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Assessment of the demographic effect on future rural development in Bulgaria

Abstract: *This paper investigates the current demographic crisis in Bulgarian rural areas and potential solutions for overcoming it. The future development of rural areas in Bulgaria will depend on the practical implementation of the National Plan for Rural Development – NPRD (2007-2013). Ultimately, the purpose of the present study is to analyse the consequences of demographic trends in Bulgarian rural areas and to explore several good practices which could be suitable for improving the demographic situation.*

Keywords: *rural population, demographic development, rural development, Bulgaria*

Introduction

The enormous political, economic and social changes which have taken place in Central and Eastern Europe since the end of the 1980s have had a significant demographic impact. Some of the demographic trends noted in the region's countries in the course of the last two decades are cause for deep concern: namely, falling populations in absolute figures, a decline in life expectancies, a drop in fertility rates, higher mortality rates, population ageing and a general deterioration of the health situation (Council of Europe 1999).

Bulgaria is mentioned in all recent reports of the United Nations Development Programme (UNDP 2004) as the Eastern European nation with the highest negative population growth rate (a negative rate of natural growth means that the death rate is higher than the birth rate). The country has been mired in a severe demographic crisis ever since the total absolute population began to fall in the late 1980s. Due to the negative natural growth rate of minus 5.1 per 1,000 population, Bulgaria is now undergoing one of the most severe peacetime po-

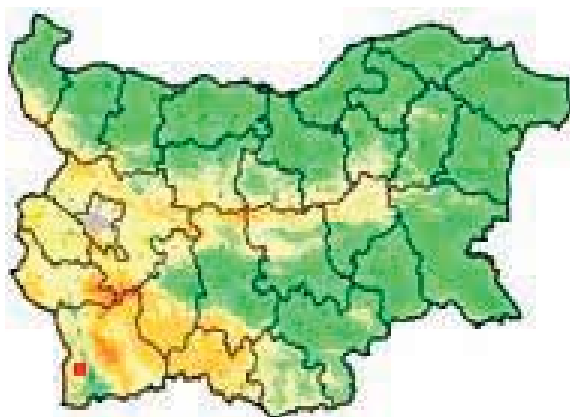
population declines in history. Since the beginning of transition the disparities between urban and rural areas, but also between different rural regions, have increased. Felt strongest in the border regions, the depopulation process in villages is also creating serious problems for Bulgaria's economic development, particularly in rural areas.

Objectives

The main objective of the present paper is to assess the demographic situation in Bulgarian rural areas and to make recommendations for its improvement. To achieve this objective, two main issues were formulated and an investigation was undertaken in two stages as follows:

- Analysing and forecasting the demographic development processes taking place in rural settlements
- Studying, analysing and applying the positive experiences of several villages in solving demographic problems and attempting to avoid further aggravation

The scope of the analysis in the first stage concentrated on all villages of the country, whether they belonged to a rural region or not, and thus comprised 5,079 villages with a total population of 2,253,958 in 2006 (NSI 2006). For the second phase we analysed all villages in Strumyani Municipality, to include studying the results of several projects already conducted in the same community as part of the Improving the Social Environment Programme (supported by the Charles Stewart Mott Foundation) – a programme which has been active since the year 2000 (FLGR 2002-2004). The Municipality of Strumyani is situated in southwest Bulgaria, in the district of Blagoevgrad, and includes 21 settlements with 6,596 total inhabitants in a territory measuring 362 km². Strumyani Municipality extends across the eastern slopes of Maleshevska Mountain, along the Struma River Valley and over a small stretch of western Pirin Mountain. Located only 140 km south of the Bulgarian capital of Sofia, as well as 50 km from the district centre of Blagoevgrad and 14 km from the town of Sandanski, the municipality has an important geopolitical location.



Municipality of Strumyani

Map 1. Map of Bulgaria

Source: www.guide-bulgaria.com

Methodology and Data

In the study's first stage we applied a comparative analytical method, a mathematical population forecasting model as well as a graphical method. The mathematical model is expressed by the equation:

$$P_{t_2} = P_{t_1} + B_{t_1-t_2} - D_{t_1-t_2} + M_{t_1-t_2}$$

where P_{t_1} and P_{t_2} are the population at time t_1 and t_2 , respectively,

$B_{t_1-t_2}$ is the number of live births during the period $t_1 - t_2$,

$M_{t_1-t_2}$ is the migration increase expressed as the difference between the number of immigrants and emigrants during period $t_1 - t_2$,

$D_{t_1-t_2}$ is the number of deaths during the period $t_1 - t_2$,

and time t_1 is the base year and t_2 the forecast year, which for the purposes of our study were 2006 and 2011, respectively.

The theoretical basis of the mathematical model used to forecast the rural population was a method of population components. The model takes into account the following main factors influencing the population variation: the rural population in 2006, the expected levels of deaths and births until 2011, and migration flow levels for the period 2006- 2011 [NSI 2006]. Applying the method of rural population components, we decomposed the population into age-gender groups at age intervals of 5 years and calculated the main characteristics for each group. Thus, we were able to evaluate the expected levels of mortality, birth rates and migration fluxes for each group separately.

During accomplishment of the second stage in 2007, a scientific team from the Institute of Agricultural Economics (IAE) led a dedicated research project which investigated the potential territorial population mobility in Strumyani

Municipality (Yanakieva et. al., 2008). As part of the project, a questionnaire survey was conducted with village mayors. The oral interviews of 11 mayors included 12 questions seeking their opinions regarding possibilities for improving the demographic situation. The main emphasis was to determine the mayors' views about current rural migration and the key factors causing it. Of the 21 settlements in Strumyani Municipality, 10 have a population of less than 100 persons. Therefore only 11 villages have their own mayor whilst the 10 smaller villages fall under the jurisdiction of one of the former. As a result, the interviews were representative for all of Strumyani Municipality.

Information from the National Institute of Statistics was used in the first-stage analysis. For the second, we applied the results of other projects conducted in the same villages of Strumyani Municipality as part of the Improving the Social Environment Programme (FLGR 2002-2004) supported by the Charles Stewart Mott Foundation.

Analysis

Analysis of the demographic situation in villages and forecasting of the rural population

The continuous decrease in the population of Bulgarian villages is one of the key issues affecting rural area development, and this negative population trend is still ongoing. In absolute figures the rural population fell by 164,000 between 2001 and 2006, which equates to an average rate of decline of 1.1% annually for the period. During this time, the rate for the urban population stood at 0.2% (see Figure 1). In the single year from 2005-2006, Bulgarian villages lost nearly 50,000 inhabitants. The fundamental reason for this development is natural migration of the rural population as reflected in the worsening demographic indices.

Until the early 1970s, the main reason for the drastic decline in rural population, and even the complete depopulation of entire regions (especially those in mountainous and semi-mountainous areas), had been the intense outflow of human resources from villages towards larger urban settlements. Today, these unfavourable rural population dynamics are exacerbated by natural demographic processes: a low fertility rate, a higher mortality rate and the ageing of the rural population. Since 1975, a negative rate of natural growth can be observed, increasing from -1 to -12.4 per 1000 inhabitants in 2006. As for the urban population, natural growth was negative in 1994 (-0.7 per 1,000) and increased to -2.1 per 1000 population in 2006. These figures confirm the huge difference between urban settlements and rural villages in terms of both population reduction and natural reproduction rates.

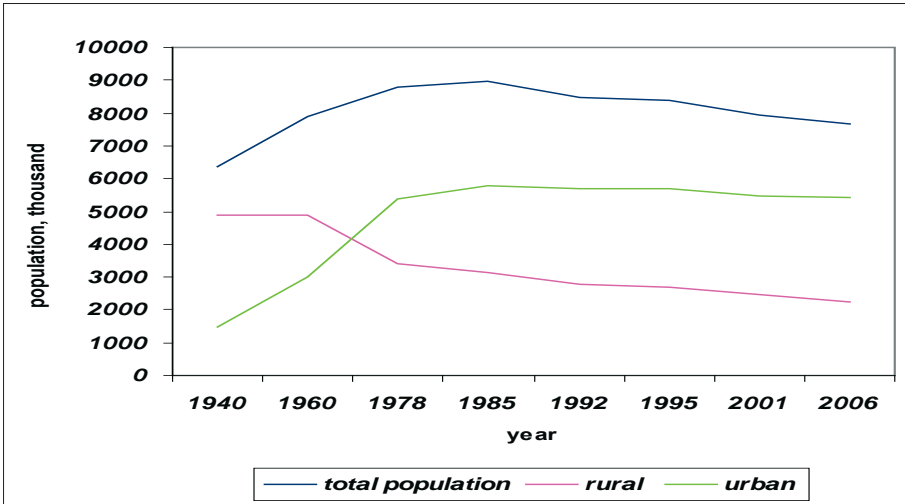


Figure 1: Population Dynamics in Bulgaria

Source: Own calculation based on data from the National Statistical Institute (NSI), Population in Bulgaria (NSI 2006)

The highly negative demographic trend in rural areas as compared to developments in urban regions is a consequence of two key factors: the lower birth rate in rural villages, which measured 8.3 per 1,000 inhabitants in 2006 vs. 10.1 in urban areas, and also the higher death rate, which reached as high as 20.7 per 1000 inhabitants in some villages vs. 12.2 in rural towns. Especially alarming is the infant mortality rate of 13.1 per 1,000 live births in villages as it is significantly higher than the Bulgarian average of 9.7. Although a comparison of more recent years with 2001 shows a slight drop in these indices, it should be noted that among all EU member states only Romania has a higher infant mortality rate (15.0 per 1,000) than Bulgaria, which is followed by several other newly joined EU members: Latvia at 7.8, Slovakia at 7.2 and Lithuania at 6.8. The lowest infant mortality rates are in Iceland, Sweden and Luxemburg, where rates range between 2 and 3 infants per 1,000 live births (NSI 2007).

Bulgaria's rural population decline is accompanied by a significantly worsening age structure: More than one third of the rural population is older than 60 years as compared to only 19.3% of the urban population. According to all age-related demographic indices (age dependence rate, rate of demographic aging, rate of progression of the age structure, etc.) the situation of the rural population is worse than that of its urban counterpart (NSI 2007). However, the demographic trend in villages located near larger district centres is slightly better, as the decline in rural populations near towns and cities is lower than in other rural areas. For example, the number of inhabitants in villages near the capital of Sofia actually increased by 5.8% in absolute terms between 2001 and 2006, whilst the rural population in the district of Burgas decreased by only 2.9% during this same period (NSI 2007). This circumstance can be explained by the daily migration of people who live in adjacent rural areas but

work in a nearby town or city. Though settlements in such areas are able to maintain their populations, they are not typical of most villages in rural regions, as agriculture and connected activities are generally developed only on a small scale. Indeed, the prognosis for future demographic development in Bulgaria's rural areas (through 2011) indicates a 7.5% decrease in population as compared to the 2006 level according to an estimate prepared by the Institute of Agricultural Economics (NSI 2007).

Our analysis identified variances in the reduction intensity of the rural population among different age groups, which implies more unfavourable changes in terms of age distribution. Specifically, a reduction of human potential in rural areas is expected for all of the three major age groups (below 20, 20 to 60 and over 60) but at a different rate of decline for each. The forecast for the period 2006-2011 estimates a significant drop in the youngest villagers (below 20 years of age), who are projected to decrease by 13.6% prior to 2011. At the same time, the 20-60 age group is forecast to decline by 5.6%. This trend can be explained by higher net migration rates among younger rural inhabitants (especially those aged 20-29), which in turn is due to the higher level of social and territorial mobility for these groups. Indeed, the highest rate of migration is among rural inhabitants aged 20-24, followed by the 25-29 group (which has equal values for males and females alike) and then the 15-19 group.

We observed that the intensity of rural migration stagnated between 2004 and 2006, with the overall rate decreasing from 22 to 18 migrants per 1,000 as compared to 1999. However, it is only logical that the noted differences between age groups which are currently fuelling the general intensity of the population decrease in rural villages will result in even more unfavourable changes to the rural age structure in the future (see Table 1).

Table 1. Change in the rural population by age group, 2006-2011

Age group	2006		2011	
	Rural population, thousands	Share of rural population, %	Rural population, thousands	Share of rural population, %
Under 20	432.7	19.2	373.8	17.9
20-60	1,078.8	47.9	1018.7	48.9
Over 60	742.4	32.9	692.2	33.2
Total	2254	100.0	2,084.7	100.0

Source: Own calculation based on the model and data in Population in Bulgaria (NSI 2006)

Table 1 shows that the population of villagers aged below 20 will continue to decrease. At the same time, the share of rural inhabitants aged between 20 and 60 is prognosticated to increase by approximately 1% whilst the oldest age group (over 60) is estimated to remain at roughly the same level as it was in 2006.

The further worsening of the rural population's age structure will drastically reduce the reproductive potential and lead to an even bigger demographic crisis for Bulgarian villages. With respect to the future reproductive population in rural villages, the decrease in younger inhabitants will have a significantly disadvantageous impact, since the birth rate is highest among the 15 to 29 population. Of the total number of infants born in rural villages during the period 2001-2006, 37.8% were born to mothers aged between 20 and 24, 24.8% to mothers aged 25 to 29 and 23% to mothers aged 15 to 19.

Analysis of the positive experiences of selected municipalities

The 2007 IAE study (Yanakieva I. et al. 2008) focused on the potential territorial mobility of the rural population in Strumyani Municipality. The results of the already mentioned interviews with village mayors indicate that all were optimistic about the future. In their collective assessment of the current situation, the mayors were in agreement that the local inhabitants felt the gradual process of bringing the villages back to life and reviving the former spirit and traditions had already begun, even if only slowly. One reason for optimism is the fact that no villagers had abandoned their residences or emigrated since Bulgaria's accession to the EU. Bearing this out, for example, are statistics on the village of Mikrevo (in Strumyani Municipality) where the total number of inhabitants in 2005 remained virtually unchanged as compared to 1992. One explanation could be the implementation of four projects for improving the local social environment and that these have helped positively influence the local population to stay. To overcome the demographic crisis in Bulgarian villages, the experiences of smaller municipalities like Strumyani will certainly play a valuable role in designing bottom-up initiatives with the active involvement of locals, as this may ultimately help other mayors retain the population of their villages. In the case at hand, the four mentioned projects have the following objectives:

- overcoming social isolation among pensioners and the aged within the community
- providing social care to needy senior citizens
- greater inclusion of children and youth in village social life

One of the projects targeted the establishment of a day centre for the older citizens of Mikrevo. The centre was inaugurated for the purpose of integrating elderly inhabitants more fully in the social and cultural life of the community and to occupy them with various activities of interest (e.g. clubs) in their free time. Thus, the lonely among the older generations, such as pensioners or other village inhabitants experiencing social, cultural and/or public isolation, are the main target group, although the project also caters to older members of the population who are still in their working years but display difficulty in communicating with others or actively participating in the social life of the community. Importantly, a third target group consists of pensioners who are still very vital and active in the local social life, as this group has been trained within the scope of the project to deal with problems related to social and

health dysfunctions. Senior citizens from the latter group are thus able to act as volunteer “mentors” for assisting the less fortunate groups mentioned above. A second project has been launched with the goal of improving social care for the older inhabitants of Strumyani Municipality. Its objective is to elaborate and implement model programmes which can improve the life circumstances of the isolated and helpless among the older generations; and furthermore to facilitate overcoming administrative and institutional obstacles and to garner the full acknowledgement of society – and of the applicable institutions – with respect to the target group’s specific needs.

The third project has focused on establishing a day care nursery for children in the village of Ilinden (also in Strumyani Municipality) as a means of providing the young with facilities for meaningful free-time activities. And, finally, the fourth project to be realised with financial support from the Charles Stewart Mott Foundation was the “Youth Initiative for Strumyani.”

Results

The expected continuation of negative demographic processes in Bulgaria’s rural villages during the coming years will cause a further worsening of the population age structure. Thus, the projects which we examined can be viewed as a notable achievement in terms of partnership and mutual co-operation by all sides concerned. For their successful implementation, they used local staffs who were trained expressly for carrying out the specific projects. Not only does such a model provide added motivation for rural inhabitants to actively participate in improving the quality of life and social environment within their own communities, but it also offers the added benefit of helping to reduce rural unemployment. The evaluated projects thus provide examples of good practices for bettering the social environment, improving the quality of life of villagers and preserving the population in rural areas. Although financial support for undertaking similar future projects is still quite modest, the accomplishments thus far should not be ignored when seeking potential solutions to Bulgaria’s demographic crisis.

Conclusion

Overcoming the demographic crisis in Bulgaria’s rural areas will certainly be a long and complicated process. Beyond efforts like those of the few villages which are already attempting to solve the resulting problems, changes in demographic, migration, integration and other national policies appear to be needed. Importantly, these policies should be oriented not only towards overcoming the problems in rural villages, but also towards addressing the demographic problem nationwide. For, it is well known that negative demographic trends are equally affecting Bulgaria’s larger urban settlements and causing a considerable outflow of human resources abroad, primarily from towns. In this context, the solution for the demographic crisis in rural areas should be considered as an inseparable part of the general national strategy. To

assist in further stabilising the demographic situation, Bulgaria has developed and is already implementing the National Plan for Rural Development, which is scheduled to last until 2013. A more rapid and purposeful assimilation of the European financial means granted for this programme as well as the granting of subsidies and technical aid to local authorities and other local organisations – for preparing and implementing plans to improve and build up social and technical infrastructure – will all be very important factors for creating a positive change in the demographic situation affecting rural areas.

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