DEMOGRAPHIC PROCESSES AND PROBLEMS IN RURAL AREAS OF POLAND AND BULGARIA

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ДЕМОГРАФСКИ ПРОЦЕСИ И ПРОБЛЕМИ В СЕЛСКИТЕ РАЙОНИ НА ПОЛША И БЪЛГАРИЯ

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Abstract

This report aims to analyse and assess the trends in the development of demographic processes in rural areas of Poland and Bulgaria and their consequences which affect the development of the rural areas. Trends in the demographic processes in rural areas in 2010 – 2021 were analysed and assessed. Different coefficients of demographic replacement and trends in their changes were established. On this base, comparisons between were made and conclusions about the worsening of the demographic structures and the possibilities for the development of the local economies and communities in both countries were made.

Key words: demographic processes, coefficients of demographic dependence, coefficient of demographic replacement

JEL: J 10; J 11; J 14

Introduction

Poland and Bulgaria's accession to the European Union led to significant changes in all aspects of economic life and society. The largest part of the transformations are alike with similar directions and dimensions in the other new EU member countries. At the same time, the national peculiarities of the social and economic relationships, traditions etc. affect not only the speed but in some cases they also affect the directions of the transformations regardless of the implemented common agriculture politics.

In the new member states, changes are observed in the number of inhabitants and in the relative share of the population in rural areas. Researchers of rural areas (Brown, Argent, 2016) link the negative effect not only to population loss, but to the impact on rural society and economy. These changes lead to spiralling effects and severe negative consequences for the transformation of communities and the formation regional identity (Emery, Flora, 2006). A study of the significance of

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demographic changes in rural areas in Austria links them to potential regional development approaches to overcome the negative consequences of population loss (Dax, Fischer, 2017). These approaches are logically derived from the concepts of rural areas development which are aimed at using the specific local assets and presenting the diversity of regions as a valuable characteristic (Dax, 2016).

Depopulation worsens the conditions for rural development when local markets shrink and skilled talent workers are insufficient to develop rural industries (Wood, 2008; Carr and Kefalas, 2009; Karwat-Woźniak 2022). This causes a vicious cycle of declining local economies and depopulation that coexist and reinforce each other.

In communities that have successfully renewed their local industries, adapting them to market demand (Westlund and Kobayashi, 2013), transformations of social management, cooperation between different interested persons in accordance with common values and attitudes are observed. Local social capital is a prerequisite for establishing effective interactions with the external environment, access to financial and political capital that improves the results of the development (Li et al., 2016; Fukuyama, 2003).

Demographic processes and their role in the development of rural areas are the focus of research interest of economists (Mitova, 2018; Wasilewski, 2022), regionalists, sociologists, etc. A number of studies are devoted to the characteristics and changes of human capital (Wrzochalska, 2015; Wrzochalska 2022), the educational and social infrastructure in rural areas, the model of agriculture and its effects, the speed of demographic changes (Doitchinova et al., 2017; Doitchinova, Miteva, 2020). Regardless of the methodological approaches adopted, the conclusions of a number of studies lead to the conclusion that the way in which the evolution of rural areas takes place depends on the capacity of rural communities, i.e. from their responses to external changes by adapting the functions and structure of their internal components. In this context, the research question is what demographic processes have occurred in rural areas of Poland and Bulgaria and how these changes affect the capacity of rural communities to develop viable rural areas. This also determines the aim of the report to analyse and assess the trends in the development of demographic processes in the rural areas of Poland and Bulgaria and the consequences for the development of rural areas.

Methodological framework

The object of research are the demographic processes in the rural areas, and the subject is the changes in the number of the population, its qualitative characteristics, structures and the consequences for the development of the rural areas.

In this article, we use indicators to assess the demographic situation and development for the period 2010 – 2021, to assess changes in the number of the population; the age structure of the population; the demographic replacement coefficient; age dependence coefficients; their projected changes, etc.

The information used is from the national statistical institutes of Poland and Bulgaria and Eurostatistics.

Analysis of changes in demographic structures and processes in Poland and Bulgaria

In 2021, rural residents accounted for 40.2% of Poland's total population. In recent years (i.e. since 2010), the number of people in rural areas has increased by 1.5 percent, and according to GUS data, in 2021, nearly 15.4 million people live in rural areas. Throughout the analysed period, a gradual decrease in the number of urban residents was observed, while at the same time the number of people living in rural areas, located mainly around large urbanized areas, has been increasing.

In Bulgaria, 37.7% of the country's total population live in rural areas, including 26.73% in villages. Compared to 2010, their number decreased by 290.2 thousand people or by 13.5 percent against 6.8 percent for the population in cities. The relative share of rural residents has also decreased – by 1.25 percent for the studied period.

Changes in the total population and the rural population are shown in Figure 1, taking 2010 as the base. The data show that the total population in Poland decreased by 0.45 percent, while in rural areas it increased by 1.51 percent.

In Bulgaria, the total number of the population decreased by 8.71 percent, and in the villages the decrease is even greater – by 13.68 percent.

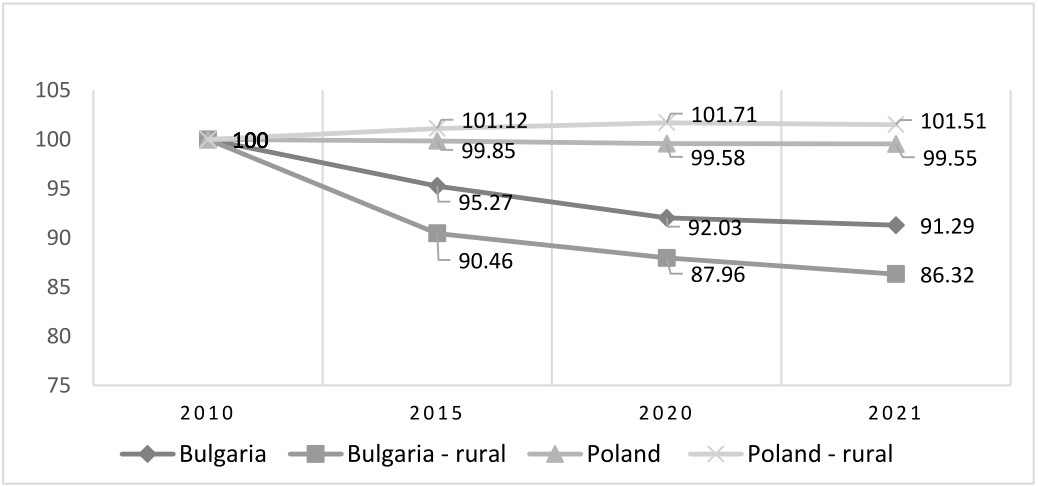

Figure 1. Changes in the total population and in rural areas of Poland and Bulgaria

Sources: National Statistical Institute of Bulgaria, 2022; Central Statistical Office of Poland

In 2010 – 2021, rural areas in Poland were characterized by relatively better demographic indicators than those in cities, mainly in terms of the age structure of the inhabitants. The percentage of population of pre-working age and working age is higher (0-14 years) than in cities, respectively the share of the group of population of post-working age (over 65 years) is lower. As a result, in rural areas the number of people of non-working age per 100 people of working age is lower than in cities, and the ratio of people over 65 to the number of children and adolescents is better. This is proven by the more favourable size of the studied demographic indicators. However, it should be emphasized that during the analysed period there was an annual population decline in the first two groups. Only the number of people in the post-working age group is increasing. As a result, the relative share of the working-age population decreases by 1.8 percent (Figure 2).

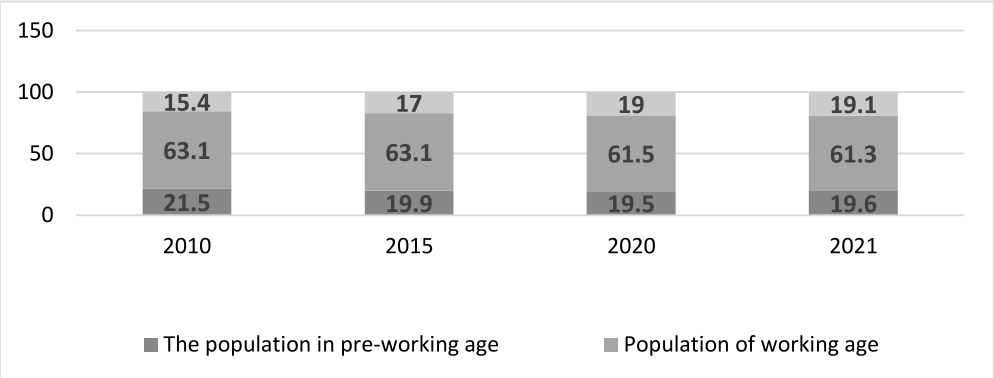

Figure 2. Age structure of the population in rural areas in Poland for the period 2010 – 2021

Source: Central Statistical Office of Poland, 2022.

The age structure of the population in the rural areas of Bulgaria is less favourable, both in comparison with the cities and with the rural areas of Poland. It has a significantly higher relative share of the population of post-working age, and for the studied period it increased by 0.7 percent. In 2010 there were 25.71% of people in the last age group, and in 2021 they reached 26.43% which is respectively 10.3 and 7.3 percent more than the similar indicators in Poland.

The relative share of the population in pre-working age is low. For the entire time period, it lies within 13.06% (2010) and 13.21% (2021). These values determine the tendency towards a decrease of people of active working age by 0.86 percent.

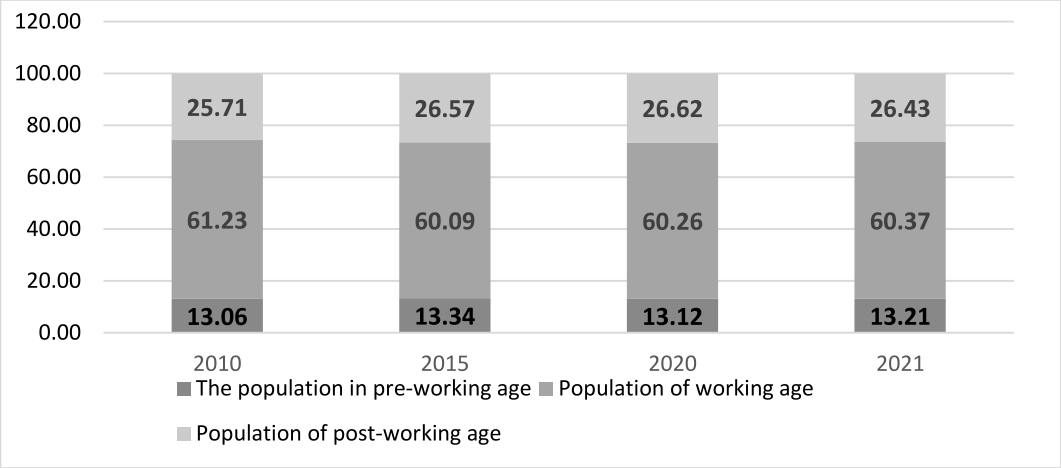

Figure 3. Age structure of the population in rural areas in Bulgaria (2010 – 2021)

Source: National Statistical Institute of Bulgaria, 2022.

The aging of the population is expressed by the increase in the percentage of elderly people while the percentage of children is decreasing. During the analysed period, the percentage of elderly people in rural areas in Poland and in Bulgaria gradually increased. In the rural areas of Poland, the percentage of people over 65 was 19.1% in 2021 and, compared to 2010, it increased by almost 5 percent. In Bulgaria, the relative share of the population over 65 in villages is 26.43%, and compared to 2010, it had increased by 0.7 percent.

Comparative analysis and prognosis

Comparisons between the information in Figure 2 and Figure 3 show the changing shapes of the age structures. In the information about the population of Poland we still observe an approximate parity of inhabitants of pre-working and post-working age, but in Bulgaria the relative share of the population up to 15 years is twice lower than that of the population over 65 years. This shows the significantly more unfavourable situation in the country in 2021.

Table 1 shows some basic indicators of age ratios in the two countries. In general, they show less favourable values in Bulgaria, where the values of the demographic replacement coefficients are lower, and the other age dependence coefficients are higher for the coefficients for the importance of the population of post-working age.

Table 1. Changes in demographic coefficients

Indicators and years	Demographic replacement rate		Coefficients of age dependence					
			Population of post-working age per 100 people at pre-working age		Pre-working age population per 100 people of working age		Population of post-working age per 100 people of working age	
	Poland	Bulgaria	Poland	Bulgaria	Poland	Bulgaria	Poland	Bulgaria
2010	53	70	100	141	26	21	27	42,0
2015	61	61	121	146	27	22	34	44,2
2020	72	62	140	151	30	22	42	44,2
2021	72	63	142	151	30	23	43	43,8

Source: own calculations.

Table 2 shows the differences in trends and the value of changes for the studied period. For some of the indicators (3 out of a total of 7) there are opposite trends. This refers to the number of rural residents, the change in the population of pre-working age and the demographic replacement rate.

Table 2. Differences in the main demographic characteristics of the rural population in Bulgaria and Poland

Indicators	Trends and changes (2021 compared to 2010)	
	Poland	Bulgaria
1. Changes in population	-0,45	-8,71
2. Changes in the population in rural areas	+1,51	-13,5
3. Changes in the number of pre-working age population in villages	-0,9	+0,15
4. Changes in the number of working-age population in villages	-1,8	-0,86
5. Changes in the population of post-working age in villages	+4,7	+0,72
6. Demographic replacement rate	+19	-7
7. Changes in age dependence coefficients		
A) Changes in the number of the population of post-working age per 100 people of pre-working age	+42	+10
B) Changes in the number of the population of pre-working age per 100 people of working age	+4	+2
C) Changes in the number of the population of post-working age per 100 people of working age	+16	+1,8

Source: own calculations.

The most significant are the differences in the values of indicators for population changes. While the population in the rural areas of Poland is increasing, it is decreasing in Bulgaria (by a double-digit number). The demographic replacement rate

also changed differently – in Poland it increased by 19 percent, while in Bulgaria it decreased by 7 percent.

The total number of the population is decreasing in both countries, but while in Poland this decrease is below 0.5%, in Bulgaria it is 8.71%. The remaining indicators, where the trends are unidirectional, have higher values in Poland compared to Bulgaria. The relative shares of the population of pre-working and post-working age and the corresponding age dependency ratios are increasing faster in Poland.

Population aging, according to accepted definitions, means an increase in the percentage of elderly people while a decrease in the percentage of children. In rural areas in Poland and in Bulgaria, the percentage of elderly people gradually increased during the analysed period. In the rural areas, the percentage of people over 65 in 2021 is 19.1%, and compared to 2010, it has increased by almost 5 percent.

According to data from the Central Statistical Office of Poland, in the coming years the population in Poland will decrease and in 2040 it will reach 35,668 million inhabitants, i.e. according to the forecast from 2021, it will decrease by nearly 2.5 million inhabitants (GUS, 2014). Population decline will be observed primarily in urbanized areas in the number of residents of working-age. At the same time, the number of people of retirement age will increase in both urban and rural areas, thus continuing the process of population aging. Already in 2030, 26.3% of the population in rural areas and 31.0% of the population in urban areas will be over 60 years old. In 2040, these indicators will be even more unfavourable.

The trend of decreasing population in Bulgaria continues. By 2040, it will be 5.359 million people, taking into account the current trends of change. The rates of reduction will increase significantly after 2030 and will reach between 16% in the optimistic scenario and 27% in the pessimistic scenario. According to the authors of the prognosis (Ilieva, Bardarov, 2021), the most probable option is the one between the tendentious and pessimistic options, which means that in the next 20 years the population of Bulgaria is expected to decrease by nearly a quarter.

Another alarming trend is the increase in the number of villages that will be completely depopulated. In the structure of villages in 2011, settlements without population were 4.4%, and in 2040, they will be nearly 25% of settlements in Bulgaria. Another expected alarming trend is the decrease of the number of villages with more than 1000 residents. Their share of 10.9% in 2011 will drop by almost half to 5.04% in 2040.

Conclusions

Population decline, unfavourable trends in demographic indicators are characteristic of developed countries in recent decades. They are more pronounced in rural areas where some territories are already defined as "demographic deserts" with low population density (Ilieva, Bardarov, 2021).

Demographic processes lead to many challenges for the countries (and especially for Bulgaria) connected to the availability and accessibility of various types of social and administrative services, the construction of an efficient transport network which can guarantee quick access to them, the creation of incentives for entrepreneurial activity etc.

Regardless of the relatively better demographic indicators in the rural areas of Poland, in both countries the opportunities for the activation of rural communities are decreasing, especially in border areas and territories far from large towns. In a number of municipalities and voivodeships, the necessary critical mass of interested parties – local residents, entrepreneurs, representatives of local authorities and organizations which can develop, apply for and implement strategies for local development does not exist. This necessitates cooperation between interested parties from several neighbouring territories, increases controversial decisions on development priorities and on the use of financial resources. Practically, the creation of local capacity for the implementation of projects with European funding among the beneficiaries of local communities becomes an essential condition for the activation of local communities and for the implementation of a number of initiatives to dynamize the development of the local economy and improve the quality of life of rural residents.

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