science.

Dołzbłasz, S. 2015. Symmetry or asymmetry? Cross-border openness of service providers in Polish-Czech and Polish-German border towns. *Moravian Geographical Reports* 23-1, 2–12. DOI: 10.1515/mgr-2015-0001.

Đorđević, D. 1994. Towards planning of the peripheral zone of Serbia - the new decentralization and local government. *Zbornik radova Geografskog fakulteta* 43, 227-232 (in Serbian with English summary)

Đorđević, D. 2002. Systematic approach to the revitalization of the border areas. In: Stanković, S. [ed.], Revitalization problems of the border areas of Yugoslavia and the Republic of Srpska (pp. 23-33). Belgrade, Faculty of Geography (in Serbian)

Đorđević, J., Todorović, M. 2006. Towards the new concepts of rural development in Serbia. *Glasnik Srpskog geografskog društva* 86-1, 211-220. DOI:10.2298/GSGD0601211D (in Serbian with English summary)

Eder, K. 2006. Europe's Borders The Narrative Construction of the Boundaries of Europe. *European Journal of Social Theory* 9-2, 255–271. DOI: 10.1177/1368431006063345

Ferrer-i-Carbonell, A. 2005. Income and well-being: An empirical analysis of the comparison income effect. *Journal of Public Economics* 89-5(6), 997–1019. doi:10.1016/j.jpubeco.2004.06.003

Foucher, M. 1991. Fronts et Frontières. Un tour du Monde geopolitique, Nouvelle edition – revue et argumente, Paris, Fayard.

Gabrić-Molnar, I. 2010. Quality of life research in North Vojvodina. *Zbornik Matice srpske za društvene nauke* 131, 497-505. DOI:10.2298/ZMSDN1031497G (in Serbian with English summary)

Ghasemzadeh, B., Toofan, S. 2014. The role of Cultural Gathering Spaces in the Promotion of Citizen Quality of Life Case study: Tehran City Theater. *Geographica Pannonica* 18-1, 18-25.

Grčić, M. 2002. The concept of a border region. In: Stanković, S. [ed.], Revitalization problems of the border areas of Yugoslavia and the Republic of Srpska (pp. 11-21). Beograd, Geografski fakultet (in Serbian)

Jovanović, V., Gavrilov-Jerković, V. 2013. Dimensionality and Validity of the Serbian Version of the Life Orientation Test-Revised in a Sample of Youths. *Journal of Happiness Studies* 14, 771–782. DOI: 10.1007/s10902-012-9354-2

Kalenjuk, B., Đerčan, B., Tešanović, D. 2012. Gastronomy tourism as a factor of regional development. *Ekonomika* 3, 136-146 (in Serbian with English summary)

Kalmijn, W., Veenhoven, R. 2005. Measuring Inequality of Happiness in Nations: In Search for Proper Statistics. *Journal of Happiness Studies* 6, 357–396. DOI: 10.1007/s10902-005-8855-7

Keith, M., Pile, S., 1993. Place and the Politics of Identity. Routledge: London and New York.

Kingdon, G., Knight, J. 2006. The measurement of unemployment when unemployment is high. *Labour Economics* 13-3, 291-315. doi:10.1016/j.labeco.2004.09.003

Kolosov A. V., Mironenko S.N. 2001. Geopolitics and Political Geography, Moscow, Aspect Press (in Russian)

Kolosov, V. 2005. Border Studies: Changing Perspectives and Theoretical Approaches *Geopolitics* 10-4, 606-632.

Konrad, V. 2015. Toward a Theory of Borders in Motion. *Journal of Borderlands Studies* 30-1, 1-17. DOI: 10.1080/08865655.2015.1008387

Koroutchev, R. 2012. The Serbian – Bulgarian Border Region: the Forgotten Backyard of Europe. *Researches Review of the Department of Geography, Tourism and Hotel Management* 41, 118-133.

Lampič, B., Potočnik Slavič, I. 2007. Demographic vitality and human resources as important factors for rural areas development. *Glasnik Srpskog geografskog društva* 87-2, 103-114. DOI:10.2298/GSGD0702103L

Layard, R. 2005. Happiness: Lessons from a new science, London: The Penguin Press.

Layard, R., Mayraz, G., Nickell, S. 2009. Does relative income matter? Are the critics right? SOEP papers on Multidisciplinary Panel Data Research, Berlin: Deutsches Institut für Wirtschaftsforschung.

Lukić, T., Bubalo-Živković, M., Đerčan, B., Jovanović, G. 2014. Population Growth in the Border Villages of Srem, Serbia. *Acta Geographica Slovenica* 54-1, 51-65. DOI: 10.3986/AGS5410

Miljanović, D., Miletić, R., Đorđević, J. 2010. Regional inequality in Serbia as a development problem. *Acta Geographica Slovenica* 50-2, 253–275. DOI: 10.3986/AGS50204

Millar, J.S., Hull, C. 1997. Measuring Human Wellness. *Social Indicators Research* 40, 147–158. DOI: 10.1023/A:1006803426777

Newman, D. 2006. The lines that continue to separate us: borders in our 'borderless' world. *Progress in Human Geography* 30-2, 143-161.

Ni Laoire, C. 2000. Conceptualising Irish rural youth migration: a biographical approach. *International Journal of Population Geography* 6, 229–243. DOI: 10.1002/1099-1220(200005/06)6:3<229::AID-IJPG185>3.0.CO;2-R

Nicol, H. N., Minghi, J. 2005. The Continuing Relevance of Borders in Contemporary Contexts. *Geopolitics* 10, 680–687. DOI: 10.1080/14650040500436647

Orviska, M., Caplanova, A., Hudson, J. 2014. The Impact of Democracy on Well-being. *Social Indicators Research* 115-1, 493-508. DOI: 10.1007/s11205-012-9997-8

Pantelić, M., Ivkov-Džigurski, A., Ivanović, LJ., Dragin, A., Blešić, I. 2011. Unemployed Persons in Border Municipalities of Northern Banat in Serbia. *Geographica Pannonica* 15-1, 16-26.

Peiró, A. 2002. Happiness, satisfaction and socioeconomic conditions: Some international evidence. WP-EC Working Paper-21, Valencia: Universitat de Valencia.

Perkmann, M. 2003. Significance and Drivers of Regional Cross-Border Co-Operation. *European Urban and Regional Studies* 10-2, 153–171.

Petz, B. 1981. Basic statistical methods for no-mathematicians, Zagreb: SNL (in Croatian)

Radivojević, A., Pavlović, M., Milovanović, M., Stričević, LJ., Dimić, M. 2016. Population Aging in Serbia: A Case Study of the Municipality of Bela Palanka. *Journal of Family History* 41-2, 165-175. doi: 10.1177/0363199016635217

Royo, M. G., Velazco, J. 2006. Exploring the relationship between happiness, objective and subjective well-being: Evidence from rural Thailand, WeD Working paper 16. ESRC Research Group on Wellbeing in Developing Countries, Bath: University of Bath.

Rumford, C. 2006. Theorizing Borders. *European Journal of Social Theory* 9-2, 155–169. DOI: 10.1177/1368431006063330

Rumley, D., Minghi, J. V. [eds.]. 1991. The Geography of Border Landscapes. London, Routledge.

Runcan, P.L., Iovu, M.B. 2013. Emotional Intelligence and Life Satisfaction in Romanian University Students: The Mediating Role of Self-Esteem and Social Support. *Revista de Cercetare si Interventie Sociala* 40, 137-148.

Sebestyén, T. 2005. Életminőség és Boldogság Magyar Trendje Globális Összehasonlításban, Budapest: Szövetség a Polgári Magyarországért Alapítvány számára készült résztanulmány (in Hungarian)

Shishmanova, M. 2010. Central and peripherial regions – a topical problem in regional policy. *Zbornik radova Geografskog instituta „Jovan Cvijić"* 60-1, 87-105. DOI:10.2298/IJGI1001087S

Sibel, S. 2008. Life Satisfaction and Happiness in Turkey. *Social Indicators Research* 88, 531–562. DOI: 10.1007/s11205-007-9218-z

Sohn, C. 2014. The Border as a Resource in the Global Urban Space: A Contribution to the Cross-Border Metropolis Hypothesis. *International Journal of Urban and Regional Research* 38-5, 1697–1711. DOI:10.1111/1468-2427.12071

Statistical office of the Republic of Serbia 2012. Vital events in Serbia 2011, Belgrade: Statistical Office of the Republic of Serbia (in Serbian)

Stockdale, A. 2002. Towards a typology of out-migration from peripheral areas: a Scottish Case Study. *International Journal of Population Geography* 8, 345–364. DOI: 10.1002/ijpg.265

Stockdale, A. 2006. Migration: Pre-requisite for rural economic regeneration? *Journal of Rural Studies* 22-3, 354-366. DOI:10.1016/j.jrurstud.2005.11.001

Šuvar, S. 2004. Villages in transition. *Teme* 3, 167-175 (in Serbian with English summary)

Todorović, M., Bjeljac, Ž. 2009. Rural tourism in Serbia as a concept of development in undeveloped regions. *Acta Geographica Slovenica* 49-2, 453–473. DOI: 10.3986/AGS49208

Todorović, M., Tošić, B. 2006. Transborder Cooperation in the Pannonian Plain – Case Study of The Euroregion Danube–Drava-Sava. *Geographica Pannonica* 10, 85-88.

Tsou, M.W., Liu, J.T. 2001. Happiness and domain satisfaction in Taiwan. *Journal of Happiness Studies* 2, 269–288. DOI: 10.1023/A:1011816429264

Turjančanin, V., Čekrlija, Đ. 2006. Basic statistical methods and techniques in SPSS - Application of SPSS in the social sciences, Banjaluka: Centar za kulturni i socijalni popravak (in Serbian)

UNDP, 2011. Human Development Report 2011. Sustainability and Equity: A Better Future for All, New York: United Nations.

Utasi, Á. 2007. Az életminöség feltételei, Budapest: MTA Politikai Tudományok Intézete (in Hungarian)

Van Houtum, H. 2000. European perspectives on borderlands, An overview of European geographical research on borders and border regions. *Journal of Borderlands Studies* 15-1, 56-83. DOI:10.1080/08865655.2000.9695542

Van Houtum, H. 2005. The Geopolitics of Borders and Boundaries. *Geopolitics* 10, 672–679. DOI: 10.1080/14650040500318522

Van Ours, J. C., Vodopivec, M. 2008. Does reducing unemployment insurance generosity reduce job match quality? *Journal of Public Economics* 92-3(4), 684-695. DOI: 10.1016/j.jpubeco.2007.05.006

Veenhoven, R. 1996a. Developments in satisfaction research. *Social Indicators Research* 37-1, 1–46. DOI: 10.1007/BF00300268

Veenhoven, R. 1996b. The study of life satisfaction. In Saris, W. E., Veenhoven, R., Scherpenzeel, A. C., Bunting, B. (coord.), A comparative study of satisfaction with life in Europe, Budapest: Eötvös University Press, 11–48 pp.

Veenhoven, R. 1996c. Average level of satisfaction in 10 European countries: Explanation of differences. In Saris, W. E., Veenhoven, R. A., Scherpenzeel, C., Bunting, B. (coord.), A comparative study of satisfaction with life in Europe, Budapest: Eötvös University Press, pp. 243–253.

Veenhoven, R. 2005. Inequality of happiness in nations. *Journal of Happiness Studies* 6, 351–355. DOI: 10.1007/s10902-005-0003-x

Vujnić, A. 2014. Regional development indicators, case study- Serbia. *Researches Reviews of the Department of Geography, Tourism and Hotel Management* 43-1, 28-42.

Vukasović, T., Bratko, D., Butković, A. 2012. Genetic Contribution to the Individual Differences in Subjective Well-Being: A Meta-Analysis. *Društvena istraživanja* 21-1, 1-17. DOI: 10.5559/di.21.1.01

Walters, W. 2002. Mapping Schengenland: denaturalizing the border. *Environment and Planning D: Society and Space* 20-5, 561-580.