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# Geodemographic Processes and Their Effects in Blagoevgrad Municipality

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## ABSTRACT

The article explores and presents the leading trends in population dynamics and spatial distribution in Blagoevgrad municipality, Bulgaria. The key demographic aspects were analysed for the period between 2001 and 2016 (number and density of rural and urban population, natural and migratory dynamics and age structure). Data was freely provided by the National Institute of Statistics, Bulgaria and collected during field work. Specific features of the demographic resources were shown and the processes of depopulation and suburbanization were explained and localized. Their impact on the settlements in the area under study was analyzed - a large administrative and educational centre, Blagoevgrad town and 25 villages. Results show that the contemporary geodemographic processes and the territorial distribution of population are also features describing other municipalities in Bulgaria.

## 1. INTRODUCTION

Population is one of the most important resources in any territory. The overall territorial development and every other particular socioeconomic process depend to the greatest extent on its quantitative and qualitative characteristics. The spatial movement of population generates the size of the settlements, creates their development opportunities and influences the planning processes. This study aims to show the changes in demographic resources in a selected territory and analyze their current state so as to reflect the territorial effects of these changes in the populated areas. The territory selected as the case study is Blagoevgrad municipality in Bulgaria, in which we also find a city of great importance for the Bulgarian standards having an important administrative and educational function.

## 2. THEORY AND METHODOLOGY

A variety of scholarly publications stating the views and interpretations of various authors on the basic concepts and terms related to spatial organization and territorial development were used for the present study. In theory, we refer to studies from different countries related to the influence of natural movement and population migration on settlements and the course of processes such as depopulation, suburbanization, desurbanization, ruralization and rurbanization (Palmer, 1988; Ilieva and Mladenov, 2003; Yukihiko, 2007; Paveliuc-Olariu, 2010; Mladenov and Dimitrov, 2010; Antipova and Fakeyeva, 2012; Delgado Viñas, 2013; Masoumi and Roque, 2015; Ren Yang et al., 2016; Makra et al., 2018; Naidenov, 2018). Based on a comparative analysis of the conceptual and terminological issues, we assume that with the

development of social relations and under the influence of new technologies and globalization, there is an evolution in the development of processes, which also affects their definition. For example, several decades ago, suburbanization was understood as a process whereby the peripheral parts of urbanized territory were developing at a faster rate than their central parts. It is defined as active inland migration. It is now accepted that suburbanization is developing not only at the periphery of urban areas but also affecting villages close to the city. The development of digital communications and the existing connectivity between settlements allow people to leave the cities and choose to live in villages, in a more natural environment. However, they continue to work in the cities and take advantage of the large city's opportunities for highly skilled and well-paid jobs, better infrastructure and services, etc. These people are continuing to live their urban way of life in the villages where they migrate. In some countries, these changes are referred to as „ruralisation” or „rurbanisation”. Villages that are very close to cities are preferred, with high transport accessibility and good values of environmental and noise pollution indicators. A very close process to suburbanization is desurbanisation, in which process we also find a proliferation of urban lifestyle in villages/rural areas. But it is not the result of urban migration, but of a change in local residents' basic employment. And it is the result of changes in the education and qualification of their inhabitants, the emergence of new economic activities and professions under the influence of changes in society and economy, the development of the service sector, etc. Young people are particularly interested in these changes. They no more engage in agricultural activities that used to be essential to their parents or grandparents. Therefore, employment is changing but residence is not. These villages have become rich and well-developed, resembling urban neighbourhoods, but by status they remain villages.

Depopulation is another quite important issue in the development of the analysed region. Generally, it is defined as the process of migration of population from villages to towns (in this case the city of Blagoevgrad). This leads to a change in the age structure of the rural population, which is aging at a much faster pace. In the depopulated areas, population decreases because of the migration processes on the one hand, and on the other hand, the decrease in the birth rate and the distortion of the generational substitution in the territorial aspect. There is an increase in the effect (double effect) from the migration and a permanent deterioration in the age structure of the population. Therefore, the change in population size of settlements is considered as the main quantitative indicator reflecting demographic changes in the study area.

Depopulation of small settlements is a problem that occurs in many countries, regardless of their total population or level of socio-economic development (Palmer, 1988; Patarchanova, 2007; Antipova and Fakeyeva, 2012; Delgado Viñas, 2013; Pătrăţanu, 2013; Ren Yang et al., 2016). It has also been proven that this process is more pronounced in territories located near state borders (Grasland, 1990; Hooz, 1992; Geshev, 1994).

*“From a geographic point of view, depopulation means such a reduction in the number and changes in the structures of the population that lead to a permanent impossibility of its reproduction. As a result, areas with a destructive development of the settlement network are formed”* (Mladenov and Dimitrov, 2005). Depopulation implies also a sense of a system of *“rural displacement in various regions of the country, which is considered by its sustainability or instability with all the resulting effects from that processes of reproduction of the population, a degree of population density, a structure of the population and a certain level of vitality of the villages”* (Geshev, 1999).

The analysis on the process of depopulation of rural territories in the country in the early '90s of the 20<sup>th</sup> century by Geshev (1999) shows that the territory under our study is classified as the fifth type: highly depopulated areas covered by *“frontal creeping depopulation from the west to the east (from the western border territories)”*. These are *“almost completely depopulated areas without any possibilities of revitalizing naturally”*. They include elderly people, native and migrated in the past retirees who use the previously abandoned houses or cottages for recreation and farm work in the yard (Geshev, 1999).

We employed the methodology for estimating the demographic events in the regions of the Republic of Bulgaria during the period 2001 - 2011. The purpose was to estimate the values of demographic phenomena: births, deaths, natural increase and migration balance, and the final annual population in each calendar year of the survey and for the entire analysed period. The high quality and highly detailed available data provided by the National Institute of Statistics of Bulgaria on demographic dynamics made it possible to approach and structure them. The statistical information went through several stages of processing, as follows: the number of demographic events (births, deaths, etc.) in the area under study during the survey period was obtained from the NIS; demographic events were compiled in annual cohort dynamics; the census population was developed retrospectively over time in the different calendar years of the period; the difference between the hypothetically calculated and the actually available population is a reliable estimate of the total migration balance broken down by characteristics. Special attention was paid to the distribution of

population by settlements and the changes in the structure of population. Based on this, the dynamics of settlements were characterized and the ongoing processes were established. Settlements were selected for more detailed on-site research. Changes in the number of population in settlements over the studied period and its sub-periods underlie the identification and characterization of depopulation and suburbanization. Field methods of gathering information through interviews were also used to detail and differentiate the territorial aspects of the processes. Credible and objectively justified results were obtained through a properly selected scientific approach.

Population inhabiting a given territory and its demographic and social characteristics determine to a high degree the opportunities for the use of its resource potential on the one hand, and on the other hand, influence the development and the anthropogenic impact on that territory. The change in the number of population reflects the degree of demographic sustainability of the territory and its ability to influence it. We therefore accept, the change in the number of inhabitants as *“a complex indicator of the natural and mechanical movement of the population and its age structure, which assesses the existing working and living conditions in a given region”* (Mihailov et al, 1999).

The estimates examined are consistent with the patterns in the past demographic processes of natural reproduction of the population: fertility and mortality, and with the past migration processes occurred in these settlements during the analysed period and sub-periods.

### 3. RESULTS AND DISCUSSION

#### 3.1. Number, distribution and density of population

For the entire period 2001 - 2016, the municipality of Blagoevgrad has a permanently shaped tendency of decreasing the population, despite some fluctuations such as ones in 2005 or 2008 - 2011. Therefore, this municipality is not an exception to the overall tendency for the whole country. In absolute terms, the population decreases by more than 2,500 people for a period of 16 years, therefore the rate of decrease is not high and it is lower than the average registered in the country (Table 1).

Interesting is the change in the number of the population of the city of Blagoevgrad. For the reviewed period, the same trend of population decline is observed, by about 1,869 people, in the last year compared to the year before. In individual years there is an increase over the same period (2005 compared to 2004), as well as from 2008 to 2011. These findings are based on the absolute number of the population of the

city. They correspond also to the periods of growth of the total population of the municipality. The comparison of these peculiarities in the change in the number of population with its relative share to the total population of the municipality shows some differences. The relative share of the urban population in the municipality increased from the beginning of the period to 2009 and then started decreasing but retained a higher value at the end of the period compared to the beginning. This gives reason to assume that the reduction of the total population of the municipality is mainly determined by the decrease of the rural population. This is evidenced by the dynamics in the number of the population inhabiting the villages of the municipality, both in absolute numbers and in relative share (Table 1).

Table 1. The dynamics of the total population of Blagoevgrad municipality and the ratio between urban and rural population (2001-2016) (source: NSI and own calculations).

Years	Total (no.)	Urban (no.)	Rural (no.)	Urban (%)	Rural (%)
2001	78472	71457	7015	91.06	8.94
2002	77848	:	:	:	:
2003	77530	70986	6544	91.6	8.4
2004	77384	70923	6461	91.6	8.4
2005	77442	71061	6381	91.76	8.24
2006	76859	70549	6310	91.79	8.21
2007	76174	69902	6272	91.77	8.23
2008	76242	70004	6238	91.81	8.19
2009	76498	70291	6207	91.88	8.12
2010	76708	70331	6377	91.69	8.31
2011	77306	70779	6527	91.56	8.44
2012	77080	70609	6471	91.60	8.40
2013	76951	70573	6378	91.71	8.29
2014	76740	70438	6302	91.79	8.21
2015	76283	69951	6332	91.70	8.30
2016	75929	69588	6340	91.65	8.35

Population density in Blagoevgrad municipality follows the typical tendencies for population as a whole, which is logical. It is more important to note that the density of the municipality (124 - 125 people/km<sup>2</sup>) is much higher than the average of the country (below 70 people/km<sup>2</sup>).

#### 3.2. Depopulation and suburbanization

In the studied territory of Blagoevgrad municipality, the population is distributed in 26 settlements, consisting of one city and 25 villages. The city with its population dominates remarkably over the remaining settlements (Table 2).

The classification of villages according to the number of inhabitants in Bulgaria is as follows: small

(up to 500 people), medium (501-1,000 people), large (1,001-2,000 people) and very large (over 2,000 people). In Blagoevgrad municipality, small villages dominate, with a population of up to 500 people (76%) while the other 24% are integrated in the category of medium villages. There are no villages included in the

higher categories in the studied municipality. That is why we introduced the category of very small villages (up to 100 people). About 48% of the villages (12 out of 25) in the municipality can be included in this class, and 5 of them have less than 50 inhabitants (Table 2, Fig. 1).

Table 2. Population by settlements according to the census (2001 and 2011) and at 31.12.2016 (source: NSI and own calculations).

Settlement	Population 2001	Population 2011	Absolute increase (2001-2011)	Population 2016	Absolute increase (2011-2016)
Blagoevgrad municipality	78,133.0	77,306.0	-827	75,929.0	-1377
City of Blagoevgrad	71,144.0	70,779.0	-356	69,588.5	-1,190.5
Belo Pole	603	613	+10	597	-16
v. Bistritsa	151	90	-61	85	-5
v. Buchino	134	88	-46	71	-17
v. Bulgarchevo	340	320	-20	280	-40
v. Gabrovo	73	36	-37	23	-13
v. Gorno Harsovo	115	78	-37	60	-18
v. Debochitsa	29	15	-14	18	+3
v. Delvino	50	56	+6	86	+30
v. Drenkovo	123	91	-32	72	-19
v. Dabrava	117	103	-14	136	+33
v. Elenovo	161	189	+28	181	-8
v. Zelen dol	223	220	-3	194	-26
v. Izgrev	509	576	+67	567	-9
v. Klisura	26	28	+2	15	-13
v. Leshko	303	197	-106	158	-39
v. Lisia	31	11	-20	7	-4
v. Logodaj	291	274	-17	287	+13
v. Marulevo	74	43	-31	83	+40
v. Moshtanetz	56	68	+12	59	-9
v. Obel	29	26	-3	21	-5
v. Padesh	835	683	-152	594	-89
v. Pokrovnik	855	891	+36	909	+18
v. Riltsi	852	915	+63	880	-35
v. Selishte	350	292	-58	251	-41
v. Tserovo	659	657	-2	661	+4

This distribution of villages according to the number of their inhabitants outlines a tendency of depopulation, which is manifested in two directions: from the state border to the interior of the territory and the second direction from the high mountainous areas to Struma river valley. All of the villages with population under 50 people are located in the western part of the municipality, next to the state border with the Republic of Macedonia, along with one village with a population between 51 and 100 people. Four of the villages in the same category are located in the mountainous part of the municipality (Rila Mountains) at an altitude of 800-1000 m. Therefore, depopulation

is highly effective and the process seems irreversible. This analysis refers to census data in 2011 and population statistics from 2016.

Special attention is paid to the average villages with a population of more than 500 people, which are the largest villages in the studied territory. They are Belo pole, Riltsi, Izgrev, Pokrovnik, Matade and Tserovo. They are located near the city at a distance between 5 and 15 km, and some of them are spatially distributed along the main roads - the Struma highway or first class roads (Fig. 1).

Between the last two population shifts in Bulgaria (2001 and 2011), Blagoevgrad municipality

shows negative trends because its population decreased by 827 people.

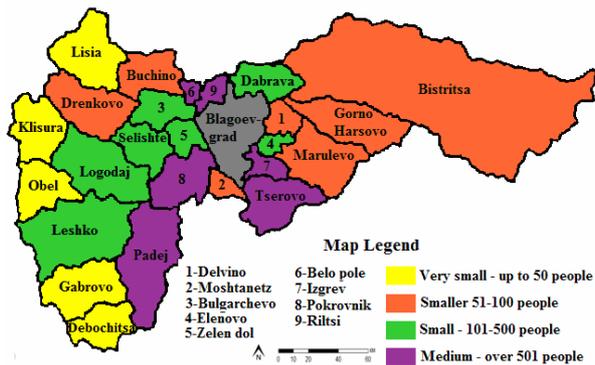


Fig. 1. Classification of villages according to the number of inhabitants.

This trend is typical of the city, which lost 356 people and of another 17 of the total number of villages. Therefore, only eight villages in the municipality show an increase in their population. In some of them, the growth is barely noticeable (almost symbolic) - by 2 to 6 people (village of Klisura, village Delvino). In other villages the increase in population is significant for the size of Bulgaria and the region, with more than 60 people - the villages of Izgrev and Rilci, with over 30 people - the villages of Elenovo and Pokrovnik, with over 10 people - the villages of Mosantz and Belo pole (Table 2). These villages are the largest in the municipality and are located at a distance of 5-10 or 15 km from the city. They owe this increase in the population number to the suburbanization process. This process has also occurred in other areas of Bulgaria. It is characteristic to the villages located around the large cities. This is a process in which urban life is transferred to settlements without urban status, i.e. the inhabitants of the respective settlements have their own way of life and are not involved in activities specific to the rural areas. For example, in Bulgaria, there are villages along the cities of Sofia, Plovdiv, Varna, Bourgas, Rousse, Stara Zagora that have become the villages of wealthy citizens from the large urban centres, but practically these villages are being preserved.

During a period of 10 years (2001-2011), these three villages located in the mountainous areas of the surveyed area lost between 32% and 42% of their population. That is why depopulation looks very strong. Blagoevgrad lost only 0.6% of its population for the same period of time, i.e. there is no depopulation process (Fig. 2).

Between 2011 and 2016, the development of depopulation process deepened. There are already 18 settlements that registered population decrease. Overall, the dynamics is greater, because six villages, which in the previous period reported population growth, now show a loss of between 8 and 35 inhabitants (Elenovo, Belo pole, Izgrev, Klisura,

Moshtanetz and Riltsi) (Table 2). Only two villages among those with a population increase in the period between the censuses, keep the trend up to the moment. These are Delvino and Pokrovnik, whose population increased respectively by 30 and by 18 people in the period 2011-2016, which proves that suburbanization process continues to develop. It is also confirmed by the fact that five villages, which showed a decrease in their population between the two censuses, show growth in the period 2011 - 2016. These are Debochitsa, Dabrava, Logodash, Marulevo and Tserovo. All these villages are located around Blagoevgrad at a distance of up to 25 km. The suburbanization continues to develop, but now acquires new features. The radius of manifestation raises by covering even larger villages, due to an improved quality of roads and road network and the decrease in the time to travel to the city. It is not without importance the fact that the car park is changing, now having more powerful and modern cars, which make travelling more comfortable. The new villages affected by suburbanization have an important advantage, offering a cleaner and more relaxed living environment and opportunities for a natural way of life.

The process of suburbanization has developed in two main directions, from which we can distinguish two zones: the eastern zone, covering 6 villages located to the east of Blagoevgrad to the foot of the Rila Mountain with the best ecological indicators of the environment; the second zone of the suburbanization is related to the more important roads that cross the municipality, Struma highway and the road from Blagoevgrad to the "Logodaj" border checkpoint with Macedonia (Fig. 2).

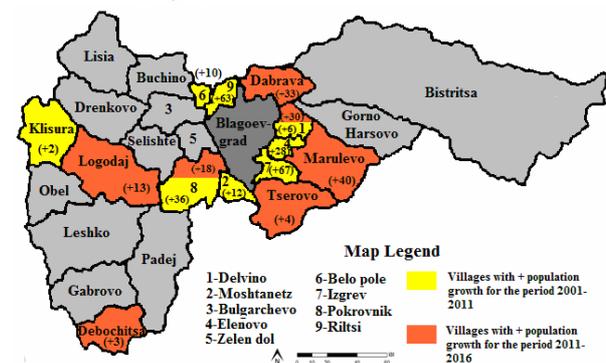


Fig. 2. Areas of depopulation and suburbanization in the municipality of Blagoevgrad.

### 3.3. Natural dynamics of population

Depopulation is closely related to the level of the birth rate. From a regional point of view, it is much more pronounced. As many authors note in their studies (Geshev, 1999; Ganev et al., 1997; Slaveikov and Balev, 1997; Ganev, 1998; Hadzhieva, 2003; Mladenov and Dimitrov, 2005; Patarchanova, 2007) in the second half of the 20<sup>th</sup> century, as a result of the socio-economic changes, the reproduction regime of the

Bulgarian population has also changed. This is even more significantly noticeable in the rural areas. The migratory flow from villages to cities not only that leads to their depopulation but it changes the fertile contingent of these settlements and territories, which reflects negatively in the reproductive behaviour of their population. As a result, since the mid-1960s, the birth rate has declined throughout the entire country, and since the 1990s it has remained at an alarmingly low level. The trend continues throughout the 21<sup>st</sup> century. The studied territory is no exception to it, but here it appears a little weaker. The birth rate varies from 676 to 827 (Fig. 3).



Fig. 3. The birth number in Blagoevgrad municipality (2002-2016).

The main reason for the relatively high birth rate is the presence of a large city in the municipality, because Blagoevgrad is not only the administrative centre of the municipality but also of the whole area. And, although its population is below 100,000 people and, therefore, does not fall into the category of the largest cities in Bulgaria, it has its own demographic potential. This is also shown by the coefficient of birth rate in the city that ranges from 10‰ to 11‰. Only four cities in Bulgaria register higher values for this indicator - Sofia, Plovdiv, Varna and Sliven (Cities and their Functional Urban Areas in the Republic of Bulgaria, 2016). The analysis shows that a change in the reproductive behaviour of the population cannot be expected. From the demographic point of view, the low birth rate (in terms of natural reproduction) in the municipality is due to the decreased number of women of fertile age and the low number of newborns during the fertile period. The average number of children that a woman gives birth throughout her fertile period is about 1.7 children, which is a low value for this indicator, i.e. we have a low reproduction level of population. The optimal theoretical minimum to provide a simple reproduction of the population is 2.1 live births per woman. The currently negative effect of the decreasing number of women of fertile age will affect the reproduction of the population over the next decades. This is due both to the negative changes in the age structure of women aged 15-49 and the decrease in the absolute number and relative share of girls aged 0 to 14, who will contribute to the reproduction of the population in the municipality in the following decades. The alteration is mainly determined by the changes in the socio-economic conditions, and from there in the value system of women - in the foreground, values such

as graduating higher education and ensuring better work, successful professional careers come out. However, it is expected that this trend of a slightly higher birth rate than the average for the country will maintain.

The level of death rate also strongly influences the depopulation process. When it exceeds the birth rate, depopulation occurs naturally. By the mid-1960s the mortality rate in the country was decreasing (Ilieva and Mladenov, 2003). After that it began to grow gradually due to the demographic aging of the population. Since the mid-1990s, mortality rates have passed the threshold of 12‰, ensuring the simple reproduction of the population (Mladenov and Dimitrov, 2005).

The high level of total mortality rate (including child and infant) is among the most alarming demographic issues. A major factor driving the dynamics of overall mortality is the demographic aging process. This process is a result of changes in the age structure of the population, and it reduces the relative share of young people in the general population and increases the share of older people. The mortality rate for men is relatively higher than for women. This is due to lifestyle, increased risk in working conditions, high levels of stress, etc. The unusual rise in the overall mortality rate is also caused by the significant economic and social changes in the conditions of market economy and the manifestations of economic crisis over the last few decades.

Due to population aging and the deterioration of health care quality in the villages adjacent to the municipality, in recent years there has been a steady tendency to maintain relatively high mortality rate, although they are lower than the average of the country as a whole (Fig. 4).

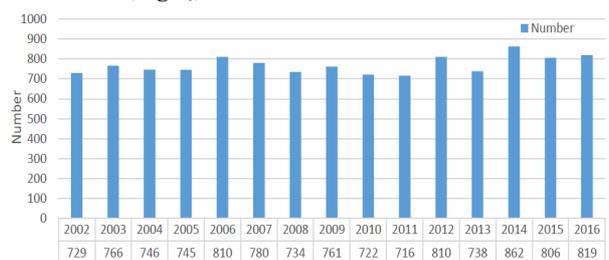


Fig. 4. Mortality in Blagoevgrad municipality (2002-2016).

The overall mortality rate in the surveyed territory fluctuates in a relatively small range, from 716 to 862 cases per year. Against the background of the overall mortality in the municipality, the city itself stands out, with relatively more favourable values of the coefficient, of mortality about 9‰. This is one of the lowest values in the country and the lowest among major cities (Cities and their Functional Urban Areas in the Republic of Bulgaria, 2016). The big difference between the values recorded by the city and the surrounding villages in the municipality may be

explained by the fact that villages are mostly inhabited by older people, which also increases the level of total mortality.

The reproduction of population in a given territory is manifested by its constant revival or by the change of generations. The quantitative aspect of the process is expressed by the natural movement of the population.

The natural growth shows the reproduction state of population and its demographic potential. Based on the fact that it is a function of birth and mortality rate, it is natural to expect higher values in the surveyed territory than in the country. This holds true for the city, which traditionally maintains positive values for this indicator. For the studied period, they fluctuate between 1.5‰ and 1.8‰. Blagoevgrad is one of the few cities in the country that still have positive values of natural growth. The rest of the surveyed territory shows greater dynamics with regard to the natural movement of the population. Natural growth has both positive values (between 37 and 105) and negative in a large range (from -93 to -8). The periods with positive (2008 - 2011) and negative (2002 - 2007, 2012 - 2016) values of the natural growth in the municipality are clearly outlined (Fig. 5).



Fig. 5 Natural growth in Blagoevgrad municipality (2002-2016).

In the recent years, the negative values of natural growth have increased, therefore reducing the demographic potential of the municipality. This is a limiting factor for its future socio-economic development, although from an ecological perspective it has its advantages. The combination of demographic resources and environmentally friendly natural conditions is a good foundation for successful investments in infrastructure, food production and organic products, rural and environmental tourism, etc.

### 3.4. Migration of population

Migration, both external and internal, is an essential component of the demographic development and it is important for the territorial distribution of population and the process of depopulation. Throughout the 20<sup>th</sup> century, the main triggering factors were the socio-economic conditions, according to which the main direction of migration was *from village to town*. As a result, the number of urban

population has grown and vast rural areas have been depopulated (Geshev, 1994; Mladenov and Dimitrov, 1998; Kojuharova-Zhivkova, 1998). “The share of migrants from villages to towns gradually decreased between 1976 and 1985 ... and the dominant role of the “city-city” migration was taken into account. This was due to the large demographic “erosion” and depopulation of the rural areas, which have already been deprived of their basic migration potential - enough young people” (Tsekov, 1999). In the 1990s, the migratory flow from towns to villages has dominated over the traditional. The main factors included the land reform, the land restitution, the transformation of the economy into market, hidden and apparent unemployment, the limited financial capacity of population, etc. (Patarchanova, 2007).

The surveyed territory is no exception to these trends, which are typical of the country as a whole. On the contrary, here the manifestation of some of these factors is even stronger. The peripheral geographical position of the administrative area to the territory of the country is a reason for the migratory flow from the villages and smaller towns to be directed towards the city of Blagoevgrad, throughout the second half of the 20<sup>th</sup> century. This also leads to the shaping and development of this urbanized area. In the 1990s, the significant demographic resource accumulated over the years starts to return to their native places, “feeding” the city – village migration. The graphics in Fig. 5 show the change in the migratory balance of the population in the municipality of Blagoevgrad, as well as the differentiation by type of settlements. The negative values of the indicator prevail, with the exception of two periods 2004-2005 and 2008-2009. The finding is very unfavourable (it is very clear in Figure 6) that the majority of the population, who leaves the territory of the municipality of Blagoevgrad, is from the city itself and not from the villages.

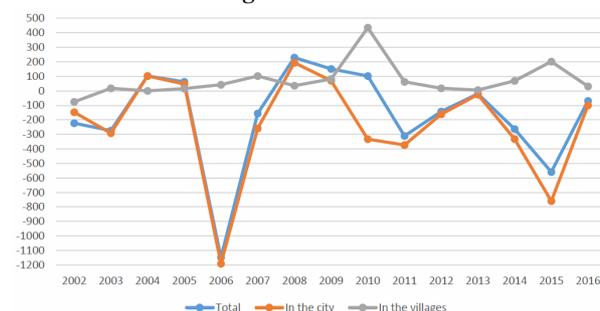


Fig. 6 Migratory balance of the population in Blagoevgrad municipality (2002-2016).

This has a negative impact on its economic development. The main reasons for the migration of population from the city to other places are the attractiveness of other cities in Bulgaria (mainly Sofia) and abroad, related to the opportunities of finding better jobs, better conditions of urban infrastructure, access to higher education, etc. The potential emigrants

are people aged 20-35, and 2/3 of them have secondary and higher education. Therefore, migrants are young and educated people, in which the state has invested, and who are more adaptable to the new environment.

The emigration of young and highly educated people has economic and social implications for the future development of the municipality. It has a negative effect on the reproduction of population because women of fertile age are leaving the territory, which reduces the potential future birth rate not only for the next 10-15 years but also for a longer period of time. The reasons for emigration in the past 25 years are mainly related to ensuring employment, higher incomes and living standards, a strive to live in a better

urban environment. This motivation is complemented by the pursuit of educational and professional accomplishment. The situation in the villages is different. The already formed tendency of positive migratory balance for almost the entire period is quite visible. Villages attract population, mainly from the city, i.e. this is another confirmation of the described suburbanization typical of the villages located near Blagoevgrad city. The migration from the city villages, especially those located in the mountainous areas, makes them lose their demographic resources that are settled in the city or in the larger villages of the municipality. A leading factor in choosing a place to settle is the financial one (Table 3).

Table 3. Migratory balance of the population in Blagoevgrad municipality (2002 - 2016) (source: NSI and own calculations).

Years	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total	-223	-274	102	62	-1148	-156	229	151	102	-311	-143	-20	-263	-559	-69
In the city	-147	-292	102	47	-1190	-258	194	70	-333	-373	-161	-26	-332	-760	-100
In the villages	-76	18	0	15	42	102	35	81	435	62	18	6	69	201	31

For the villages in the mountainous part of the studied area, it is most appropriate to focus on activities in the field of tourism - rural and ecological. The natural environment and cultural traditions of the local population are an excellent prerequisite for alternative forms of tourism. They are proven good practices in many countries (Popescu, 2010; Dinu, 2011; Pavlovic et al., 2012; Borsos, 2013).

### 3.5. Age structure of population

The age structure of the population is of particular importance because it is influenced by the natural reproduction of the population and it is relevant for the labour resources. The narrowed reproduction of the population in Bulgaria does not allow natural replacement of generations. Therefore, the share of the under-active population is lower than that of the population over the working age. The age structure of the population is also very important for the overall socio-economic development of the territory. Each age group has different living and working possibilities and participate differently in the material production and the spiritual life of the society. The change in the age structure of the population is crucial for the formation of labour resources. Because of the low birth rate in the municipality, the working-age population occupies the smallest share of the population in the surveyed territory. The town of Blagoevgrad has a higher share of the population of working age than the average value of the country. This is among the most favourable demographic characteristics, because it allows to ensure the formation of sufficient labour resources in the near future (Fig. 7a). Unfortunately, this is not the trend in the other settlements in the municipality. However, for

the whole analyzed period of 15 years, the working population in the municipality has decreased by about 1,300 people, and in the city itself - by 1,276 people. And this is because a large part of the villages in the municipality have no population of this age group. It is clear that it is almost entirely concentrated in the city.

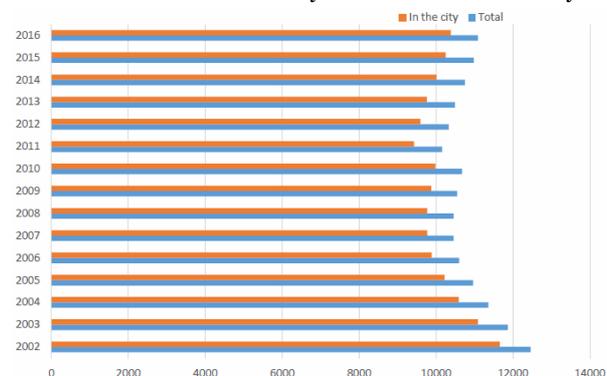


Fig. 7a. Number of under-active population in Blagoevgrad municipality (2002-2016).

The share of the working age population in the municipality is above the national average. Its territorial distribution between the city and the villages is relatively more balanced (Fig. 7b). This creates the prerequisites for the development of economic initiatives and productions not only in the city but also in those villages where the population of this age group is concentrated. These are the large villages in the municipality located near the town, connected with the city through good road infrastructure. It allows residents to enjoy the services the big city offers, but to live in one-family houses with courtyard spaces, and in a relatively more peaceful environment, which the villages concerned provide. The comparative analysis of the data from Table 8 shows that the working

population in the municipality has increased between 2002 and 2005, and then it has declined. The dynamics of the working population in the city is more positive. Its values at the beginning and the end of the period remained almost unchanged, with an increase in individual years. It is also due to changes in the labour law, according to which the retirement age was increased (Fig. 7b).

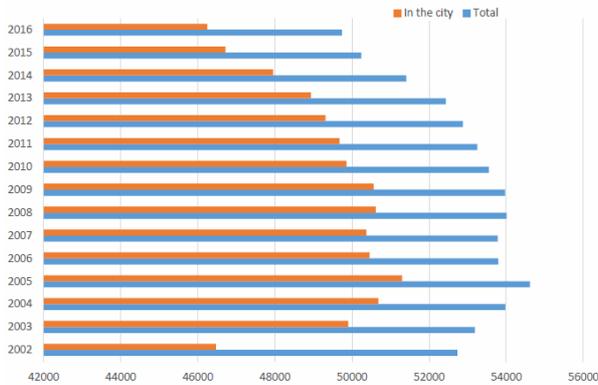


Fig. 7b. Population of working age in Blagoevgrad municipality (2002-2016).

The share of population above the working age in the municipality is close to the average values of the country. According to data for 2012, we have a relatively low demographic burden in the city, with young and old generations accounting for 28% of the working age population, with an average of 47% for the country. Unfortunately, there is a high demographic burden in the other settlements in the municipality. However, in general, Blagoevgrad municipality has a lower demographic burden compared to the national one, in which case there are worrying tendencies of growing the number of elderly people and a decrease in the young generations that are to be included in the working group (Fig. 7c).

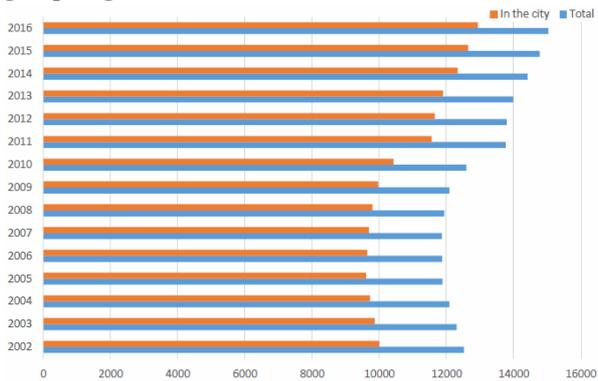


Fig. 7c. Number of population of over-working age in Blagoevgrad municipality (2002-2016).

Data in figure 7c illustrate the very unfavourable process of growth of the over working age population, a trend which is typical of both the municipality and the relevant types of settlements. Therefore, here there is no difference between the city and the villages, the aging process of the population is

very strongly manifested, and in the second part of the period, the growth is at a higher rate. In many villages, this age group is dominant.

#### 4. CONCLUSION

According to a number of demographic indicators, the studied territory - Blagoevgrad municipality shows a better condition than the average values for Bulgaria. Despite some negative trends, such as population decline, it still has a relatively good demographic potential, better than dozens of municipalities in the country. The birth rate is still higher than the country average; the natural growth rates in some years are positive or close to 0% and so on.

There are large disproportions in the demographic indicators between the city and the other settlements in the municipality. "Still the opportunities given by the cities are greater than these in the villages" (Naidenov, 2018). There are problems of the "center-periphery" type, which will be deepening in the future and will have an unfavourable effect on the overall development of the territory. The depopulation will cover new territories and will "descend" even lower, i.e. will cover areas with a lower altitude. The villages in the mountainous areas will completely lose their demographic resources. The process of suburbanization has developed in two main directions, which creates two zones. An eastern area, covering 6 villages located to the east of Blagoevgrad to the foot of the Rila Mountain with the best ecological indicators of the environment and the second one, in which case suburbanization is related to the main road infrastructure developed through the municipality, Struma highway and the main road from Blagoevgrad to the "Logodaj" border checkpoint with Macedonia. In the near future, the process of suburbanization will develop at a low rate of growth, as there is no other city besides Blagoevgrad to provide it. Blagoevgrad has its significant demographic potential, which will be preserved despite some negative processes. It is a regional leader in the system of settlements in this part of Bulgaria and will continue to attract future young age population because of the universities and the high schools located here, as well as due to the diversity and quality of the services offered. This gives us reason to believe that the proven process of suburbanization will continue to manifest and influence the future development of the processes between the centre and its periphery. When making decisions related to spatial planning for sustainable development, it should be taken into account both "people's preferences and the peculiarities of the territories in which they live by ... avoiding the "universal approach" and the implementation of ready-made models and schemes in areas with different geographic environment"

(Patarchanov, 2019). Therefore, to ensure sustainability in terms of population and socio-economic development of a specific area such as Blagoevgrad municipality, local and regional authorities should increase their management capacity of the land, labour force, market, capital and decide, implement and strategically control the territorial functionality (Zotic et al., 2010).

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