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IMPROVEMENT OF SOCIO-DEMOGRAPHIC STRUCTURE IN RURAL AREAS IN SERBIA – POSSIBILITIES AND CHALLENGES

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Abstract

Rural areas occupy more than a half territory of the Republic of Serbia, and they are home for more than 50% of total population. These areas are very diverse due to different topographic structure, settlements within them emerged mainly spontaneous - adjusting to the existing terrain. Settlements in rural areas have very vibrant history and the influence of different cultures left marks on their current structure. In Serbia, rural areas are characterized with low population density, inadequate access to main public services, lack of communal infrastructure, low income and mainly agriculture-oriented economy. One of the biggest problems that rural areas are facing is certainly unfavorable sociodemographic structure due to constant depopulation process and low quality of life.

Starting from the assumption that rural population represents one of the biggest rural resources, this paper discusses possibilities and challenges for improvement of socio-demographic structure in rural areas in Serbia. Within this paper, first the current state of rural areas is analyzed and key development problems and possibilities are determined. Then, the examples of positive practice of implemented projects in rural areas in Europe are presented in order to illustrate possibilities for improvement of socio-demographic structure. Based on these findings, the aim of this paper is to propose possibilities for improvement of socio-demographic structure in rural areas. It is concluded that socio-demographic structure has influence on all other structures of rural areas and that its improvement is important for overall rural development.

Key words: rural development, socio-demographic structure, rural population, regional development

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1. INTRODUCTION

In the Republic of Serbia, unequal regional development caused significant differences in the economic development of different regions, which undoubtedly affected the development of rural areas. Decades of neglect of rural areas led to their stagnation in the economic, socio-demographic, functional and environmental terms, the quality of life was reduced and the physical structure was degraded, which affected the overall rural development process [1]. The continuous process of depopulation, which is more pronounced in recent years, is recognized as one of the biggest problems in rural areas in Serbia [2]. Demographic emptying in rural areas is a consequence of economic underdevelopment, reduced quality of life, inadequate or completely absent communal infrastructure, underdeveloped traffic network and devastated environmental structure. Devastated micro-rural centers are also a big problem, which are most pronounced in border and hillymountainous rural settlements, especially in the area of southeastern Serbia [3,4]. The absence of a developed and hierarchically structured polycentric system of settlements, underdeveloped connections between urban and rural areas are some of the specificities of settlements in rural areas of Serbia that have a negative impact on their development [5].

Rural areas occupy a significant territory in the Republic of Serbia and play an important role in overall national and regional development. These areas are lagging behind in demographic, economic and spatial terms, so their revitalization is necessary. Rural development can be seen as a process of improving the quality of life and the socio-demographic and economic structure of rural areas [6]. Rural development can also be defined as a complex and comprehensive process, which, in addition to the overall improvement of rural areas, has an economic, environmental, cultural and socio-demographic role [7]. In the process of rural development, the emphasis is on activating local resources and their efficient exploitation. The starting point of this research is that the rural population represents the main resource of rural areas, and so this paper discusses improvement of the socio-demographic structure of rural areas. The goal of this research is to determine the opportunities and challenges for improving the sociodemographic structure of rural areas in Serbia based on the analysis of their current state. Also, the goal is to propose possibilities for improving the sociodemographic structure of rural areas in Serbia based on the analyzed positive European experiences. By improving socio-demographic structure, it is possible to contribute to the further overall development of rural areas and positively impact other structures of rural areas - economic, spatial-physical and environmental.

2. METHODOLOGY

The methodological framework in this paper is based on the analysis of the rural areas in Serbia, specifically their socio-demographic structure and investigating possibilities for its improvement. At the beginning, the paper explores the main characteristics of rural areas in Serbia, primarily their socio-demographic structure and its impacts on other structures and vice-versa. Next, implemented positive

practice examples of improving socio-demographic structure in European countries are presented. Based on the results, in the second part paper discusses the possibilities and challenges for improvement of socio-demographic structure in the context of sustainable development.

In order to conduct comprehensive analysis based on all specific characteristics of analyzed rural areas in Serbia, examples of positive practice were analyzed and presented within this paper. These examples were determined based on the context and problems that rural areas were facing. Presented examples illustrate cases in which rural settlements were facing similar problems as rural areas in Serbia, which were determined in the first part of this paper. Projects that are analyzed are all financed through funds from Rural Development Programme for 2014-2020 period.

3. CONTEXT - RURAL AREAS IN SERBIA

Rural areas in the Republic of Serbia occupy a major part of the territory and have been discussed within numerous legislative, planning and strategic documents. Over the years, a large number of researchers have studied rural areas and settlements in them, but even today there is no universal definition and classification of these areas. Within the Draft Spatial Plan of the Republic of Serbia for the period 2021-2035. [8], which was presented in 2021, division of rural areas is defined into 6 regions (Figure 1). The largest part of the territory belongs to the region of rural distortions. The rural territory of this region is characterized by demographic emptying, heterogeneous territory and uneven characteristics of peripheral and areas around urban centers. According this Draft, by applying OECD classification, 94,1 % of the territory of Republic of Serbia is defined as rural where population density is less than 150 inh/km². This territory is home to 47,8 % of total population and within there are 72,6% of total settlements.

In the Republic of Serbia, current division of settlements, according to the Statistical Office of the Republic of Serbia, is on *urban* and *other*. This division has been in use since the 1981 census [9]. Considering the division of settlements into urban and other settlements, automatically all urban settlements are urban, and all other are declared as rural settlements. Current division of settlements does not give a realistic situation, because among the "other settlements" in urban areas there are significant differences in terms of demographic and economic characteristics, availability and quality of public services [10]. Rural settlements and smaller towns are defined as other settlements - some current undeveloped municipalities and former municipalities, which have different numbers of inhabitants, structure and levels of development.

Based on the data from censuses for the 1948-2022 period, comparative presentation of population trends in "other settlements" at national and regional level is shown in chart 1. In the period 1948-1961, there was a noticeable growth in the number of inhabitants in all regions. After that, a continuous decline in the number of inhabitants is clearly visible, except in the case of the Belgrade Region. This Region is also the most developed in the country and includes mainly functional area of the capital city Belgrade. In the case of the Region of Kosovo and Metohija, there are no census data after the 1981 census. When comparing the census data [11,12] at the level of the entire country, between the 2002 and

2011 censuses, the number of inhabitants in other settlements decreased by 11.1%, while between the 2011 and 2022 censuses, it decreased by 13.3%, which is less for 388,769 inhabitants in the last decade.

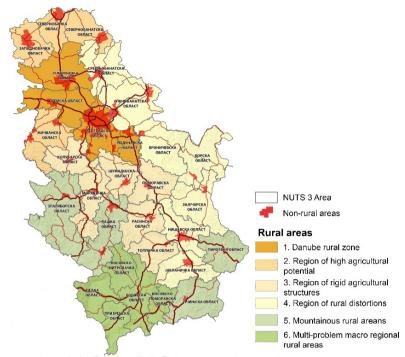
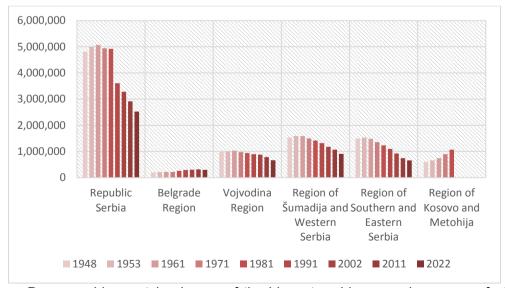


Figure 1. Map of rural areas, (Nacrt Prostornog plana Republike Srbije za period 2021-2035. god, (https://www.mgsi.gov.rs/sites/default/files/PPRS%20Nacrt.pdf)

Chart 1. Comparative presentation of the number of inhabitants in other settlements according to census data 1948-2022 (Authors according [11,12])



Demographic emptying is one of the biggest problems rural areas are facing. The reason for the decrease in the number of inhabitants is primarily uneven

economic development, due to which rural areas, especially those in hilly and mountainous areas, are marginalized [13]. In addition to unequal economic development, these areas also face uneven spatial development compared to urban areas [14]. Migrations in rural areas are mostly migrations of the younger population for education because of underdeveloped network of educational institutions or for work. Due to pronounced unemployment, the level of poverty is high, and the income from agriculture is decreasing, both due to market prices and due to climate changes, which have had catastrophic effects on agriculture. Compared to the gross income per inhabitant, the income in rural areas is evidently lower, and the "gray economy" is expressed [15]. There is also social exclusion, and often there is no participation of the local community in the creation of strategic and spatial plans. An insufficiently developed and dysfunctional network of settlements has a negative impact on the quality of life in rural areas, which is already at a low level, and leads to constant migration and the demographic emptying of rural settlements [16].

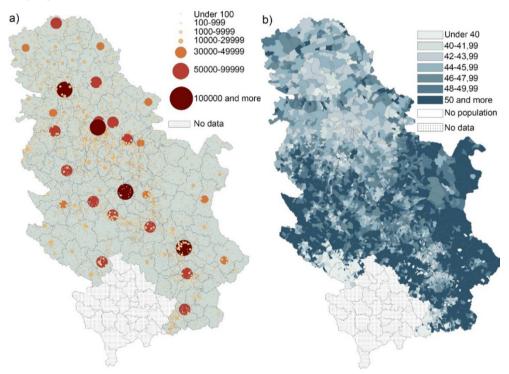


Figure 2. a) Map of population distribution by settlements; b) Map of average population age by settlements [12]

According to the data from the 2022 census, it is evident that, due to rural-urban migration, there are settlements with a smaller number of inhabitants in rural areas, which mostly gravitate to the district or regional centers (Figure 2a). Unequal population distribution and an underdeveloped functional network between rural and urban settlements have a negative impact on the development of these areas and additionally contributes to migration process. As a negative consequence of migration, there is an unfavorable age structure, especially in rural areas (Figure 2b). Based on the results of the 2011 census [12], the average age in other settlements was 43.6. Based on the results of the 2022 census it is 45.25. These

data show a tendency for the share of the elderly population to increase, which is a threat to the future development of rural settlements. As far as the gender structure is concerned, the participation of the male and female population is approximately the same, according to the last census, 50.4% are male and 49.6% are female.

The problems within the socio-demographic structure are a consequence of the decrease in the number of inhabitants and constant migration to urban areas. Negative natural growth represents a direct threat to the development and existence of rural areas. Unfavorable age structure, the outflow of the younger and working capable population, causes an adverse qualification structure, which is a great threat to the improvement and development of rural economy. As a consequence of social exclusion, the rural population is characterized by passivity in decision-making and planning processes. During the period of communism, there were cooperatives and associations of agricultural workers, but after 2000, they stopped working. Since 2016, there has been an initiative to organize social cooperatives, but it is still under development. The lack of interest and inactivity of the rural population are one of the significant problems that pose a great threat to future development. Also, unlike developed countries, in the case of underdeveloped countries, rural areas are associated with a traditional society that is predominantly engaged in agriculture, and where the underdevelopment is expressed in economic, social and technological terms [17].

By analyzing the structure of these rural areas, it can be concluded that the problems within the socio-demographic structure have a negative impact on other structures of rural areas - economic, physical, functional and environmental (Chart 2). Also, the problems within other structures negatively affect the socio-demographic structure, which slows down the overall rural development.

Shortage of workplaces
mainly agriculture oriented economy
impact of the built area on the quality of life
energy inefficient construction

unfavorable age structure
unfavorable qualification structure
inadequate attitude of residents towards the built environment
unplanned expansion of the rural built territory
inadequate land management
low awareness of environmental protection

Chart 2. Cause-and-effect relationship between different structures of rural areas, Authors

In order to overcome these problems in an efficient way, it is necessary to first determine their interrelationships. The economic structure has a negative impact on the socio-demographic one, because due to the lack of workplaces and an economy primarily oriented towards traditional agricultural production, population migration occurs. On the other hand, the unfavorable age and qualification structure of the rural population represents a great threat to economic development. Because of the lack of planning documents in most rural areas, uncontrolled construction occurs, which negatively affects the built-up space. Inadequate management and poor attitude towards the built space by residents

has a negative impact on the spatial structure. On the other hand, inadequately maintained building fund affects the quality of life and does not meet modern energy requirements. As far as the environment, there is no developed awareness of the importance of environmental protection. Creation of the illegal landfills and unsustainable land management leads to the environment pollution. Rural areas, and thus the rural population, face the biggest global problem of today - climate change [18]. Climate change consequences have negative impact on people's health, lives and the environment.

In addition to numerous problems that socio-demographic structure of rural areas is facing, there is also a large number of potentials that are characterizing them. The vibrant history and influences of different cultures over the centuries have resulted in a heterogeneous ethnic structure, especially in rural border areas. After the COVID19 pandemic, the attitude towards rural areas changed, especially during the lock down period. Rural areas, which are characterized by untouched nature, have become more attractive for life due to greater freedom of movement and a more favorable quality of the natural environment. This gives the possibility of reducing rural-urban migration in the future [18]. Another potential of rural areas is the traditional way of life of the elderly rural population. Living in the rural areas is synonymous with a healthy lifestyle which is one of the comparative advantages to urban areas.

4. EXAMPLES OF POSITIVE EUROPEAN PRACTICE

Rural areas in Europe have been facing similar problems as rural areas in the Republic of Serbia. In European countries, there is more developed awareness of the importance of rural areas, as well as numerous funds for financing projects for the revitalization of rural areas. In the tables hereunder, one can explore a selection of good practices examples. The projects were selected based on the problems faced by rural areas in Europe, which are similar to the problems faced by rural areas in Serbia. Table 1 shows projects related to the empowerment and activation of the younger population. The main goals are to increase the inclusion of young people, their involvement in decision-making processes and development processes and in that way reduce migrations.

Table 1. Presentation of projects for empowering young rural population

Tartu County Active and Entrepreneurial Youth, Estonia				
Implemented 2018-2021				
https://ec.europa.eu/enrd/projects-practice/tartu-county-youth-foundation_en.html				
Context- problems:	Goals:	Results:		
 Inaccessibility to funds 	 Connecting young people with the 	 35 small scale projects, 1000 people 		
 Lack of local community spirit 	local community	from Tartu aged 12-26 participated		
 Inactivity of the young 	 Developing skills in project writing 	 Promotion of entrepreneurship 		
population	 Entrepreneurship development 	 Introducing young people into 		
 Migrations of young people 	and youth empowerment	decision-making processes		
Centre for Social Inclusion in the village of Gilău, Romania				
Implemented 2019-2021				
https://ec.europa.eu/enrd/projects-practice/centre-social-inclusion_en.html				

Context- problems:	Goals:	Results:	
 Depopulation 	 Minority and vulnerable groups' 	 Inclusion of young people 	
 Unemployment of youth 	access to social integral services	 Transition from education to labor 	
 Young people face poverty 	 Involvement of young people in 	market guidance	
and lack of opportunities	development processes	 Better connections between young's 	

Table 2 shows projects related to the improvement of the availability of public services and use of modern technologies for improvement of rural activities and community. The main goals are to enhance quality of life and promote use of modern technologies in rural activities. This way there is a positive impact on the age and qualification structure and the spirit of community is strengthened.

Table 2. Presentation of projects for improving availability of public services and use of modern technologies for improvement of rural activities and community

Transformation of public space in rural areas, Western Asturias, Spain				
Implemented 2021-2021				
https://ec.europa.eu/enrd/projects-practice/transformation-public-space-offer-leisure-alternatives-rural-				
areas en.html				
Context- problems: Goals: Results:				
Progressive abandonment of Preserving architectural and Creation of contents.	cultural hub			
	architectural heritage			
	on of activities and			
	f social inclusion			
 Rural population inactivity Developing tourism Creation of r 				
	iew jobs			
Equipping the healthcare center in Biertan, Sibiu County, Romania				
Implemented 2018-2020				
https://ec.europa.eu/enrd/projects-practice/equipping-healthcare-centre-biertan-sibiu Context-problems: Goals: Results:	-county-romania_en.ntmi			
Unfavorable age structure Combat isolation and social Improved				
Medical care and basic exclusion Fatablish on integrated assistant and a sixty of the second and second and a sixty of the second and a sixty of the second and a	workplaces			
	sion and care services are			
	eople from vulnerable and			
0 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ups			
Agricultural education in the world of virtual reality, Hungary				
Implemented 2021-2021				
https://ec.europa.eu/enrd/projects-practice/agricultural-education-world-virtual-reality	_en.html			
Context- problems: Goals: Results:				
	Itural education in step			
	nnological developments			
	riculture productivity			
	e interest of young people			
agriculture • Develop agricultural education in agriculture	9			
Smart Villages for Tomorrow, Slovenia				
Implemented 2019-2020				
https://ec.europa.eu/enrd/projects-practice/smart-villages-tomorrow_en.html				
Context- problems: Goals: Results:				
	mart solutions for ageing			
• Ageing of rural population technology solutions rural commu				
	places for socializing of			
people and development Developing appropriate digital all age group	ns			
	mobility for the elderly			

The analyzed projects from European countries are positive examples of how problems in the socio-demographic structure can be overcome. Depopulation, non-favorable age and qualification structure, unavailability of public services and inactivity of the rural population - especially younger people are the main problems in the examples shown. In each example, the focus is on the activation of local resources, empowering the younger population and improving the connections and activities of the rural community.

5. DISCUSSION

Based on the context analysis, it can be concluded that it is necessary to improve the socio-demographic structure and overcome the problems it is facing. In this way, its effects on other structures of rural areas would be reduced and eliminated, and it would contribute to the economic, spatial and ecological development of rural areas. To improve the socio-demographic structure, first of all it is necessary to improve the quality of life, which is one of the triggers for demographic emptying, and to reduce the negative trend of depopulation. In order to effectively improve the socio-demographic structure of rural areas, it is necessary to increase the number of inhabitants and reduce rural-urban migration. As rural areas are synonymous for a healthy way of life and untouched nature, it is possible to use this and promote urban-rural migration, which would have a positive natural increase as a "consequence". One of the possibilities is subsidies for the return of rural population. If young people were stimulated to return to rural areas, and if investments were made in the education of young people through their scholarships, it would be possible to reduce the rural-to-urban migration.

In order for residents to decide to stay and live in rural areas, it is necessary to increase the standard of living of the rural population and provide them dignified life, access to basic public functions and adequate communal infrastructure. Housing is the dominant function in rural areas, so its improvement is necessary in order to improve the standard of living. The quality of housing in rural areas is not at a high level, primarily due to insufficient and completely absent communal infrastructure and illegal construction. The quality of housing could be improved by building new and upgrading the existing communal infrastructure and by energy renovation of buildings in order to make them resilient to the climate change.

In a large number of settlements, neither basic health care nor grocery stores exist. It is necessary to ensure accessibility to basic services in rural settlements and in that way to enhance the quality of life. In order to overcome this problem, it is possible to organize a mobile ambulance service, because residents of some rural areas do not have access to basic health care. The improvement of health care is very important because of the unfavorable age structure, but also because of the consequences of climate change - primarily heat waves.

As already mentioned, living in rural areas is related to a healthy lifestyle, so in addition to promoting this advantage for increasing the number of inhabitants, the promotion of rural lifestyle can have a positive effect on increasing the resilience of the rural community. These areas are characterized by large green spaces, forests and other natural resources, so it is possible to promote a "return to nature" as one of the advantages of rural life. In order to improve people's health and adapt to changed climate conditions, it is possible to apply nature-based solutions when planning the territory of rural settlements. By implementing modern concepts, it is possible to increase thermal comfort and thereby influence the quality of life in rural areas and mitigate the negative impacts of climate change.

Due to the decades-long marginalization of rural areas, the term rural is synonymous with something that is "backward", so a precondition for increasing the number of inhabitants and their social inclusion is improving the image of rural areas and rural life, as well as the promotion of rural identity. Because of the unfavorable qualification and age structure of rural population, it is necessary to improve the transfer of knowledge. In addition to raising awareness about the

importance of the local community, it is important to enable the requalification of the rural population in order to diversify the rural economy. In this way, dependence on income exclusively from agricultural production would be reduced and the economic standard of the rural population would increase. Also, demographic structure would be more heterogeneous which could positively affect economic structure and improve rural economy. In this manner, new jobs would be created, corresponding to the actual situation and needs - the existing qualification structure of the population. In order to increase the standard of living, it is necessary to improve and develop a network of functions complementary to housing that are vital for the daily life.

Since one of the problems is the passivity - lack of interest of the rural population, it is important to improve the transfer of knowledge in order to raise the awareness of the population about the importance of their active participation in decision-making and planning processes of rural development. The rural community, as the largest rural resource, must be activated and "exploited effectively" in order to improve the socio-demographic structure and overcome the problems within it. This is possible through strengthening the local community and encouraging the establishment of associations and the development of entrepreneurship, as well as more intensive involvement of the local population on different levels in the processes of development of rural areas. Strengthening the local community is possible through the promotion of social interactions and the organization of traditional events. This can be done through arranging the existing public spaces in the settlements (squares) and activating abandoned public buildings (cultural centers, local administration buildings).

Given that rural communities face today's major global challenge - the consequences of climate change, it is necessary to define measures and reduce the negative impacts of climate change on the health and life of the rural population, with the aim of creating more resilient communities. So, it is necessary to continuously educate the population about the possibilities of adaptation and mitigating the impact of the changed climate conditions in order to increase health and reduce the risk to the life of the population. It is important to develop the local capacities to monitor impact of climate change on the health of the rural population.

Rural areas are not "globally visible" which is a major disadvantage in modern times. Therefore, it is important to encourage use of modern technologies and that way increase their visibility and promote their comparative advantages. In order to connect the population of different settlements in the rural territory, it is important to increase their availability on the internet, promote the rural community and the benefits of living in rural areas. Promotion of rural areas through social networks is particularly important for the younger population.

For the implementation of the improvement projects for socio-demographic structure of rural areas, it is possible to use funds from the National Program for Rural Development, the IPARD Fund, through IPA projects, Erasmus+ projects and other foreign projects, as well as through private-public partnerships. Significant problem for implementation of these projects is the low awareness of the rural population about their possibilities, as well as the lack of skills in preparation of national and international projects. On the other hand, in the case of financing through the National Program of Rural Development, there is a problem that the measures defined are generally intended for all rural areas in Serbia,

without taking into account all the specificities of individual rural areas. In order to effectively improve the socio-demographic structure, it is necessary that decision-making and projects are made and implemented at the local and not at the national level. Only this way it is possible to anticipate and overcome all potential obstacles and adequately influence the structure of rural areas.

6. CONCLUSION

There are a large number of causes that lead to the demographic deterioration of rural areas. When planning rural development and revitalization of the sociodemographic structure, it is necessary to look at all causes and take them into account in order to overcome all potential obstacles. A large area of the territory of Serbia is occupied by rural areas, however, they are not heterogeneous and there are differences in their structure. Some of the divisions are given through planning and strategic documents, however, when planning, it is necessary to carefully look at these local specificities. In Serbia, there are currently planning and strategic documents related to rural development, but their implementation in practice is not at a satisfactory level. One of the disadvantages is that all the strategies are national rather than territorial in scope, so not all problems are considered. The problem is also the negative image of the rural in society and the lack of interest in development from the local community. The rural population's awareness of their opportunities for further development, as well as the percentage of their active participation in decision-making processes, is at a very low level. As rural population represents one of the most important resources of rural areas, it is necessary to overcome the problems they face in order to improve rural development. Rural areas occupy major part of the country's territory and they have important role in regional and overall development, so their improvement and revitalization are priority. Improving socio-demographic structure could be a trigger for improving other structures because of their mutual interrelationship.

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