Ekaterina A. Antipova, Ludmila V. Fakeyeva

Demographic revitalization of Belarusian towns in the XXI century

Problemy Rozwoju Miast 10/1, 113-122

2013

Ekaterina A. Antipova
Ludmila V. Fakeyeva

DEMOGRAPHIC REVITALIZATION OF BELARUSIAN TOWNS IN THE XXI CENTURY

Abstract. The modern dynamics of the urban population of Belarus differs from the total population dynamics trend. The total population size of Belarus decreased from 10.1 to 9.5 million or 6%, in the period from 1989 to 2009 years. The urban population increased from 6.2 to 6.7 million, or 8.2% in the same space of time.

Groups of towns by population size differ in the character of population dynamics. Population growth is typical for small towns, because of administrative reforms – some urban-type settlements get status of town. The population of small towns has increased by 17.5% during the period of 1989-2009 years, large and medium cities – by 7% an average.

Natural movement indicators of the urban population of Belarus have significant differentiation between classes of towns by population size. During the period of 1989-2009 years the highest birth and mortality rates were established in the small towns. The highest birth and the lowest mortality rates are typical for large cities. Higher values of fertility rates in large cities determines by higher level of socio-economic development and the continued migration to cities the XXI century. The higher fertility rates in small towns are due to two factors: the state-support of small business in this group of settlements and attracting young professionals to new enterprises in small towns. Natural increase of population is manifested in all classes of towns in Belarus during the period 1989-2010 years. The highest rates of natural increase are typical for large cities with population size over 100 thousand people. In general, the demographic revitalization is obtained in 46% of towns in Belarus. This process is based on the factors of natural and migratory population movement. Population is growing due to natural increase and migration inflow with an absolute predominance in the structure of migratory factor in every fifth town (21%). In 17 towns (15%) population is increasing due to the predominance of one positive factor with negative value of the second (Natural increase > Migratory outflow, Natural decrease < Migratory inflow). Population decline with the dominant role of migratory losses is typical for 64% of towns in Belarus (mainly small and medium).

Key words: Belarus, urban population, factors of demographic dynamics, demographic revitalization.

Introduction

Settlement structure has seen transformational changes in the second half of the XX century: a primarily agricultural country in 1959 with a rural population share of 69% has turned into an industrial one with dominance of the urban population in the structure – 69%.

Post-WWII industrialisation of Belarus has been accompanied by an accelerated growth of urban population that has seen an almost threefold increase over the period of 1959-1999 years. Quick growth of the urbanisation level has contributed to the development of the urban settlement system, quick population growth in large cities (over 100 thousand people), the dominating role of the Minsk capital city agglomeration and the emergence of the differentiation of the demographic trends in Belarusian urban areas according to the

population size. The aim of the study was to analyse the dynamics of the population size and demographic trends in Belarusian towns according to the population size classes, to reveal town classes by population size (with positive demographic trends – with higher birth rates, lower death rates, with stable population increase), spatial-temporal factors and regularities of demographic revitalization of Belarusian towns over the period of 1989-2009 years.

Spatial differentiation of the urban population dynamics in Belarus

The modern urban settlement structure includes 112 cities. Quantitatively, towns are the dominating class with a share of 66% in the settlement structure. Large cities with a population of more than 100 thousand make up to the 12% in the population structure; virtually the same share belongs to semi-medium towns with a population of 20 to 50 thousand people. Population settlement according to the town classes is characterised by its maximal concentration in large cities. 70% of the urban population of Belarus dwells in the cities with a population size of over 100 thousand people, 11% in cities with population size of 50 to 100 thousand people (table 1).

Table 1. Urban settlement structure in Belarus*

Town classes by population size, thousands of people	Number of towns		1989		2009	
	entities	%	Population size, thousands of people	%	Population size, thousands of people	%
more than 100	13	12	4337	70,0	4651	69,4
50-100	10	9	704	11,4	758	11,3
20-50	15	13	455	7,3	472	7,0
less than 20	74	66	702	11,3	825	12,3
Total	112	100	6198	100	6706	100,0

* Source: *Own compilation based on Population of Belarus: statistical digests 1970-2011*

Before the beginning of the 1990s overall population size in Belarus was constantly increasing, but since 1970s years the growth has been slowing down. The death rate surpassed the birth rate for the first time in 1993, and the country entered into a qualitatively new stage of its demographic development – depopulation.

The urban and rural population size dynamics are oppositely directed. The urban population size is constantly growing, while the rural population size is constantly decreasing. As a result, the proportion of rural and urban population undergoes changes [Manak, B.A., Antipova, E.A. 1998].

The urban population size was actively increasing in 1980s, up till the beginning of 1990s, and then its speed has abruptly slowed down, and, despite a small increase that is still visible, the urban population size has practically stabilised at the number of ± 7 million people.

The modern type of the urban population dynamics in Belarus is different from a general trend in the country population dynamics. The total Belarusian population has diminished over the period 1989-2009 from 10151.8 thousand people to 9513.6 people, or by 6%. The population of Belarusian towns and cities at the same period has increased from 6198 thousand people to 6706 thousand people, or at 8.2%.

The urban population of Belarus is non-uniformly distributed over the territory. 26% of the all urban population is concentrated in the capital city of Minsk. 15% of the urban population live in the eastern region of the Belarusian Polesye – Gomel region. The western region of the Belarusian Polesye – Brest region, the region of Belarusian Poozerye – Vitebsk region, and the eastern Belarusian region – Mogilev region have equal positions according to the urban population share. The lowest urban population share (10%) is concentrated in the eastern Belarusian region – Grodno region.

Belarusian regions are characterised by different urban population size dynamics and can be divided into two types. The first type – with a positive population dynamics – includes four regions: the Minsk city, Minsk, Brest and Grodno regions. The urban population size in these regions has increased by an average of 10%. The biggest increase values are specific to the capital city – Minsk (13%). The second type – with a negative population dynamics – has formed in the three regions of the Mogilev, Vitebsk and Gomel regions. On the average, the decrease of the urban population size there has amounted to 1% (table 2).

Table 2. Regional dynamics of the urban population size in Belarus*

Regions	1989		2009		Population dynamics over 1989-2009 years, %
	thousands of people	%	thousands of people	%	
Brest	819	12	912	13	11
Vitebsk	906	14	896	13	-1
Gomel	1065	16	1045	15	-2
Grodno	666	10	735	10	10
Minsk	739	11	789	11	7
Minsk city	1607	24	1814	26	13
Mogilev	841	13	835	12	-1
Belarus	*6643*	*100*	*7026*	*100*	6

*Source: *Own compilation based on Population of Belarus: statistical digests 1970-2011*

The patterns of the urban population dynamics are different not only according to the Belarusian regions, but also according to the urban area classes by population size and it allow to make conclusions about the structural differentiation of the dynamics.

The first pattern is the differentiation of the positive dynamics level of different urban area classes. The biggest growth of the urban population size has occurred in the small Belarusian towns (less than 20 thousand people), and this is explained by administrative conversions – some settlements were lifted to the town status – rather than the positive demographic dynamics. All in all, over the period of 1989-2009 years the population size of small Belarusian towns has increased by 17.5%. The population size of large (over 100 thousand people) and medium (50-100 thousand people) has increased by 7% on the average. The most stable dynamics are characteristic to the semi-medium towns with the population size of 20-50 thousand people, where the population has increased by 3.7%.

The second pattern is the intensification of the spatial differentiation in the urban population dynamics on the regional and micro-geographic level. Population size dynamics in large cities characterised by a positive trend in three regions – Brest, Minsk and Grodno regions. Negative dynamics in large cities is formed in Vitebsk, Gomel and Mogilev regions.

Medium towns with a population of 50-100 thousand people in all the regions have a positive dynamics. In semi-medium towns with a population of 20-50 thousand people over the period 1989-2009, the population size has reduced in Gomel and Mogilev oblasts, and increased in Minsk, Grodno and Brest. Dynamics in small towns is the most differentiated of the town classes. In Brest, Vitebsk and Gomel regions a significant reduction of the population size has occurred. For instance, in Brest region the level of the population reduction has reached 53.2% over the period 1989-2009. In Minsk, Grodno and Mogilev regions an increase in the population size occurred in small towns. In contrast to the Brest region, in the Western (Grodno) region – the level of the increase amounted to the 57%.

Therefore, the urban space in Belarus according to the urban population size dynamics has a conventional rhumb border that is passes from the north-west to the south-east.

Structural demographic revitalization of the Beralusian cities

Demographic development of Belarus, starting from 1993, is characterised by the death rate exceeding the birth rate, prevalence of the natural population decline and the advent of the depopulation condition. According to the 2010 data, the natural decline of the Belarusian population amounted to 3‰. Considering the diminished population growth, the beginning of the period of the depopulation, trends and type of the natural population change in the rural and urban are oppositely directed. In the rural areas, the population size reduction as a result of the natural decline first took place at the end of the 1970s. In the urban settlements this process appeared 20 years later, and the death rate exceeded the birth rate only in the middle 1990s.

The trend of the natural movement in the urban settlements is characterised by the followings: 1) high increase in the 1950s (at the level of 21‰); 2) following twofold reduction over the 35 years by the up to the end of 1980s; 3) abrupt reduction in the 1990s to the level of 0.5‰; 4) following 10-year period of the increasing and decreasing natural population decline (years 1996-2006); 5) population increase at the level of 0.5‰, starting from year 2007.

The modern patterns of the natural movement of the urban and rural population in Belarus have been different. The level of the natural population decline remains high in the rural areal, while a stable population increase can observe in urban areas (table 3).

Table 3. Comparative parameters of the population natural movement in Belarus

Indexes of the population natural movement	Total population			Urban population			Rural population		
	1989	1999	2009	1989	1999	2009	1989	1999	2009
Crude Birth Rate, ‰	15.1	9.3	11.5	16.5	9.5	11.7	12.3	8.7	10.8
Crude Mortality Rate, ‰	10.2	14.2	14.2	7.1	10.6	10.9	16.1	22.3	23.8
Natural Movement Rate, ‰	4.9	-4.9	-2.7	9.4	-1.1	0.8	-3.8	-13.6	-13.0

*Source: *Own compilation based on Population of Belarus: statistical digests 1970-2011*

Belarusian population *birth rate* is characterised by low values that are on the same level as the European and equal to 11.4‰. Differences between the birth rates in the rural and urban areas over the demographic history spanning more than half a century has

consisted in the higher birth rate levels in the towns compared to the country, starting from 1950s. The differences have started to even out in the beginning of 1990s, and currently the difference constitutes 0.8‰.

Birth rate dynamics of the urban population in Belarus is characterised by a number of distinguishes features, one of which is the trend type variation. Up to 2004, a birth rate reduction was observed that lead to the decrease of the total rate by 43%, reaching the lowest in the 20th century value of 9.4‰. The lowest birth rate was characteristic of the last 1990s, which was accounted for by the political, social and economic transformations and population's incertitude about the future. From 2004 onward, the birth rate in urban areas has been on the increase, and now amounts to 11.6‰. This phenomenon is explained by two main factors: 1) legislative and institutional – development of the social measures of the state demographic politics to support young families and mother of large families, to create maternal health and reproduction centres; and 2) demographic – a numerous generation of the children, born in the late 1980s, entered the reproductive age. At the same time, over the period of 1989-2010 an abrupt decrease in the birth rate was observed in Belarusian towns, and the rate is still estimated as the corresponding to the European.

The biggest birth rates, both in 1989 and 2011, are characteristic to the two Belarusian regions – Brest and Grodno regions, and it is explained by the historical forming factors, traditions and the confessional structure of the local population. Notwithstanding the spatial differentiation of the birth rates among the regions, the extent of the reduction over the period of 1989-2010 years in all the regions have been the same and equal to circa 30% on the average (table 5).

Therefore, the urbanised space in Belarus can be divided into three birth rate areas: 1) south-western area with relatively high birth rates as *the main zone of demographic revitalization of Belarusian towns;* 2) central and south-eastern area with medium birth rates and 3) northern area with low birth rates.

The highest birth rates and *the strongest demographic revitalization* are characteristic of the two town types – large with a population of more than 100 thousand people and small with a population of less than 20 thousand people. Relatively higher values of the birth rate in large cities are due to the higher level of the social and economic development, which is definitive of the reproductive processes in Belarus, unlike many European countries. Such large cities as Brest, Pinsk, Grodno are characterised by the birth rates within 13‰.

The higher birth rates in small towns are accounted for by two principal factors: the development and the governmental support of the small business in small urban settlements and hence the efforts to bring the young workforce to the enterprises that are being created in small towns. In such towns as Zhabinka, Malorita, Ivanovo in Brest region, Vetka in Gomel region, Oshmiany in Grodno region, Logoysk and Stolbtsy in Minsk region, which are situated in the south-western, central and south-eastern zones, the birth rates exceeds 15‰.

The lowest birth rates are characteristic of medium and semi-medium towns with a population of 20 to 100 thousand people. In such towns as Gorki in Mogilev region, Slutsk in Minsk region, Novopolotsk in Vitebsk region the crude birth rate is much lower, at around 10‰.

The population *death rate* in Belarus is characterised by high values that surpass the average European level and constitute around 14.4‰. Differences between the urban and rural areas in the death rates, unlike the birth rates, are very appreciable. They first surfaced more than 50 years ago – in the early 1960s – and consist in much higher death rates of the rural population compared to the urban. Currently crude mortality rate in the Belarusian towns is more than 2 times lower than in rural settlements and equals to 11.1‰ and 24.4‰ respectively. These differences are accounted for by social and economic factors (lower development level, asocial phenomena in rural areas, opposite trends in towns), as well as by demographics ones (much higher ageing level in the country compared to town etc.).

The death rate dynamics among the urban population is characterised by the trend variation. However, unlike the birth rate, prior to the middle 1960s death rate was reducing up to 5.3‰, while during the next 50 years its significant growth was observed. Over the period of 1965-2005 years crude mortality rate has doubled and reached the highest value in the century of the 11.0‰. During the four years after 2005 an insignificant decrease in the urban population rate took place, by 0.1-0.2‰. Currently crude mortality rate has increased and amounts to the 11.1‰, which is comparable to the average European level. The main factors of the death rate growth are ageing and the cases of younger men having cardiovascular diseases. As a result, the life expectancy of a town man is 66.9 years, ten years lower than woman's.

The most favourable death rate statistics are characteristic of the three Belarusian regions: the capital city – Minsk, Brest and Grodno regions. In these regions the crude mortality rate varies around the level of 10‰ and in Minsk is the lowest in the country – 9.8‰. The higher birth rates of the urban population and correspondingly the younger age structure are the main factors of lower death rates in these regions.

The least favourable death rate statistic are in two Belarusian regions – Vitebsk and Mogilev regions. In Belarusian Poozerye this is accounted for by a higher level of demographic ageing, in Mogilev region by the peripheral position in demographic and economic development. The death rates that are closest to the average country level are characteristic to the Minsk and Gomel regions.

Spatial differentiation of the death rate level according to the regions over the period of 1989-2010 years, unlike the birth rate, shows differences in the intensity of the death rate increase. The death rates in the towns of Grodno and Mogilev regions were the highest and exceeded 60%, which is higher than an average values for the country. The death rate has increased with the slowest speed in the capital city of Minsk.

All in all, the Belarusian urbanised space can be divided into three death rate areas: 1) capital and south-western area *the main zone of demographic revitalization of Belarusian cities* with low death rates, 2) central and south-eastern area with medium death rates; 3) north-western area with high death rates.

The highest population death rates are characteristic to the small towns, where the average values surpass 14‰, and the total increase in the index amounted to the 43.5%. This is explained by the peripheral position for the social and economic development of a number of urban settlements. In such towns as David-Gorodok of Brest region, Vetka,

Dobrush, Elsk, Turov, Vasilevichi of Gomel region, Logoysk of Minsk region, Krichev, Slavgorod of Mogilev region, crude mortality rate surpasses 16‰.

At the same time, in a number of small Belarusian towns where the building of small enterprises takes place and the age structure of the population is younger, the death rate is decreasing and currently has minimal values – less than 9‰. For instance, Beryoza, Ivanovo, Ivatsevichi, Mikashevichi in Brest region, Smorgon in Grodno region, Fanipol in Minsk region.

The lowest death rates are characteristic of the population of the large Belarusian cities, which is connected, first of all, with the higher level of the social and economic development and, as a result, the better development of the health care system. In such cities as Brest, Pinsk of the Brest region, Grodno of the Grodno region, Soligorsk of the Minsk region, crude mortality rate of the urban population marginally exceed 9‰.

The nature of the dynamics and the modern birth rate level influenced the formation of the spatial view of the *population natural movement* in Belarus. Currently two region types can be distinguished in the Belarusian urbanised space: 1) central and south-western type of the *the demographic revitalization of Belarusian cities* with population increase; 2) north-western and southern type with population increase. Conventional demographic border passes from the north-west to the south-east. The first type, on the basis of the spatial patterns found earlier, includes the towns and cities of Brest, Grodno, Minsk regions and the Minsk city. The highest natural increase indexes are characteristic of the Brest region (2.4‰). The natural increase in the capital city amounts to 1.6‰. The highest natural population decline is characteristic of the Vitebsk region population (2.7‰) (table 4, fig. 1).

Table 4. Regional dynamics of the urban population natural movement in Belarus, ‰

Regions	1989	1999	2009	2010
Brest	11.4	1.7	2.6	2.4
Vitebsk	6.7	-3.5	-2.3	-2.7
Gomel	9.5	-1.3	0.3	-0.2
Grodno	11.5	0.6	2.7	2.3
Minsk	9.9	-0.9	0.3	0.1
Mogilev	8.4	-1.9	-0.3	-1.1
Minsk city	9.5	-1.5	1.9	1.6
Belarus	*9.4*	*-1.1*	*0.8*	*0.5*

*Source: *Own compilation based on Population of Belarus: statistical digests 1970-2011*

The study has shown that, according to the town classes by the population size, the type of the population natural movement exhibits a structural differentiation that consists in following. Firstly, during the period of 1989-2010 years, on the macro-geographical level, all the Belarusian towns and cities, except the small ones, are characterised by a natural population growth. Two regions of the Brest and Grodno regions are characterised by the largest indexes of the natural population growth. On the regional level, natural population growth is absent in large and small towns in Vitebsk region, semi-large towns in Minsk region. Secondly, despite the overall natural population decline in small towns, on the mezzo-geographical level Brest region shows a natural population growth (table 5).

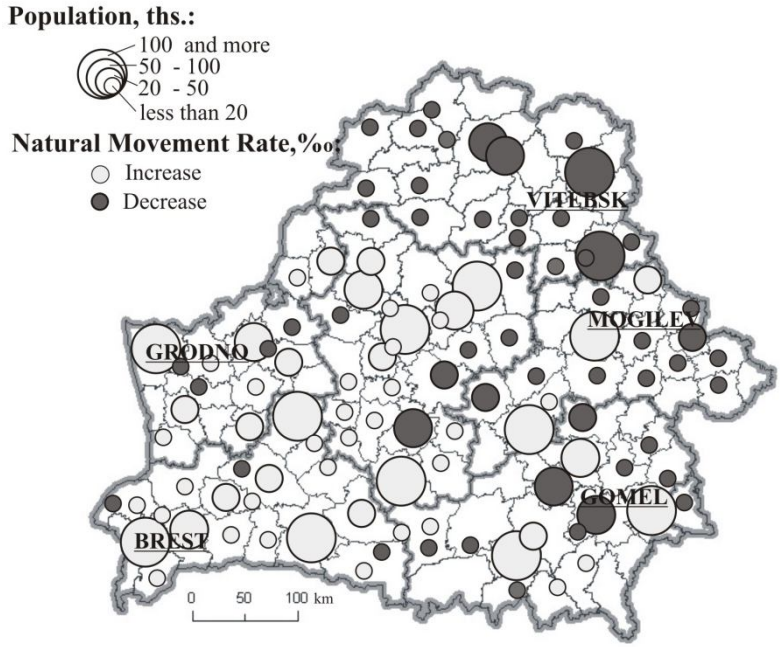

Fig. 1. Natural movement in Belarusian towns, 2010

Table 5. Structural dynamics of the urban population natural movement in Belarus

Town classes by population size, thousands people	Years	Urban population natural movement by region, ‰						Belarus
		Brest region	Vitebsk region	Gomel region	Grodno region	Minsk region	Mogilev region	
Large, more than 100	1989	10.4	5.7	9,8	11,2	8,4	6,1	8,6
	2009	2.5	-1.9	1,2	4,9	1,4	0,5	1,4
Medium, 50-100	1989	11.7	1.3	8,7	12,2	9,3	0	7,2
	2009	1.4	-3.18	0,7	1,3	0,3	0	0,0
Semi-medium, 20-50	1989	9.7	0	7,6	11,5	4,5	9,2	7,1
	2009	3.5	0	0,9	2,4	-1,9	0,4	0,9
Small, less than 20	1989	5.3	2.5	1,8	7,7	4,7	6,6	4,8
	2009	1.9	-5.8	-4,2	-2,9	-2,4	-2,2	-2,6

*Source: *Own compilation based on Population of Belarus: statistical digests 1970-2011*

The final stage of the study involved carrying out the typology of Belarusian towns according to the main factors of the demographic balance (natural increase (NI), natural decrease (ND), migration increase (MI), migration decrease (MD)). As a result, 6 demographic town types have been determined in the Belarus.

1 type – the main town type with demographic revitalization, *Progressive,* includes towns, where the population is growing due to the both components of the dynamics – natural increase (NI) and migration increase (MI). This type includes two subtypes: 1a. NI<MI, 1b. NI>MI. In every fifths Belarusian town, the positive demographic balance is formed mainly because of migration. As a rule, these are large and medium towns with a population size of more than 50 thousand people. The second subtype includes two towns – Berezino and Soligorsk in Minsk region.

2 type. *Contrast-factor based on the natural growth* (NI>MD), includes 7 towns situated in the Brest, Grodno and Minsk regions with a population size of less than 50 thousand people.

3 type. *Contrast-factor based on the migration growth* (ND<MI), includes 10 towns primarily with a small population size, and, usually, one town-forming enterprise of oblast or state importance. Of large cities, this type includes Vitebsk.

4 type. *Contrast-factor based on the natural decrease* (ND>MI), comprises four towns (Orsha in Vitebsk region, Dobrush, Vasilevichi in Gomel region and Chausy in Mogilev region).

5 type. *Contrast-factor based on migration decline* (NI<MD) takes the second place in the structure (23% towns), comprises 26 towns, primarily with a population size with less than 10 thousand people, situated in all the oblasts and belonging to the area of a large regional centre's influence.

Table 6. Belarusian cities typology according to the main factors of the demographic balance

Town types according to the main factors of demographic balance formation	Number of towns	%
1 type – the main town type with demographic revitalization. *Progressive*	23	21
Subtype 1a. NI<MI	21	19
Subtype 1b. NI>MI	2	2
2 type. Contrast-factor based on the natural growth (NI>MD)	7	6
3 type. Contrast-factor based on the migration growth (ND<MI)	10	9
4 type. Contrast-factor based on the natural decline (ND>MI)	4	4
5 type. Contrast-factor based on the migration decline (NI<MD)	26	23
6 type. *Regressive*	42	37
Subtype 6a. ND<MD	35	31
Subtype 6b. ND>MD	7	6

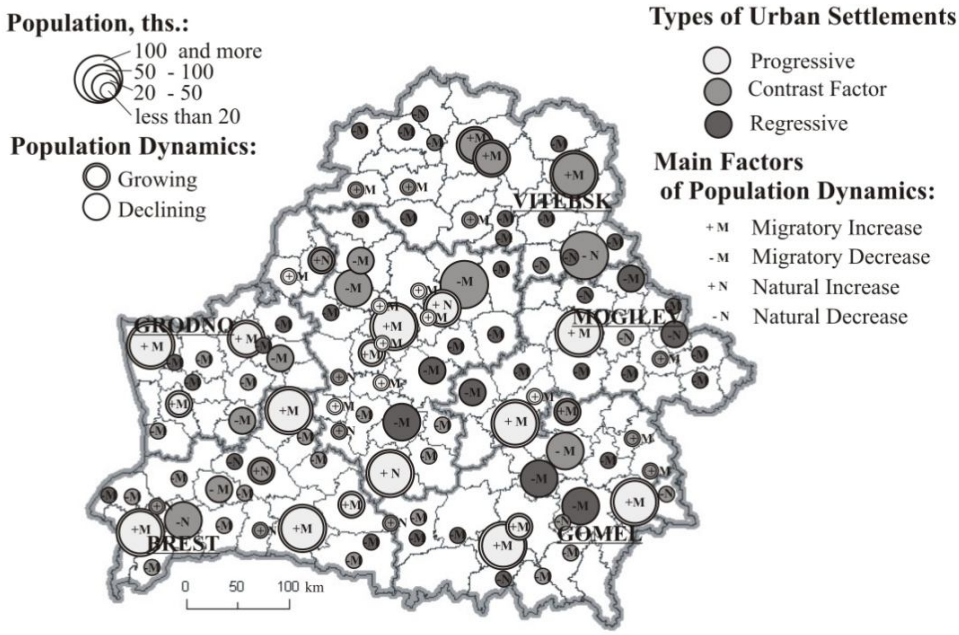

Fig. 2. Belarusian towns typology according to the main factors of demographic balance

6 type. *Regressive*, includes towns, where population is decreasing because of two components of the dynamics – natural decrease (ND) and migration decrease (MD). This type includes two subtypes: 6a. ND<MD; 6b. ND>MD. Every third Belarusian town belongs to the type, where negative demographic balance is formed primarily on the basis of migration population decline. As a rule, these are small towns, where population size varies from 10 to 20 thousand people. The second subtype (7 towns), where population dynamics is formed primarily on the basis of natural decrease, includes towns with a population of less than 10 thousand people (table 6, fig. 2).

Conclusion

Therefore, the analysis of the birth and death rates and population natural movement in Belarusian towns allowed determining the spatial and temporal shifts of the demographic development. Spatial shifts are manifested by the presence of two main areas of natural population growth (Brest, Grodno and Minsk regions) and natural decline (Vitebsk, Mogilev and Gomel regions), the border between which has a rhumb vector and lies from the north-west to south-east. Structural shifts of the demographic development consist in more favourable trends of the population dynamics in large cities and less favourable in small towns. Demographic revitalization is typical for one in five Belarusian towns (21%) and this process is manifested on spatial and structural levels. Demographic revitalization on spatial level is typical for north-west and central regions (Brest, Grodno, Minsk regions) and for cities with functions of regional centres. Structural demographic revitalization is characterize by progressive dynamics, natural and migratory increase for two types of towns – large and small, that is accounted for institutional and socio-economic factors.

References

Manak, B. A., Antipova, E. A. 1998: Ekonomiko-geograficheskij analiz demograficheskoj situatsii i razmeshchenie naseleniya na territorii Respubliki Belarus *(Economic-geographical analysis of Belarus population demographic situation and spatial distribution)* Belarusskij Gosudarstvennyj Universitet, Minsk, p. 292.

Antipova Ekaterina
Doctor of Geographical sciences, Full Professor
Belarusian State University Faculty of Geography
Minsk
Republic of Belarus

Fakeyeva Liudmila
PhD in Geography, Belarusian State University
Faculty of Geography
Minsk
Republic of Belarus