DEPOPULATION IN RURAL AREAS OF DOBRUDZA REGION AND ITS IMPACT ON THE SCHOOL NETWORK

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ABSTRACT Depopulation is a serious demographic problem. This process gives negative trends in rural areas. Closed schools and students decreased in others. These processes in the Dobrogea area are strongly negative. This article examines these processes in analytical and spatial order. Use the most current statistics data. The main goal is to reveal the causes of depopulation. Also cumulative effect of it on other social processes. Demonstrates the role of the school network to preserve the social fabric of rural areas. On the other hand: the impact of depopulation on the school network. Methods used are: analysis of statistical data, field studies, interviews and personal observations of the authors. Used territories at the level of municipalities. They more accurately and correctly reveal the underlying statistical data.

Introduction

Approximately 1.9 million residents live in Bulgarian villages today. In the early 2015 of all 5,264 towns and villages in Bulgaria the number of towns is just 257. Villages predominate. A sufficient part of the population of the state spends its lives in them and in their adjacent territories so that it should be thoroughly researched and
analyzed – the population itself with its demographic characteristics, as well as the rural areas with their features and distinctive aspects.

**Definitions of rural areas**

The national definition of Bulgaria refers to rural areas belonging to LAU 1 level –municipalities. They are defined as rural when there is no settlement with population of more than 30,000. According to the national definition the rural areas (municipalities) are 231 of all 264 municipalities in Bulgaria (Figure 1).

The definition of the European Union offered by the Organisation for Economic Co-operation and Development (OECD) is adopted because it is defined as clear and simplified, including areas which are densely populated. As early as 1994 the OECD defined the municipalities for local level (NUTS 5, LAU 1) as rural when their population density is below 150 inhabitants per square km. For regional level the units (NUTS 3 and NUTS 2) are grouped as follows:

- Predominantly rural (if more than 50% of the population lives in rural communes);
- Intermediate rural (50–15 % in rural communes);
- Predominantly urban (below 15% of the population lives in rural communes).

In 2010 the OECD changed the definition for the regional level – if there is an urban center with more than 200,000 inhabitants, which is not less than 25% of the population of a predominantly rural region, it is defined as intermediate; if there is an urban center with more than 500,000 inhabitants, which is not less than 25% of the population of an intermediate region, it is defined as predominantly urban.

![Figure 1. Rural areas in Bulgaria/LAU 1 level](source: National concept of Spatial Development of Bulgaria 2013–2025.)
Model areas

For the objective of this paper the rural areas of the municipalities Silistra and Dobrich are selected. Each one of them has its distinctions from the others (sea outlet, river outlet or inland territory). Thus conceivably the differences of the examined indicators could be determined in view of their geographic location.

Dobrudza covers the administrative areas of Dobrich and Silistra regions. In order to have a benchmark using a territory of Shumen. The comparison gives clear direction to the negative demographic processes in Dobrudza (Figure 2).

![Figure 2 Bulgarian part of Dobrudzha (municipality Silistra and Dobrich)](source)

Based on the dynamic analysis of the specified indicators, the paper makes corresponding conclusions. It outlines basic recommendations for overcoming the negative trends in the researched territories. Some of them are:

1. The indicator average density is much deteriorated and for certain areas depopulation is a leading demographic problem.
2. The age structure of the rural population is deeply worsened and for some of the villages their “deletion” from the map of the state is a question of no more than a decade.
3. In the villages with functioning schools the demographic and socio-economic development respectively is more favorable, etc.
4. The analysis of the educational infrastructure of the municipalities of the district from Silistra and Dobrich opens the approach to education of the population.
5. This material examines the schools. They are centers that support education levels and keep the history and traditions of the population.
6. Schools are that part of the educational infrastructure, which functioning “supports” positive demographic outlook of the population, although in the context of the overall process of depopulation. Here have been analyzed all the types school institutions on the territories of the districts of Silistra and Dobrich.

Depopulation in Danubian Dobrudzha for example

Table 1. Population in Danubian municipalities for the period 2001–2013

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Total (people)</th>
<th>In towns (people)</th>
<th>In villages (people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutrakan</td>
<td>19,152</td>
<td>14,780</td>
<td>10,322</td>
</tr>
<tr>
<td>Glavinitsa</td>
<td>13,743</td>
<td>10,553</td>
<td>2,087</td>
</tr>
<tr>
<td>Sitovo</td>
<td>6,740</td>
<td>5,197</td>
<td>--</td>
</tr>
<tr>
<td>Silistra</td>
<td>61,294</td>
<td>49,437</td>
<td>41,397</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100,929</td>
<td>79,967</td>
<td>54,006</td>
</tr>
</tbody>
</table>

Source: the National Statistical Institute in Silistra.

The examination actual process of depopulation in towns and villages shows a sequence of negative trends. For example in period 2001–2013 if in Bulgarian towns have lost their population in 3.3% in these researched municipalities this quota was 21%. This process of urban depopulation is with extreme negative parameters even according EU scale. Some more: Glavinitsa municipality has decreased its town population for the aforesaid period with over 27% (Penerliev, 2015). Silistra municipality also has lost (as the biggest and most economic developed among all) with 17%. Obviously the problems of the towns in these municipalities are bigger than the other ones. In analysis of village depopulation essential response with the average indexes are not represented. With average rate in Bulgaria of the village depopulation 19% for the period 2001–2013, for villages of Danubian municipalities is around 24%. Tutrakan municipality is the first one with this index 27% (Table 1).

Negative trends on school networks

This section of the article discusses some of the areas in Dobrudzha. They show a real trend towards a reduction of the students and schools.

From the regional analysis of the district of Silistra in Table 2 it is clear that in the studied period in all the municipalities the number of kindergartens have been reduced. In the Municipality Kaynardja this reduction is 6 times, followed by the municipality of Glavinitsa a little more than 4 times and 4 times in the municipalities of Dulovo and Alfatar, but in the municipality of Silistra the number of kindergartens have been reduced 2 times. If we take the total number for the whole area, we can see that the reduction for that period is slightly more than 3 times. The number of children in kindergartens for the studied period has been reduced with 196 children, but from the
Table 1 you can see that the average attendance of the groups in the municipality of Silistra and municipality of Tutrakan is very high – 28 and 25 children.

**Table 2. Kindergartens data for the period from the school year 2005/2006 to the school year 2014/2015 in the district of Silistra**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>total number</td>
<td>children total</td>
</tr>
<tr>
<td>Silistra</td>
<td>18</td>
<td>1,406</td>
</tr>
<tr>
<td>Dulovo</td>
<td>28</td>
<td>832</td>
</tr>
<tr>
<td>Tutrakan</td>
<td>11</td>
<td>497</td>
</tr>
<tr>
<td>Glavinitsa</td>
<td>17</td>
<td>504</td>
</tr>
<tr>
<td>Kaynardzha</td>
<td>6</td>
<td>199</td>
</tr>
<tr>
<td>Sitovo</td>
<td>7</td>
<td>213</td>
</tr>
<tr>
<td>Alfatar</td>
<td>4</td>
<td>106</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>91</td>
<td>3,757</td>
</tr>
</tbody>
</table>

Source: the National Statistical Institute in Silistra.

Table 3 shows that for the same period in the municipalities of Dobrich there is a relatively keeping the number of kindergartens. In the municipality of Dobrich even seen increasing the number of kindergartens with opening of 2 new kindergartens, but there is s noticeable reduction of kindergartens in the municipality of Shabla – 4 times and in the municipality of Krushari more than 2.5 times. If we take the total number for the whole area we can seen that for the same period, the overall reduction is slightly more than 1 time. The number of children in kindergartens has been decreased with 101 children, but from the Table 2 you can see that the average attendance of the groups is about 20 children, as the biggest is the average attendance in the municipality of Sabla – 25 children.

The statistics gives an interesting insight into the number of children in kindergartens. The data available are about the number of children in the municipalities, as the number of kindergarten. An interesting index is obtained
at the ratio children/number kindergartens. In the Tables 1 and 2 this average index for the school year 2014/2015 shows that in the district of Silistra there are 132 children in a kindergarten, while in the district of Dobrich there are 59 children in a kindergarten; that shows a good structure of kindergartens in the district of Dobrich.

Table 4. Educational system data for the period from the school year 2005/2006 to school year 2014/2015 in the district of Silistra

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>Total number schools</th>
<th>Schools for the school year 2005/2006</th>
<th>Schools for the school year 2014/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>classes</td>
<td>students</td>
</tr>
<tr>
<td>Silistra</td>
<td>14</td>
<td>87</td>
<td>1,759</td>
</tr>
<tr>
<td>Dulovo</td>
<td>16</td>
<td>72</td>
<td>1,181</td>
</tr>
<tr>
<td>Tutrakan</td>
<td>10</td>
<td>29</td>
<td>614</td>
</tr>
<tr>
<td>Glavinista</td>
<td>10</td>
<td>28</td>
<td>475</td>
</tr>
<tr>
<td>Kaynardzha</td>
<td>4</td>
<td>16</td>
<td>269</td>
</tr>
<tr>
<td>Sitovo</td>
<td>4</td>
<td>12</td>
<td>206</td>
</tr>
<tr>
<td>Alfatar</td>
<td>3</td>
<td>11</td>
<td>153</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>255</td>
<td>4,657</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>Total number schools</th>
<th>Schools for the school year 2014/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>I–IV grade</td>
</tr>
<tr>
<td></td>
<td></td>
<td>classes</td>
</tr>
<tr>
<td>Silistra</td>
<td>11</td>
<td>63</td>
</tr>
<tr>
<td>Dulovo</td>
<td>10</td>
<td>57</td>
</tr>
<tr>
<td>Tutrakan</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Glavinista</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Kaynardzha</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Sitovo</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Alfatar</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>188</td>
</tr>
</tbody>
</table>

Source: the National Statistical Institute in Silistra.

The regional analysis of the territory of the district of Silistra shows that for the studies period the total number of schools was reduced 1.5 times as the total number of children of primary stage is 795 less; for junior high school it is 1,752 less, but for the high school it is 1,124 less. The ratio of students in the tertiary education for the academic year 2014/2015 is 3862/3600/1610. The number of children in high school decreased by almost half, but Table 3 shows that the average attendance of pupils at the primary stage is 20 children, for the junior high school is 21 children and for the high school – 23 children.

The biggest average attendance in the primary stage was observed in the municipality of Silistra – 22 children and in the municipality of Sitovo – 21 children, and this trend continued in junior high school for the municipality of Silistra – 24 children and for Sitovo municipality is 32 children. In high school the most average attendance of pupils is in the municipalities of Silistra and Tutrakan – 24 children.
The regional analysis of the territory of the district of Dobrich shows that for the studies period the total number of schools was reduced 1 time as the total number of children of primary stage is 121 less; for junior high school it is 2,745 less, and for the high school it is 1,625 less. The ratio of students in the tertiary education for the academic year 2014/2015 is 6974/6145/3007. The number of children in high school decreased by more than half, but Table 4 shows that the average attendance of pupils at the primary stage is 22 children, for the junior high school is 24 children and for the high school – 22 children. The biggest average attendance in the primary stage was observed in the municipality of Dobrich villages – 38 children and in the municipality of Krushari – 26 children, and this trend continued in junior high school for the municipality of Dobrich – villages – 35 children and for the municipality of Krushari it is 32 children. In high school the most average attendance of pupils is in the municipalities of General Toshevo as in the municipality of Shabla there is not already high school stage of training.

The analysis at the level number of students by level of education shows the need to work with dropout students. This trend is shown in the municipalities on both Tables 3 and 4. It is evident that students in the high school decrease many times.

In demographic collapse, where each generation is smaller, hardly the trend of students reduction in high school can be explained only by demographic reasons. In the municipality of Shabla there is no high school already! In the municipality of Silistra, which has the most densely educational infrastructure, the decrease was 2 times. Obviously, this is a huge, both qualitative and quantitative problem for schools.
With adequate measures for the detention of students in class, the status of the education network will be better. The problem with dropout students is ubiquitous in all the territories of the districts.

**Conclusions**

Dobrudzha depopulated. With a very fast pace. Based on comparative analysis of these processes are faster than in other areas of Bulgaria. Depopulation leads to many negative processes. As a result of the study demonstrate that they have: After the attached analysis found that:

1. Depopulation in Dobrudzha is a real process.
2. The closure of schools is closely related to the decline of population.
3. The average number of children in rural schools is also decreasing.
4. Depopulation causes problems for the educational sphere in all rural regions.

Preservation of schools is key to maintaining the economic activity of rural areas. They have to apply different management decisions: legal, economic, demographic and others.

**References**


www.riobg.com/schools.