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Analysis of Demographic Changes in the Rural Areas of the Republic of Srpska

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Abstract

The rural areas of Republic of Srpska occupy about 95% of its territory and about 83% of its population. The aim of the research was to determine the differences of demographic indicators, focusing on rural areas, between the two Population Censuses, and confirm the hypothesis that human capital in the rural areas of the Republic of Srpska is a critical factor in the development of rural areas which tends to further threaten economic and social development. The paper analyzes the results of the 2013 Population Census and the 1991 Census, comparing the basic demographic indicators. The results of the analysis show loss of population, number of household members and accelerated population ageing, and decline in the number of active population. Demographic problems are equally expressed in all parts of the rural area irrespective of the population density.

Key words: population census, rural areas, households, agricultural holdings

Introduction

The world population is increasing, whereas the population in Bosnia and Herzegovina has been decreasing. The 1991-1995 war events are not the only reason causing this trend, as there are other reasons that should be properly investigated and analyzed (postponement of marriage, economic uncertainty, political instability and similar processes). The above findings are presented in the Proceedings of the Academy of Sciences and Arts of Bosnia and Herzegovina on the subject of the Demographic and Ethnic Changes[6]. Academicians further say that if the main features of the contemporary demographic picture of Bosnia and Herzegovina should be highlighted, they would include denaturation, rapid ageing of the population, constant emigration of the population in optimal labour and reproductive age, increase in the mortality rate due to the growing share of the elderly and depopulation.

The aim of this paper is to examine the degree of demographic change in the rural area of the Republika Srpska as one of the Entities in Bosnia and Herzegovina and to identify possible differences between areas with different altitudes and density of the population. For rural future, demographic change is a key issue, since age structure in rural areas is often uneven and also unstable due to migration patterns (Amcoff and Westholm, 2007).

How rural communities cope with the ageing 'wave' over the next few years can be expected to pave the way for the rest of the country (Champion and Shepherd, 2006).

Material and Methods

The first post-war population census in Bosnia and Herzegovina after the war took place in 2013, but its results became official only in the middle of 2016 and were separately published by the Official Gazette of Bosnia and Herzegovina, and by the Republic Institute of Statistics of the Republic of Srpska. Since these separately published results differ in the final number of inhabitants, and consequently other indicators, the focus of this research was on the level of the Republic of Srpska entity.

The data for the 2013 Census were compared with the 1991 Census, when the previous Population Census was carried out in Bosnia and Herzegovina. These data were obtained from the Bureau of Statistics of B&H.

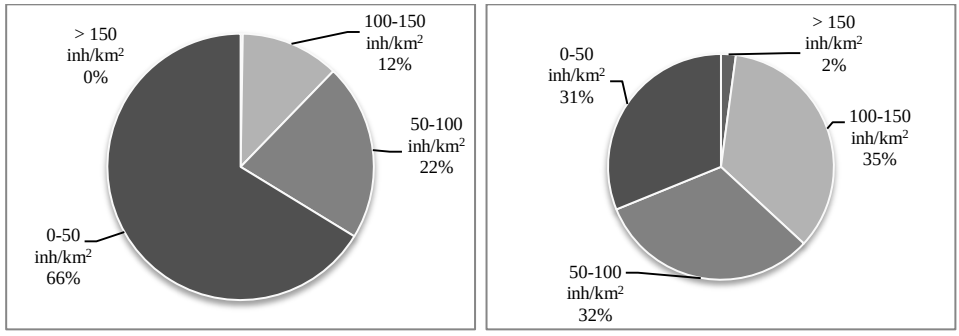
[6] Demographic and Ethnic Changes in Bosnia and Herzegovina, 2017, Department of Social Sciences, Academy of Sciences and Arts of Bosnia and Herzegovina, Sarajevo

Regional typologies are a common tool used to cluster regions with similar characteristics and possibly similar policy needs (Verburg et al., 2010). The paper analyzes the basic demographic indicators of rural development in accordance with the OECD methodology[7], as well as the OECD regional typology[8]: population density, population change (total number, natural increase, and migration balance), population structure (dependency index, vitality index, age and gender structure), households (number of household members), settlements (size of settlements).

Population statistics methods were used for data processing, and the data are presented graphically and in tabular form.

Results and Discussion

The analysis of population density as a primary indicator of rural development has shown that rural areas occupy about 95% of the territory of the Republic of Srpska and about 83% of its population, with only two smaller municipalities (total area of 65 km^2) meeting the primary criterion for urban areas. All other territories have fewer than 150 inhabitants / km^2 and have status of rural areas, where even 2/3 of the territory of the Republic of Srpska has a population density of fewer than 50 inhabitants / km^2. When it comes to the number of inhabitants, unlike the countries of the European Union where most of the inhabitants live in urban areas, the majority of the population in the Republic of Srpska is in a semi-urban or predominantly rural area (Graph 1).



Graph 1. Structure of the territory (a) and population (b) of the Republic of Srpska according to the degree of rurality, Census 2013

[7] Handbook on rural households' livelihood and well-being, p.101-103

[8] The OECD regional typology, Directorate for Public Governance and Territorial Development, June 2011, OECD

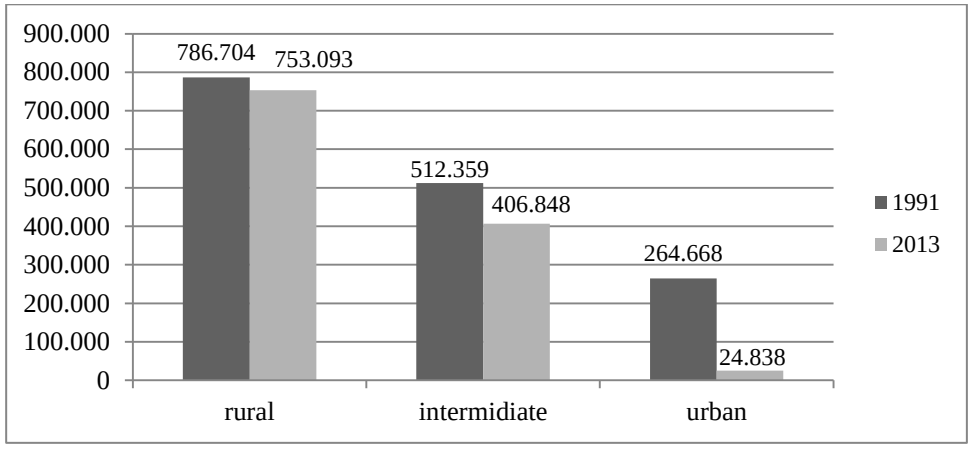
The second step in the classification of "rural" is in the percentage of inhabitants living in rural communities. Since official statistics provides data exclusively for the level of a local administrative unit (municipality), the only applicable criterion is the population density at the municipal level. Such a gradation of the level of population density is shown in Table 1. The third indicator for the definition of rural is proximity of an urban centre. Given that no city or local community outside the urban area in the Republic of Srpska has an urban centre with a population exceeding 200,000 and 500,000, this means that the vicinity of the urban centre does not change the stated relation between the rural and urban part of the territory or population.

Tab. 1. Urban and rural regions in the Republic of Srpska, 2013

	Population density (inh/km^2)	Area (km)	Population	Population density	% of the territory	% of the population
1	> 150	65	24,838	382	0.26%	2%
2	100-150	2,973	406,848	137	11.98%	35%
3	50-100	5,331	374,040	70	21.49%	32%
4	0-50	16,441	364,616	22	66.27%	31%
	Total RS	24,810	1,170,342	47	100.00%	100%

Source: Population Census 2013, Statistic Office of the Republic of Srpska

The results of the analysis also show that the total population between two Censuses decreased by 236,740 inhabitants, Graph 2.



Graph 2. Changes in the number of inhabitants between two Censuses (1991 and 2013)

The causes of the decline in the total number of inhabitants are both the decline in birth rates and internal migrations (migrations between the RS and B&H regions) and external migrations (permanent migration from the territory of RS and B&H).

What we can conclude by looking at Graph 2 is that the number of urban population was drastically reduced, while the rural population remained stable, and intermediate areas also had a pronounced trend of population loss.

The above data can lead to the conclusion that the rural area is stable from the aspect of demographic change, at least in terms of the total population. However, the population density per square kilometre as the only indicator used cannot be a sufficient indicator for general conclusions. Changes in rural areas, such as depopulation and land abandonment, but also intensification and loss of biodiversity, usually proceed very slowly yet are irreversible (Westhoek et al., 2006). Namely, until the structure of the rural population in terms of age and economic activity is examined, the only thing we can conclude is that the Republic of Srpska has a pronounced ruralization trend. This conclusion also points to the lack of industrial activity because the processes of industrialization and urbanization are closely linked.

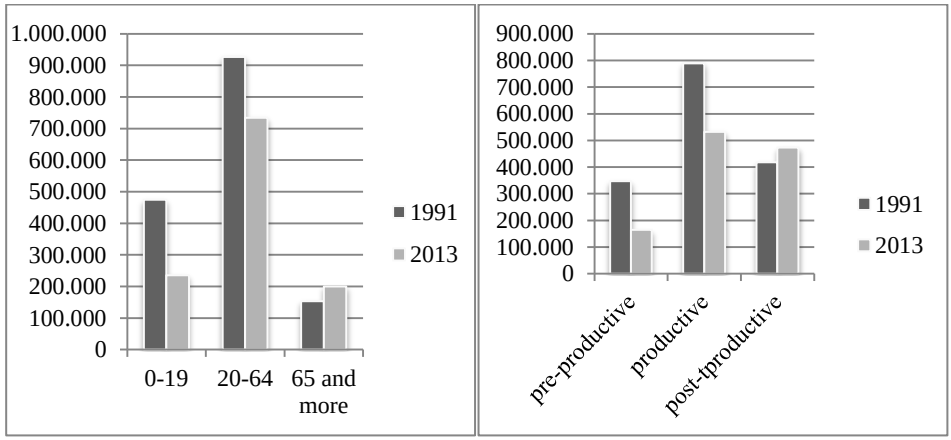
The Ageing Index as a ratio between the over-60 year old population and the population under the age of 15 is one of the demographic indicators for analyzing the age structure of the population. The average ageing index for the Republic of Srpska according to the 2013 census data is 174.5%. The average ageing index by male population is 147.91% and by female 202.49%. If we take into account that the value of the Ageing index over 40% means that population has entered into an ageing process, then these values for the Republic of Srpska should cause concern. Other indicators presented in Table 2 also show an extremely negative trend in comparison to 1991 (Federalni zavod za statistiku, 1999).

Tab. 2. Values of ageing indicators, 1991 and 2013 comparative overview

Indicator	Sex	1991	2013	Indicator	Sex	1991	2013
Ageing index	Total	-	174.50%	Youth dependency ratio	Total	32.99%	20.47%
	Male	55.51%	147.91%		Male	33.23%	20.94%
	Female	78.12%	202.49%		Female	32.86%	20.00%
Total dependency ratio	Total	47.54%	45.36%	Old-age dependency ratio	Total	14.56%	24.89%
	Male	44.93%	41.64%		Male	11.70%	20.71%
	Female	50.37%	49.09%		Female	17.51%	29.09%

Productive population also decreased. The share of economically active labour force in the total population is 47%, while this percentage is traditionally higher for men (56%) and lower for women (38%).

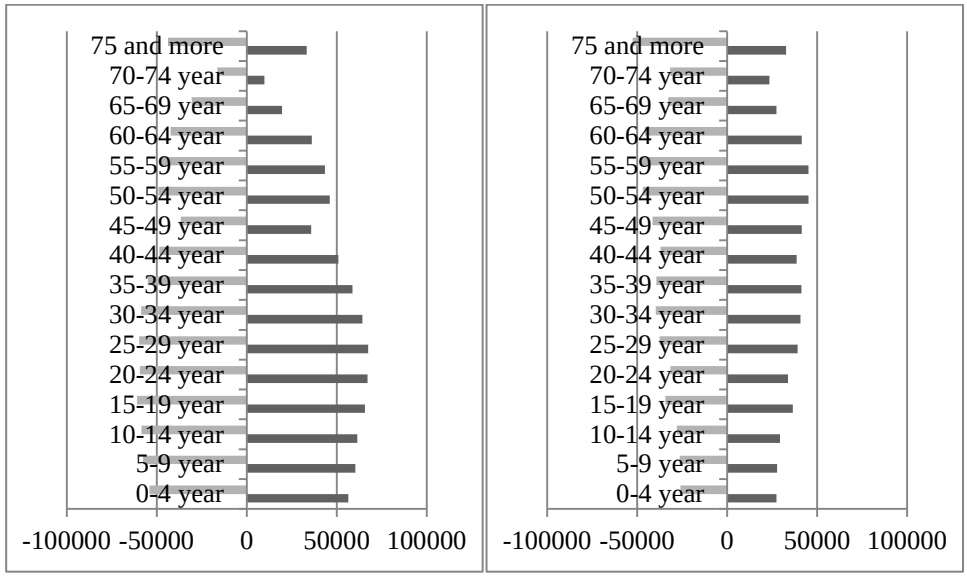
What is worrying is the downward trend in the economically active population in relation to 1991 (Federalni zavod za statistiku, 1999), i.e. falling pre-productive in relation to the growth of post-productive labour, which coincides with the values of old and youth dependency ratio (Graph 3). The ratio of economically active to the older dependent population is 4: 1, and if the same trend persists between the 1991 and 2013 censuses, it could fall to 2: 1. What is even more worrying is the unemployment rate because a large proportion of the working population is excluded from the labour market, which is currently 50% of the total workforce. Finally, as noted in the report of the Committee of the Regions: the productivity of the economically active population needs to be considered: high productivity can compensate for unfavourable age dependency ratios…the extent to which the basic needs of an ageing population can be covered will depend on fiscal mechanisms of solidarity, between generations as well as between social groups (Committee of the Regions, 2012).



Graph 3. Population structure by main age groups and a) economic activity b) 1991 and 2013 comparative overview

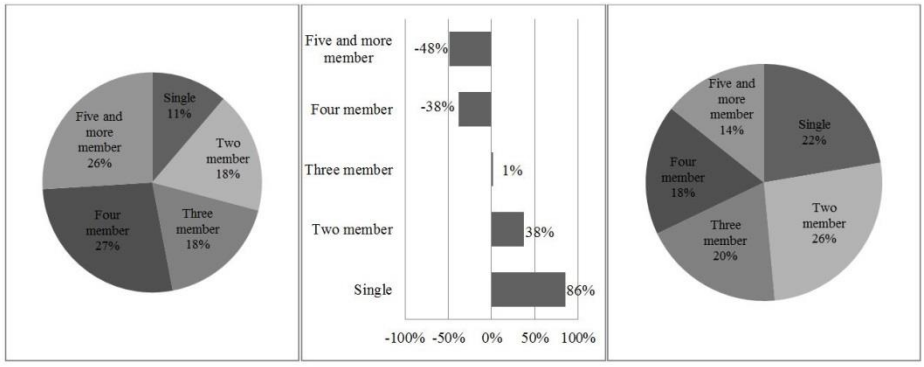
The age structure of the population and the comparison between the two censuses also confirm the ageing trend of the population, whereby the participation of all age categories above 45 years has increased, that is, the reduction in the participation of all age categories under 45 years of age, with women ageing faster than men. The analysis of the above indicators by the regions with different population density showed that the same tendencies are noticeable regardless of the density value with slight differences in the increase or decrease of the population in certain age categories.

The greatest differences are in the age category of 0-4 years, where the difference between the two censuses is 34-38% in the predominantly urban, compared to 60-69% less population of this age group in the dominantly rural area. There is also a significant reduction in the participation of the population aged 30-40 in the dominant rural area (Graph 4).



Graph 4. Population structure by age group a) 1991 and b) 2013

The size of the rural households also significantly changed in the time between the two censuses, especially with regard to the participation of households with one and two members (Graph 5).

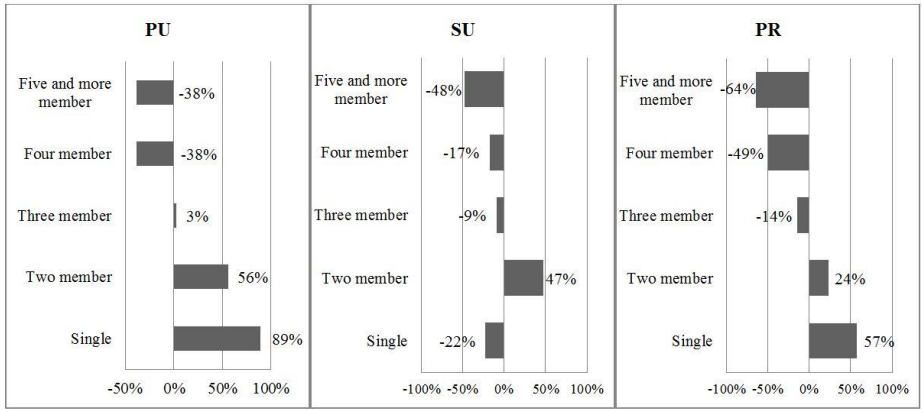


Graph 5 Structure of agricultural holdings by number of members in 1991 a) difference between two censuses b) and in 2013 c)

The share of single-member households in agricultural households at the level of the Republic of Srpska increased by 86% and of two-member households by 38%. At the same time, the number of households with five and more members decreased by 48%.

It is believed that in the villages, especially in the remote rural areas, only the elderly households remained, and that this tendency for the increase of single and grandparent households is inherent primarily to rural areas.

However, the research results show a deviation from this, where the increase in the number of single-member and two-member households is higher in urban than in rural areas, Graph 6.



Graph 6. Household structure by region type, percentage of change between 2013 and 1991 Census

The total number of households, on average, fell by 22.35%, while the decrease in the number of households in rural areas is somewhat higher, amounting to 31.57%.

Conclusion

The demographic problem of rural areas is reflected in the loss of population, the number of household members and accelerated ageing of the population, and the decline in the number of active population. The Republic of Srpska as a whole is rural territory with a small percentage of rural population. Demographic problems are equally expressed in all parts of the rural area irrespective of the density of population.

The goal of the Republic of Srpska must be to keep the population in rural areas, as this is the basis for the sustainable development of society, balanced territorial development, a prerequisite for the restoration and preservation of natural resources, and the preservation of natural, cultural and social heritage. To keep the population in rural areas is not only important from the point of view of its employment, but also from the point of view of using land, forests and other natural resources in these areas in a sustainable way, so that these resources remain available for next generations. The challenge for rural development planning is in choosing approaches to policy programming for the development of rural areas.

References

Amcoff, J., Westholm, E. (2007). Understanding rural change-demography as a key to the future. *Futures,* 39(4): 363-379.

Champion, T., Shepherd, J. (2006). Demographic Change in Rural England, The Ageing Countryside, the growing older population of rural England, Age Concern Books.

European Union (2016). Committee of the Regions. The impact of demographic change on European regions.

Federalni zavod za statistiku (1999). Popis stanovništva, domaćinstava, stanova i poljoprivrednih gazdinstava 1991. Domaćinstva po naseljenim mjestima; Stanovništvo prema broju stanovnika po opštinama; Stanovništvo po naseljenim mjestima.

Kulenovic, Z., Ivankovic, D (2016). Revitalization strategy of rural area - case of the Republic of Croatia and the Republic of Serbia, International scientific conference - ERAZ 2016: Knowledge based sustainable economic development.

OECD Regional Typology (2012). Directorate for Public Governance and Territorial Development, OECD, Paris.

Parker, K., Menasce Horowitz, J., Brown, A., Fry, R., Cohn, D'Ver, Igielnik, R. (2018). Demographic and economic trends in urban, suburban and rural communities, Pew Research Center, Social & Demographic Trends, 2012-2016 American Community Survey Data.

Republički zavod za statistiku Republike Srpske (2013). Rezultati popisa stanovništva.

Steinführer, A. (2017). Socio-demographic changes in rural areas in Germany: impacts on service delivery and settlement structures, Thünen Institute for Rural Studies, Braunschweig, Germany.

Vaško, Ž., Ostojić, A., Roković, G. Drinić, Lj., Mrdalj, V., Figurek, A., Brković, D. (2016). Poljoprivreda i ruralni razvoj u Republici Srpskoj do 2020. godine, Univerzitet u Banjoj Luci, Poljoprivredni fakultet. Naučna knjiga, 362 str. ISBN 978-99938-93-38-7.

Verburg, P. H., van Berkel, B. D., van Doorn, A. M., van Eupen, M., van den Heiligenberg, H. (2010). Trajectories of land use change in Europe: a model-based exploration of rural futures. *Lanscape ecology*, 25(2): 217–232.

Vlada Republike Srpske (2013). Ministarstvo za prostorno uređenje, građevinarstvo i ekologiju. Izmjene i dopune Prostornog plana Republike Srpske do 2025 godine.

Westhoek, H. J., van den Berg, M., Bakkes, J. A. (2006). Scenario development to explore the future of Europe's rural areas. *Agriculture, Ecosystem and Enviroment*, 114(1): 7-20.

Анализа демографских промјена у руралним подручјима Републике Српске

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Сажетак

Рурална подручја Републике Српске заузимају око 95% територије Републике Српске и око 83% њеног становништва. Циљ истраживања био је утврдити различитост демографских показатеља између два пописа становништва, са нагласком на рурална подручја, као и потврдити хипотезу да је људски капитал у руралним подручјима Републике Српске пресудан фактор развоја руралних подручја, као и да представља додатну пријетњи економском и социјалном развоју. У раду су анализирани резултати пописа становништва из 2013. и 1991. године, упоређивањем основних демографских показатеља. Резултати анализе показују пад броја становника, броја чланова домаћинства и убрзано старење становништва, као и смањење броја активног становништва. Демографски проблеми су подједнако изражени у свим дијеловима руралног подручја без обзира на густину становништва.

Кључне ријечи: попис становништва, рурална подручја, домаћинства, пољопривредна газдинства

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