DEMOGRAPHIC CHARACTERISTICS AND LIFE SATISFACTION IN SETTLEMENTS OF FRUŠKA GORA MOUNTAIN REGION: BEŠENOVO CASE STUDY

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ABSTRACT: Serbia has been facing an economic crisis for the last two decades, which is one of the causes of poor demographic situation in the country. Along with low or negative rates of population growth and ageing of population, the majority of municipalities in Vojvodina have a negative migration balance. Vojvodina is characterized by long-term trend in the decrease of young population and the increase of old population. These two processes are affected by low birth rate and life expectancy increase. The bad economic situation and the ageing of population are especially apparent in mountainous areas and peripherally located settlements. This situation has not bypassed Bešenovo, mountainous village of Fruška Gora. Field research and conduction of the questionnaire have found out that the population of this village is not satisfied with the basic living standard.

KEYWORDS: Fruška Gora, demography, mountain region, living standard
INTRODUCTION

In Serbia, there is a large depopulation across the country and a large concentration of population and industry in a few cities only. Level of economic development of some towns in Serbia stems from their geographical position which is in a number of cases the cause of functional isolation in relation to economic centres and development centres. This often results in slow development processes [Miljanović, Miletic and Đorđević 2010]. Such trends have negative consequences in the economic, social, spatial and ecological sphere [Đorđević and Todorović 2006]. Undeveloped areas of Serbia are mainly characterized by a high degree of isolation in relation to neighbouring regions and unfavourable demographic and economic picture [Đorđević 1994; Đerčan, Bubalo-Živković and Lukić 2010]. It seems that the situation is worst in the mountainous areas.

Today, mountainous areas in Serbia and the rest of the world are faced with many problems. Due to the poor quality of transport infrastructure or the complete absence of any roads, a lot of the mountainous rural communities are isolated in terms of space and time. Consequently, mountainous areas today are at risk of depopulation and population ageing [Lampič and Potočnik Slavič 2007]. Modern lifestyles and standards of living, along with the general development of technology, industrialization and urbanization, bring completely different aspects of development into the life of the population in mountainous areas.

The state of the rural area is entirely worrying and the problems are mostly pronounced in the mountain areas. The depopulation is enormous which results in processes of deagrarianization. Because of this, the interest for revitalization and infrastructural management, as well as supply for the populated areas, is very small [Đerčan, Bubalo-Živković and Lukić 2010].

European Commission (2004) determined the typology of mountainous regions based on statistical data, taking into account both social and economic indicators. The typology includes five categories based on population density, standard of living and access to market:

• Areas with best developmental preconditions
• Areas with high potentials for development but with negative demographic trends
• Areas with low population density in the vicinity of densely populated areas
• Remote areas with low population density
• Remote areas with high population density

In accordance with accessibility criteria, the following has been taken into consideration: transport infrastructure, national and regional accessibility, services (high education, health institutions – clinical centres). In line with it, four categories have been determined: very good, good, fair, bad.

Indicators of quality of life equally integrate objective and subjective elements. Since the objective circumstances of the quality of life of individuals are usually difficult to measure, these indicators must be combined with subjective judgments. These are primarily questions that determine personal opinion of the individual. The most commonly asked questions relate to life circum-
stances of the individual, but also the common questions are those about the general level of happiness [Di Tella, Haisken-De New and MacCulloch 2010]. Such questions measure fears, confidence, feelings about the future [Royo and Velazco 2006; Diener et al. 1993]. Many sociologists have examined the relationship between individual satisfaction and satisfaction with life in general. Diener and Suh [1997] speak specifically about indicators of economic, social and subjective well-being of a person. According to Diener’s definition, the subjective quality of life is actually how people evaluate their lives, including happiness, satisfaction with their own lives, pleasant feelings as well as the relative lack of unpleasant feelings and moods.

Using data about satisfaction with life circumstances aims to show the quality of life in a country, town, or in a particular social group [Ferrer-i-Carbonell 2005]. Thus, we usually estimate level of a social problem and recommend possible intervention of government services. The high level of satisfaction suggests that the quality of life is good. The low level of satisfaction indicates serious flaws in society [Veenhoven 1996]. Households dissatisfied with living conditions often decide to emigrate looking for job or other benefits of economically wealthier urban areas.

Numerous examples of depopulation in mountainous regions can be found in the Republic of Serbia. In this case, the village called Bešenovo is analyzed.

PLACE OF RESEARCH, METHODOLOGY AND SAMPLE

Mountainous village of Bešenovo in the municipality of Sremska Mitrovica was selected as a place of research. The village is located at 151 m above sea level, peripherally on the slopes of Fruška Gora [Solarević and Đerčan 2012]. According to Đ. Simonović and M. Ribar’s typological scale [1993], Bešenovo with 841 residents is one of the villages of medium size. It was presumed that Bešenovo is characterized by negative demographic trends and population is not satisfied with life in this village.

The work uses the results of the Census of 2002 and 2011, as well as demographic data obtained by special processing of data of the Statistical Office. In order to credibly show the life in mountainous areas, there was conducted a field survey and its results are used as a supplement in making objective image derived from official statistical results. Field research was conducted from the 10\textsuperscript{th} to the 20\textsuperscript{th} of June, 2014. The survey was conducted through a questionnaire. A combined sample was applied. The sample is at the same time appropriate because the research involved only residents willing to participate. All questions in the questionnaire were closed. Questions were asked in the form of sentences, and the responses were measured using a Likert scale [Turjačanin and Čekrlija 2006].

The sample included 50 respondents, or about 6\% of the population of the village. The demographic structure of the sample had a slightly higher number of women (51\%) compared to men (49\%). The largest number of respondents was aged 46–59 years (39\%), followed by 32–45 years (33\%), 18–31 years (20\%) while the lowest number of respondents was in the age group over 60 years (8\%).
The largest part of the sample consisted of respondents who were unemployed (63%), followed by employed (25%), and pensioners (5%). By level of education most of the sample consisted of respondents with primary education (62%), followed by respondents with secondary education (33%), respondents with college or university education (4%), and the lowest number of respondents have not completed primary school (1%). According to the amount of monthly income, most respondents have an income of up to 200 euros (52%), followed by those with income of 200 to 400 euros (35%), and the lowest number of respondents have a monthly income of over 600 euros (2%). The largest number of respondents (29%) comes from the three-member households, followed by respondents from households with two members (25%), one-person households (20%) and the four-member households (15%). The smallest proportion of respondents is from households with five or more members (11%). Percentage share of respondents is in line with the overall structure (gender, age, education).

Authors-researchers had sorted out properly completed questionnaires and then entered and processed the obtained data in SPSS 17.0. for Windows. The results presented were obtained from the statistical analysis in which four types of analysis were applied: descriptive statistical analysis, application of the chi-square test, t-test for independent samples and ANOVA. To determine the significance of differences between groups post-hoc Scheffe’s test was used.

RESULTS AND DISCUSSION

In the first half of the 18th century, Bešenovo was a small village with only a few dozen homes. In 1756, the village had 50 homes and in 1774 it had 109 homes. Faster growth began in the late 18th century and in 1787 it had 870 residents. This trend continued in the early next century. Growth was soon interrupted and Census in 1850 registered only 951 residents. Since the second half of the century, censuses have carried out regularly and Bešenovo com-

![Figure 1. Trends in population in the period 1787–2011](source: Ćurčić, Đuričić and Marjanović, 2002; Statistical Office (Census 2002 and 2011)
prised the population of the neighbouring Prnjavor (until 1981, when Prnjavor was first separately registered).

The figure shows that the population decline occurred after the Census of 1931 (when the maximum was recorded), specifically during and after the Second World War, when the nearby Prnjavor was burned and displaced. After the war, there was a slight increase in population as a result of post-war colonization, especially in the period 1961–1971. The general trend follows the trend of population decline at the national level as a result of the ageing of population (increasing mortality) and emigration, which, with a minimum birth rate in the inter-census period gives negative natural increase [Solarević 2009].

The figure clearly shows that the age structure of male and female population of Bešenovo is dominated by older people as a result of longer life expectancy and decline in fertility and birth rates that would contribute to expanding the base of the pyramid and appearance that would suggest stationary or regressive population. The appearance of the age pyramid coincides with the trend across the country, and this is configuration that is defined as a regressive type, because the pyramid is widest in the middle part and at the top, which shows the increasingly high ageing of population. It will inevitably lead to a drop in population in the next census, due to the increased number of people entering the age group with potentially highest mortality rate.

In 2011, the largest age groups were 55–59 and 50–54, and this is the category that is already out of the reproductive period and can not contribute to an increase in the birth rate, and therefore the natural growth. Category of
children up to 4 years is among those with the lowest share. The fact that the share of old population in the future will be even greater, because the proportion of middle-aged population is greater than half of the total population, is concerning. The average age increased from 40.2 years (2002) to 43.2 years (2011), which is above the national average (42.2).

The ageing index (i) is one of the most reliable analytical indicators of the age structure of the population and thus the process of demographic ageing. It expresses the relationship between old and young population, and a critical value is 0.4 or 40%. Population, where the relationship has higher values, is characterized by ageing and vice versa, if the index is less than the threshold value, the population is young. The ageing index in Bešenovo is 1.26, which indicates that the old population has exceeded the share of young population and as a result, shown pyramid emerges and the village disappears in terms of population. Coefficient of age (kₜ) only takes into account the relationship between the individual major age groups and the total population. When the proportion of persons aged 60 and over reaches 12%, it is considered that the population has begun to age, and the ratio of Bešenovo has a value of 23.42%, which confirms earlier findings.

According to the Census of 2002, there were 45.9% of active persons in Bešenovo, 14.1% of persons with personal income and 40% of dependents. There is a trend of growing share of dependent population, which is in Bešenovo represented by a significant proportion of the older population that does not receive a pension, and if we add the population registered as pensioners, then this share is very high, and it is more than a fifth of the total population [Solarević 2009]. Bešenovo has the highest percentage of people with incomplete primary education, and there is growth in number of persons with a secondary school diploma, while the share of highly educated population is insignificant, therefore, still present high illiteracy is not surprising in Bešenovo. In Bešenovo, according to the Census of 2002, there were recorded 290 households, out of which 239 family households and 51 non-family households. According to Census of 2011, the number of households has decreased and amounted to 271, which is not a significant decrease compared to the population decline, indicating a consistently large proportion of single (53) and two-member (67) households (together 44.28% of the households). These are predominantly households of older population, and this means that almost in half of the households in Bešenovo there live one or two people (mostly older). This decrease in the following Census will be bigger because of the expected rate of mortality in these categories, and households will be turned into empty and abandoned houses. The average number of members is 3.10.

Migrations did not favour village. More people regularly emigrated than immigrated to the village. Migration balance was negative, and such it remained to this day. In the decade from 1961 to 1971 village was left by 78 people more than people who moved in, so that a remarkable population growth (79 people) increased population only by one resident. In the following two decades, balance was -140 and -185 persons, which far surpassed population growth (5 to 60 people) and led to a striking depopulation. In the decade from 1991 to 2002 somewhat larger population immigrated (137), which contributed to the increase in population between the two censuses. This is largely the
population that fled after 1991 and during the civil war from Croatia and Bosnia and Herzegovina (mostly in 1995 from Croatia). After that, immigrants prevailed, especially younger age groups, looking for a job and a better economic situation, and there is an increasing permanent departure of highly educated population, and their staying in larger towns where they were educated. A particular problem is the postponement of marriage, which led to a large number of male unmarried population aged over 45, remaining to work on the farms, and then, after the death of their parents falling into a category of single-person households thus not contributing to the reproduction of the population.

Such migration characteristics have contributed to the fact that this village gets into a group of settlements with a minimum population of immigrants, and more common forms of migration are weekly and daily due to the high mobility of younger people [Ćurčić, Đuričić and Marjanović 2002]. According to a general coefficient of commuting, Bešenovo falls into the category of medium-active migratory settlements. According to a functional typology it is an agrarian settlement (60.1% of the working population is in the primary sector), and according to the criteria of functional dependencies is among the partially dependent settlements. Analyzed demographic and functional characteristics suggest that this village does not represent an attractive place for life and work. Conducted survey research gave subjective indicators of personal views of individuals on these topics.

Respondents were surveyed about satisfaction with life circumstances. On a scale ranging from 1 to 5, they evaluated the satisfaction with certain elements of living standards (Table 1).

Table 1. Elements that influence the quality and satisfaction with life circumstances

<table>
<thead>
<tr>
<th>Elements of satisfaction</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic connections (sufficient number of bus and rail lines)</td>
<td>%</td>
<td>50.7</td>
<td>22.9</td>
<td>17.1</td>
<td>7.1</td>
</tr>
<tr>
<td>The quality of the roads in the village</td>
<td>%</td>
<td>37.9</td>
<td>28.6</td>
<td>17.1</td>
<td>15.0</td>
</tr>
<tr>
<td>Electrification of village</td>
<td>%</td>
<td>13.6</td>
<td>7.9</td>
<td>20.7</td>
<td>30.7</td>
</tr>
<tr>
<td>Water supply network</td>
<td>%</td>
<td>13.6</td>
<td>11.4</td>
<td>22.1</td>
<td>28.6</td>
</tr>
<tr>
<td>Sewerage network</td>
<td>%</td>
<td>43.9</td>
<td>37.5</td>
<td>17.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Gas network</td>
<td>%</td>
<td>69.3</td>
<td>15.4</td>
<td>12.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Mobile phone network</td>
<td>%</td>
<td>10.7</td>
<td>7.9</td>
<td>18.6</td>
<td>24.3</td>
</tr>
<tr>
<td>TV signal</td>
<td>%</td>
<td>22.1</td>
<td>15.0</td>
<td>26.4</td>
<td>15.0</td>
</tr>
<tr>
<td>Internet</td>
<td>%</td>
<td>27.1</td>
<td>9.3</td>
<td>22.1</td>
<td>22.1</td>
</tr>
<tr>
<td>Hygiene in village</td>
<td>%</td>
<td>28.6</td>
<td>25.0</td>
<td>23.6</td>
<td>15.0</td>
</tr>
<tr>
<td>Preschools</td>
<td>%</td>
<td>10.7</td>
<td>15.7</td>
<td>35.7</td>
<td>22.9</td>
</tr>
<tr>
<td>Elementary schools</td>
<td>%</td>
<td>11.4</td>
<td>11.4</td>
<td>25.7</td>
<td>28.6</td>
</tr>
<tr>
<td>Diversity of content for children and adults</td>
<td>%</td>
<td>31.4</td>
<td>22.1</td>
<td>29.3</td>
<td>12.9</td>
</tr>
<tr>
<td>Provision of medical services</td>
<td>%</td>
<td>18.6</td>
<td>25.0</td>
<td>27.1</td>
<td>12.1</td>
</tr>
<tr>
<td>Prices of products and services</td>
<td>%</td>
<td>40.0</td>
<td>31.4</td>
<td>20.0</td>
<td>8.6</td>
</tr>
<tr>
<td>Quality of products and services</td>
<td>%</td>
<td>25.7</td>
<td>29.3</td>
<td>23.6</td>
<td>15.0</td>
</tr>
</tbody>
</table>
Traffic connections, sewer and pipeline networks have proved to be major problems because more than half of the respondents expressed their full dissatisfaction, while full satisfaction was expressed by the lowest percent of respondents. Satisfaction with the infrastructure network can be regarded as positive when it comes to electrification of villages, water supply network and mobile network, because about 70% of respondents reported partial or full satisfaction. Provision of medical services in the majority of cases (27.1%) was rated grade 3, which means that the respondents were not able to accurately determine the level of satisfaction with medical services. Surveyed residents also expressed their dissatisfaction (over 50%) in terms of the variety of content for children and adults. Generally speaking, population of Bešenovo 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% of respondents, and dissatisfaction with prices about 70% of the respondents. Interestingly, none of the respondents expressed their full satisfaction with prices.

Based on the results of t-test we see that the male population is more satisfied with certain elements of the standard of living, such as transport links, quality of roads and water supply network, while the female population is more satisfied with the availability of children’s and educational institutions. Also, women are more satisfied with the prices and quality of products and services. In respondents of different ages can be seen statistical significance at the level of significance of p <0.05 for attitudes of respondents when it comes to the variety of content for children and adults. Based on factorial analysis and post-hoc Scheffe’s test (F = 3.685, p = 0.014) the biggest differences were found between respondents in the age category of 18–31, who were not satisfied with the quality and accessibility of such content and older people in category of 46–59, who had a positive attitude towards these. Generally speaking the older categories of persons aged over 45 are more satisfied with tested elements of the standard of living compared to younger respondents. Younger categories of the population are working-age people and want better living conditions in their neighbourhood.

Regarding the attitudes of respondents of different education levels, a statistically significant differences at the level of significance of p <0.01 or p <0.05 are observed only in the Internet availability (F = 3.464, p = 0.018), where respondents with higher levels of education consider that this element is available to them to sufficient extent and respondents with primary school, who are not satisfied with the availability of this element. Analysis of the results obtained from attitudes of respondents of various occupations does not show the existence of major differences in attitudes within these groups.

In the analysis of the attitudes of those who have different monthly income, statistically significant differences are observed at the level of significance of p <0.01 for question relating to the quality of the roads in the neighbourhood (F = 5.376, p = 0.002). In this element, there is a distinguished group of respondents with higher incomes than 600€ per month, who are very dissatisfied and people with lower monthly income, who are satisfied with the quality of roads in their neighbourhood. As far as the other elements of the standard of
living are concerned, people with higher monthly incomes are dissatisfied to a higher extent in relation to people with lower incomes.

To the questions about satisfaction with the quality of life, responses were discouraging (Table 2). The largest portion of respondents (45.7%) were partially satisfied with their lives, followed by people who are not satisfied (44.3%) and the lowest percentage of respondents is satisfied (10.0%).

Table 2. Level of satisfaction with life in the border region

<table>
<thead>
<tr>
<th>Are you satisfied with life in Bešenovo?</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>10.0</td>
</tr>
<tr>
<td>Partially</td>
<td>45.7</td>
</tr>
<tr>
<td>No</td>
<td>44.3</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Data obtained using the chi-square test, when it comes to answers given by respondents of different gender, show that a slightly higher percentage of women are satisfied with their standard of living in comparison to men. If we look at the age structure, the most dissatisfied is the younger population aged from 18 to 31 and from 32 to 45. When it comes to employment, employees are a category of respondents who are most dissatisfied with their living standards. On the basis of education, the greatest dissatisfaction is manifested by persons with secondary education. When we talk about monthly income, those persons whose income is below 200€ per month are most dissatisfied. Based on these findings, we conclude that the differences in perception exist, but they are small and not statistically significant.

CONCLUSION

Research of demographic statistics showed that unfavourable demographics of this village is characterized by high mortality as a result of high average age of the population. The current structure of the population does not provide the conditions for the improvement of demographics in the future. The ageing of population and the deterioration of vital characteristics over a long period create the problem of providing a sufficient share of working-age population.

It is likely that this problem will not be solved soon, because there are fewer and fewer young people, and most of them are going to the cities, there is no natural growth, the highest percentage of the population consists of middle-aged and elderly people, and therefore the population is increasingly diminishing in number. It is essential that the awareness of residents is much higher in terms of family planning, getting married, finding employment, in terms of contribution to rural development, but also it is necessary to obtain much greater cooperation with the local government of the municipality, the allocation of more funds for Bešenovo, and many other villages that have problems of this kind.
In the empirical study of quality of life, it was concluded that the views of respondents are most affected by economic possibilities. Positive or negative attitude about perception of own living standards, respondents formed primarily on the basis of average earnings and employment. The analysis shows that the population of Bešenovo is not fully satisfied with living conditions and slightly or moderately satisfied with the basic elements of living standard. These findings confirm the initial assumptions. The biggest problems are low incomes and lack of employment.

Mountainous areas such as Bešanovo are on the economic and social margins of development resulting in permanent emigration, depopulation and economic crisis. Despite numerous opportunities for the development, these regions are classified as underdeveloped regions that are barely surviving. Today, the mountainous rural regions face sudden and rapid changes in their natural environment, economy and society. Although there are numerous opportunities for progress in synergy of agriculture, tourism and small family industry, the main problems are lack of motivation and lack of planning. The existence of mountainous regions depends on the attractive opportunities that are acceptable for the younger population. In order to keep young population in the mountainous rural areas, it is necessary to create new jobs. Also, the existing infrastructure needs to be rebuilt. Job creation is just one step towards prosperity of mountainous rural regions. In addition, numerous social and cultural activities should be restored.

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ОРИГИНАЛНИ НАУЧНИ РАД

ДЕМОГРАФСКЕ КАРАКТЕРИСТИКЕ И ЗАДОВОЉСТВО ЖИВОТОМ У НАСЕЉИМА ФРУШКОГОРСКЕ РЕГИЈЕ: СТУДИЈА СЛУЧАЈА БЕШЕНОВО

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РЕЗИМЕ: Србија се суочава са економском кризом у последњих двадесет година, што је један од разлога лоше демографске ситуације у земљи. Поред ниских или негативних стопа природног прираштаја и старења становништва, већина општина у Војводини има и негативан миграциони салдо. За Војводину је карактеристичан дугорочни тренд смањења младог становништва и пораста старије популације. Ова два процеса су уследана ниским стопама фертилитета и наталитета и повећањем очекиваног трајања живота. Лоша економска ситуација и старење становништва су нарочито присутни у брдско-планинским подручјима и периферно локалним насељима. Ова слика није заобишла ни Бешеново, планинско насеље на Фрушкој гори. Депопулација је присутна од 1931. године, уз мало повећање броја становника током послератне колонизације. Према попису становништва из 2011. године просечна старост у Бешеново износила је 43,2 године, индекс старења био је 1,26, а коефицијент старости 23,4%, што говори да је старо становништво премашило удео младог и уследило нестајање села у популационаном смислу. У емпиријском истраживању квалитета живота дошло се до закључка да на ставове грађана највише утичу материјалне могућности. Позитиван или негативан став према доживљају свог животног стандарда испитаници су формирали првенствено на основу просечних примања и запослености. Анализа показује да становништво Бешенова није у потпуности задовољно животним прилика ма и да је мало или средње задовољно основним елементима животног стандарда. Као највећи проблеми наводе се мала примања и немогућност запошљавања.

КЉУЧНЕ РЕЧИ: Бешеново, Фрушка гора, демографија, планинска регија, животни стандард