The Peculiarities of Demographic Aging in the Northern Regions of Russia

L. A. Popova

Institute for the Socio-Economic and Energy Problems of the North, Komi Scientific Center, Urals Branch, Russian Academy of Sciences e-mail: popova@iespn.komisc.ru

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Abstract—This article considers the features of the aging of the Russian population in various periods. It has been found that the Russian model has for a long time been distinguished by a birth-rate decline and a low life expectancy of the population; however, the increase in the life expectancy in recent years brings Russia to an aging model that is typical for developed countries. At the same time, the peculiarities of the demographic history currently contribute to the acceleration of aging rates, while the migration inflow from the former Soviet republics, in contrast, retards them. The characteristics of demographic aging in northern regions of the country, which is characterized by high aging rates of a still relatively young rural population, have been developed. Based on the example of the Republic of Komi, the rural aging features, which are determined by a significant lag in the life expectancy of the rural population with a definite narrowing of the gap between the urban and rural fertility models and a reduction of the migration of aging rates of Russia's population does not constitute as serious threat as is commonly believed. The social aspects of aging that are associated with the low quality of life of the elderly are more important.

Keywords: population age structure, demographic aging, aging factors, economic burden, social problems of the elderly and northern regions

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One of the global socio-demographic challenges of the modern era is the aging of populations, or demographic aging, which is defined as an increase in the proportion of the elderly and the old in the general population as a result of long-term changes in the nature of its reproduction. This problem has affected the entire world in all aspects of its existence, viz., traditional and national, financial and economic, political and moral. According to the UN estimates, in 2009 the worldwide proportion of people who are 60 and older amounted to 11%; by 2050 that figure will double. In developed countries every fifth resident is over 60 years old; by the middle of the 21st century, this will be every third person. In developing countries the share of the population who are over 60 years old is still lower than in developed countries in the middle of the last century, but here the aging process is expected to be more rapid, and by the middle of the 21st century the demographic aging level in Third World countries will be close to current rates in developed countries, i.e., approximately 20% of the population [1].

In developed countries most often there is a different threshold of old age, viz., 65 years, as in Western Europe and several other developed countries the bulk of the population retire at this age. Currently on average 11% of the populations in these countries are 65 years old or older. The UN predicts that by 2050 their proportion will rise to 26% [2]. In the EU it exceeds 17%; during the 1985–2010 period the proportion of the population who are over 65 years old increased from 12.8% of the total population to 17.4%. By all appearances, the growth of the absolute and relative number of this age group will continue in the coming decades. This will take place against the background of a reduction of the working age population; it will be particularly significant in 2015–2035 due to the retirement of many baby-boomers of the generation of the 1960s [3].

Since 1956, UN experts have constantly and consistently attracted the attention of governments and the international community to the problem of demographic aging. This issue has been widely discussed at all major international conferences on the population organized by the UN over the past 3 decades.

If in the mid-1950s the problem of demographic aging was topical mainly for the most developed countries of the world, by the early 1980s it became global. In 1982 in Vienna the first UN World Assembly on Aging was held, where for the first time it was recognized that the population aging is one of the primary problems of mankind. In 1991 the UN General Assembly recommended that the governments of all countries include the UN principles regarding the elderly in their national programs, i.e., independence, participation, care, self-fulfillment, and dignity. The United Nations declared 1999 as the International Year of Older People. In 2002 in Madrid the Second World Assembly on Aging was held, which summed up the results of the past 2 decades, when aging was recognized as a global socio-demographic problem. The International Plan of Action that was developed in Madrid is focused on three priority areas to improve the lives of elderly persons and the development of society, advance health and well-being for elderly, and to ensure enabling and supportive environments. The Plan contains recommendations in seven areas, among which are health care and nutrition, protection of older people as consumers, their housing and environment, family, social security and income support, as well as employment, and education [4].

Russian socio-economic research usually does not give much attention to demographic aging. The works of A. Boyarskii, I. Kalinyuk, N. Sachuk, S. Pirozhkov, B. Urlanis, and V. Shapiro are worthy of notice among earlier research; the works of G. Bakhmetova, G. Degtyarev, V. Dobrokhleb, N. Lushkina, T. Maksimova, Yu. Potanina, E. Shcherbakova, etc., are notable among modern studies. At the same time, in Russian research on aging this problem is considered mainly in the context of the increased economic burden on the working-age population. In recent years the demographic aging processes in Russia have been significantly accelerated for several reasons, so that studies on these issues are becoming increasingly important; therefore, it is necessary to expand their sphere, without limitation to the issues of the economic burden.

However, in our study we will not take the 60-year time point that is traditionally used in Russian aging research as the threshold of old age but, first, the exact "economic threshold of old age" that has been established in Russia, i.e., the retirement age, viz., 60 years for men and 55 years for women. First, both of the ages that are used in the worldwide practice as the thresholds of old age (60 and 65 years) are also associated with the upper border of the working age, because generally the number of people of retirement age determines the economic aspects of the aging of the population. As well, in Russia the retirement age is gender differentiated. Secondly, the given thresholds of old age, viz., 60 and 65 years, were introduced for scientific use in the 1950s–1960s and there are reasons to consider them somewhat obsolete, especially in terms of the social aspects of demographic aging. It is currently more logical to take higher ages as the threshold of old age (but in this paper this question remains open thus far).

The main factors of population aging are demographic processes. Traditionally we distinguish between aging from below, which is caused by a gradual reduction in the number of children due to the decline of the birth rate, and aging from above, which is caused by the increasing number of older people as a result of the decrease of the mortality in old ages with the relatively slow growth in the number of children [5]. The direction and intensity of migration processes can also have a significant impact on the changing of the age structure of the population. Since people of active working ages have the largest spatial mobility, an intensive migration outflow contributes to the aging of the population by means of the reduction of the proportion of people of working age, while a positive migration balance contributes to the rejuvenation of the population. Finally, the aging rates can be determined by peculiarities of the territory's demographic history; they certainly increase in the periods of achievement of the threshold of old age that is accepted in Russia by the generations that were born in years of high birth rates.

In the first half of the 20th century, when the birth rate was intensely decreasing and the life expectancy was rising due to the reduction of child mortality, the population in developed countries aged mainly from below. Recently it has been aging both from below, due to the low birth rate, and from above, owing to the life expectancy increase by virtue of further reduction of mortality from chronic and cardiovascular diseases and neoplasms in middle and old age.

In Russia a different situation exists. In general, over the last half of a century the proportion of the population that is of retirement age in Russia has increased by more than twofold, viz., from 10.2% in 1959 to 22.2% in 2010 (Table 1). Thus, in fact, it does not matter which age scale we hold (that accepted by the UN or those proposed by J. Boje-Garnier, E. Rosset, or J. Sundberg), Russia's population is "old." However, intensive aging from above was mainly typical for Russia in two time frames, viz., during the intercensal period of 1959-1970, when the relative proportion of persons of retirement age increased from 10.2 to 15.4% with smaller reduction of the number of children (from 31.4 to 28.6%), and especially during the intercensal period from 1979 to 1989, when the proportion of persons of retirement age increased from 16.3 to 18.5% and the proportion of children from 23.3 to 24.5%.

It must be emphasized that both of these time periods are characterized by maximum values of the life expectancy of Russia's population. In the mid-1960s the life expectancy in Russia reached 64.6 years for men (in 1964–1965) and 73.54 years for women (in 1967–1968); then for almost 2 decades the stagnation and the lowering of these values were observed. As well, the values of the expected life expectancy in 1986–1987, i.e., 70.13 years for the total population; 64.91, for men; and 74.55, for women, up to quite a recent time were the highest over the entire history of Russia. In 2011, after several years of steady increases, the life expectancy figure for the total population,

Year	The relat	The proportion		
	under working age	of working age	over working age	as part of population, ages 16 years and over
1959	31.4	58.4	10.2	14.9
1970	28.6	56.0	15.4	21.6
1979	23.3	60.4	16.3	21.3
1989	24.5	57.0	18.5	24.5
2002	18.1	61.3	20.5	25.1
2010	16.2	61.6	22.2	26.5

Table 1. The age structure of Russia's population according to the Censuses, %

Sources: [7-12].

which reached 70.3 years [6], exceeded the record level of 1986–1989 (for women the record figure was surpassed in 2010).

At the same time, it should be noted that the demographic situation in the period from 1979 to 1989 fully conforms to the above-mentioned definition of aging from above. Meanwhile, the demographic processes from below (this refers to the birth rate growth in the first half to the middle of the 1980s under the influence of the measures of the Resolution of the Central Committee of the Communist Party of the Soviet Union (CC CPSU) and the USSR Council of Ministers of 1981 On Measures for the Strengthening of State Support for Families with Children), in contrast, promoted the rejuvenation of Russia's population.

At the same time, in the 1970–1979 period the reduction in the relative proportion of children was much more substantial than the growth of the proportion of retired people. At the same time, the proportion of retired people as a part of Russia's adult population (16 years and older) even decreased in the 1970–1979 period (from 21.6 to 21.3%); i.e., it may be said that in this period aging from above in Russia was not observed at all. The population aged mainly due to the low birth rate. However, the migration outflow of the Russian population to other Soviet republics that was typical for that period also made a definite contribution.

In 1989–2002 under the conditions of a widespread mortality crisis in Russia, the rates of growth of the proportion of the population who are of retirement age were also much lower than the rates of decline in the proportion of children in the population. As well, the growth of the relative proportion of persons of retirement age as part of the adult population was quite small, viz., from 24.5% in 1989 to 25.1% in 2002. This is based on the very short life expectancy of the Russian population during this period. At the same time, under the conditions of a migration inflow from new foreign countries, a notable increase of the share of the working-age population (from 57 to 61.3%) and of its total number (from 83.7 million in 1989 to 88. 9 million in 2002) took place. Thus, migration led to a decrease in the aging rate. In addition, by the end of this period the number of generations that had reached retirement age as a whole declined. Thus, in 2002 the retirement age was reached by men who were born in 1942 and women born in 1947 (we must simply note that a compensatory birth-rate rise occurred in Russia in the late 1940s—early 1950s). This also slowed the scale of demographic aging in Russia.

Since 2000 Russia has experienced a rise in the birth rate. As a consequence, the last intercensal period is characterized by a reduction of the rates of aging from below; in 1989-2002 the proportion of children decreased by 26.1%; in 2002–2010 they decreased by 10.5%. Since 2004, positive trends have occurred as well in regard to mortality rates. Nevertheless, growth of the rates of aging from above has not been observed as of yet. In 1989-2002 the relative proportion of the population of retirement age increased by 10.8%, while during the last intercensal period it increased by 8.3%. In other words, even under conditions of a steady seven-year increase in life expectancy (compared to 2003, the increase in the average life expectancy was 5.5 years, viz., to 68.8 years in 2010) and the reduction of aging from below, the Russian population is still aging mostly from below.

External migration continues to constrain the aging rates. However, currently the members of the most numerous generation of Russian citizens (the generations of the postwar compensatory increase in birth rate) are reaching retirement. In contrast, the smaller generations of the 1990s are reaching the working age. Therefore, the relative proportion of persons of working age as part of Russia's population, even while maintaining a positive migration balance in the period from 2002 to 2010, remained virtually unchanged. At the same time, the proportion of people of retirement age as part of the adult population grew more significantly than during the previous intercensal period. In the coming years the rates of aging from above will only increase, especially if the tasks of life expectancy enhancement are fulfilled suc-

Year	The relativ	ve proportion of the p	The proportion	
	under working age	of working age	over working age	as part of population, ages 16 years and over
1959	29.1	65.0	5.9	8.3
1970	32.6	60.1	7.3	10.8
1979	26.9	65.4	7.7	10.5
1989	28.0	62.1	9.9	13.8
2002	19.8	66.1	14.1	17.6
2010	17.7	64.7	17.6	21.4

Table 2. The age structure of the Republic of Komi's population according to the Censuses, %

Sources: [13].

cessfully. In other words, Russia is approaching the model of demographic aging that is typical of developed countries.

In the northern regions of Russia, by virtue of the long-term process of formation of the population mainly by migration, a significantly younger age structure has developed. As well, the aging process here has peculiarities that are due to the details of demographic processes. In almost all northern regions (except the Khanty-Mansi and Yamal-Nenets autonomous okrugs) the life expectancy lags behind the average national one; this reduces the rates of aging from above. In many northern regions the childbirth figures exceed the average national ones. This leads to the reduction of aging from below. In other words, the processes of natural population changes generally inhibit population aging in the northern territories. At the same time, the migration outflow of the population from the Northern area, which has been observed for 3 decades, leads here to a significant increase in aging rates. Let us consider this in depth based on the example of the Komi Republic.

Until the end of the 1980s the relative proportion of people of retirement age in the Komi Republic was almost two times lower than the average national level (Table 2). A particularly significant difference was detected by the censuses of 1970 and 1979, viz., in the second half of the 1960s–1970s the scale of the migration inflow of people into northern regions increased noticeably due to the improvement of the system for northern compensations and bonuses and the enlargement of the list of areas covered by the "northern" legislation.

Since the second half of the 1980s the Komi Republic has been characterized by a steady negative migration balance. As a result, the convergence of the aging level of the population of the Republic to the national one has occurred. As late as in the period between the censuses of 1979 and 1989 the rate of increase of the proportion of people over working age in the Republic exceeded the national figure by more than twofold, viz., 28.6 and 13.5%, respectively (Table 3).

The scale of the migration outflow of people, up to 70% of whom are persons of working age, grew in the Republic until the mid-1990s. Meanwhile, Russia in general, in contrast, was characterized by the maximum migration inflow [14]. For this reason during the 1989–2002 intercensal period the rate of the increase of the relative proportion of people over working age in the Republic exceeded the average national one by four times, viz., 42.4% versus 10.8%. The most substantial differences were observed in the rates of increase of the proportion of retired people as part of the adult population, viz., 27.5 and 2.4%, respectively. Moreover, this excess was present under the conditions of a considerable decline of the life expectancy of the population of the republic; in the 1990s the gap with the national level of this rate increased to 3 years.

After the achievement of the maximum value in 1994, the annual net migration outflow of people in the Republic of Komi were reduced noticeably. As a consequence, the difference in aging rates also decreased; during the 2002–2010 intercensal period a reduction of the difference in the increase in the proportion of people of retirement age from 4 to 3 times was observed. The rate of increase of the relative proportion of retired people as a part of the adult population in the Republic of Komi, in contrast with Russia in general, also declined. In other words, the level of this figure in the Komi Republic during the last intercensal period converged to national one. However, the differences are still significant.

The rural population of the Komi Republic is traditionally characterized by an increased relative proportion of persons who are either under or over the working age and by a reduced proportion of the work force (Table 4). However, in recent years the differences between the age structure of the urban population are decreasing, especially with respect to children. The 2010 Census recorded almost equal proportions of people who were under working age as a part of both the urban and rural populations of the Republic; this is a consequence of the substantial convergence of the urban and rural fertility.

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	Chang	The number				
Year	under working age	of working age	over working age	as part of population, ages 16 years and over		
Russian Federation						
1959-1970	-8.9	-4.1	51.0	45.0		
1970-1979	-18.5	7.9	5.8	-1.4		
1979-1989	5.2	-5.6	13.5	15.0		
1989-2002	-26.1	7.5	10.8	2.4		
2002-2010	-10.5	0.5	8.3	5.6		
Republic of Komi						
1959-1970	12.0	-7.5	23.7	30.1		
1970-1979	-17.5	8.8	5.5	-2.8		
1979-1989	4.1	-5.0	28.6	31.4		
1989-2002	-29.3	6.4	42.4	27.5		
2002-2010	-10.6	-2.1	24.8	21.6		

Table 3. Change of the age structure of the population of the Russian Federation and the Republic of Komi during the intercensal periods, %

Sources: [13].

Table 4. The age structure of the urban and rural populations of the Republic of Komi according to the Censuses, %

Year	The rela	The proportion				
	under working age	of working age	over working age	as part of population, ages 16 years and over		
Urban population						
1959	26.8	69.3	3.9	5.3		
1970	30.9	63.5	5.5	8.0		
1979	26.5	67.3	6.2	8.4		
1989	27.7	63.7	8.6	11.9		
2002	19.3	67.5	13.1	16.3		
2010	17.7	65.2	17.1	20.8		
Rural population						
1959	32.4	58.7	8.9	13.2		
1970	35.3	54.6	10.1	15.6		
1979	27.8	60.9	11.3	15.7		
1989	28.9	57.2	13.9	19.5		
2002	21.1	61.7	17.2	21.8		
2010	18.0	62.8	19.2	23.4		

Sources: [13].

The differences between urban and rural areas also decreased very noticeably with respect to the relative proportion of people over working age. Until the early 1990s the migration outflow of rural youth to cities and towns of the Republic and outwards greatly increased the rate of aging of rural residents. In the reform period the migration mobility of the rural population was significantly constrained by the low living standard. The 1989–2002 intercensal period was characterized by a nationwide change of the vector of rural– urban migration; as a result the proportion of the rural population increased slightly (from 26.6 to 26.7%). In the Komi Republic there was also a small increase of the relative proportion of the rural population, viz.,

	Chang	The proportion				
Year	under working age	of working age	over working age	as part of population, ages 16 years and over, %		
Urban population						
1959-1970	15.3	-8.4	41.0	50.9		
1970-1979	-14.2	6.0	12.7	5.0		
1979-1989	4.5	-5.3	38.7	41.7		
1989-2002	-30.3	6.0	52.3	37.0		
2002-2010	-8.3	-3.4	30.5	27.6		
Rural population						
1959-1970	9.0	-7.0	13.5	18.2		
1970-1979	-21.2	11.5	11.9	0.6		
1979-1989	4.0	-6.1	23.0	24.2		
1989-2002	-27.0	7.9	23.7	11.8		
2002-2010	-14.7	1.8	11.6	7.3		

Table 5. The change of the age structure of the urban and rural populations of the Republic of Komi during the intercensal periods, %

Sources: [13].

from 24.5 to 24.7%. However, on a large scale this was caused by the transfer of certain urban-type settlements into the category of rural settlements in the early 1990s. According to the Regional Body of the Federal State Statistics Service according to the Republic of Komi, the balance of migration in the rural areas of the Republic was positive only in 2001–2002. During the last intercensal period a definite decline in the proportion of the rural population was noted again, viz., from 26.7 to 26.2% nationwide [12] and from 24.7 to 23.1%, in the Komi Republic [13].

Nevertheless, while the urban population of the Republic is characterized by substantial rates of growth of the relative proportion of people over working age due to the large-scale outflow of urban residents of working age, in rural areas this aging factor is not so strong. Here, in contrast, increased premature mortality, which strongly constrains demographic aging, is a more significant factor that influences the age structure. As well, the maximum lag of the rural life expectancy from urban occurred in the 2000s. In 2003, when the lowest value of the life expectancy of rural people of the Komi Republic (58.1 years) was recorded, it fell behind the urban value by 4.6 years. Therefore, while in 1989–2002 the rates of growth of the proportion of persons of retirement age in the urban and rural areas of the Republic of Komi differed by more than twofold, in the 2002-2010 period it was already an almost threefold difference (Table 5).

Thus, as late as 2002 Russia's population clearly surpassed the threshold of old age. The age structure of the Republic of Komi's does not allow one to consider it as old, at least, not by all of the known age scales. The proportion of people of retirement age (men 60-years old and older and women 55-years old and older) both in the urban and even in the rural areas of the Republic does not exceed 20%. At the same time, for this reason the regions of the Russian North, including the Komi Republic, which have suffered from migration outflow since the second half of the 1980s, are characterized by increased rates of aging of the still younger population. According to the 2010 Census, the average age of Russia's population was 39 years; compared to 2002 it increased by 1.3 years. In the Komi Republic the average age was 37.2 years. However, during the last intercensal period it increased by 2.2 years.

At the same time, the characteristics of the economic system and the uncomfortable living conditions in the North impose special requirements on the condition of the population's health and, respectively, its age structure. As well, it should be taken into account that in the Komi Republic there is a preferential retirement age, i.e., 50 years for women and 55 years for men; this is an additional factor of the growth of the economic burden on the working population.

However, let us examine the size and age structure of the population, disregarding their trends. According to the Censuses, in 1989 in Russia there were 147 million people; in 2002 it was 145.2 million and in 2010 it was 142.9 million. Therefore, the Russian population is declining at a faster pace, as the compensatory role of external migration is decreasing. However, is 142.9 million people a large or a small population? In 1979 the population of the Russian Soviet Federative Socialist Republic was 137 million people; in 1959, it was 117 million and in 1926 it was 93 million. At the same time, the proportion of persons of working age as part of Russia's population throughout the considered time was less than in the early 2000s (61.6% in 2010 and 61.3% in 2002), viz., in 1989, 57%; in 1979, 60.4%; in 1970, 56%; in 1959, 58.4%; and in 1926, 51.7% (Table 1). Even in case of an anticipated decrease in this proportion by 2020-2025 to 57.6-57.9% [15] it will be higher than in 1989.

Thus, all the "great construction projects of communism" (and the results are actually impressive; during the period of the 1920s–1980s an agrarian country turned into a powerful industrial state) were implemented with the use of much less significant human resources for extremely labor-consuming technologies. Is there any need today, with an objective demand for economic modernization based on high labor-saving technologies, to place the primary emphasis on the priorities of Russia's demographic development upon the population growth and the increase of resources for labor activity, especially at rather high levels of both hidden and open unemployment, which persist even in the conditions of economic growth? It is estimated that in the first decade of the 21st century the overall unemployment level in Russia equals 6-10% of the economically active population. In the transition to a labor-saving innovation economy the unemployment may increase significantly. All the more so as the external migration from former Soviet republics, although its scale has fallen lately, will continue to supply the workforce to the Russian labor market. As well, the better the Russia's economy develops, the more immigrants appear.

We should also not ignore the immense number of working pensioners who due to their high level of professionalism and more modest wage requirements become serious competitors to younger colleagues. According to expert estimates, up to one-third of all pensioners have to work because they cannot support thir basic needs on their pension. At the same time, even with such pensions half of the pension provision of the population is not covered by the Pension Fund's resources. As well, in terms of the acceleration of aging rates the situation with pensions will only worsen. Accordingly, pension reform in Russia is inevitable. In developed countries with high labor productivity and significant pension contributions the retirement age is much higher; as well, currently certain reforms have been implemented in order to raise it. From our point of view, pension reform in Russia will be implemented as soon as in the next decade (and society should be prepared for this, without creating illusions that the retirement age will remain unchanged); this will significantly mitigate the negative economic consequences of the aging of the population.

The announced Russian policy for economic modernization is intimately connected with the necessity of an increase in labor productivity. According to specialist estimates, in order to become a full member of the G8 and maintain its position in BRIC, Russia by 2030 should increase the labor productivity in the domestic economy by 3.6–4.1 times [16]. At the same time, it is noted that the reduction of the quantitative opportunities of the growth of the supply of labor will not be surpassed by the increase in labor productivity induced by capital growth. However, an alteration of the Russian labor potential is not always associated with a change in the size of the working-age population. Even with a stable and declining number of the workforce, the labor potential can increase by means of building up its qualitative characteristics, viz., increases in the educational and skill levels, the improvement of health conditions, the development of the physical efficiency of population, acculturation, etc.

Thus, on the economic plane the increase in the rates of the aging of Russia's population does not pose such a grave threat as is traditionally assumed. The social aspects of demographic aging are, perhaps, more important, especially for Russia, which is not characterized by a very high standard of living. Worldwide studies on demographic aging are focused primarily on the ways of improving older people's lives; the research on the aging of Russia's population should be also concentrated on this issue. The poverty problem, which for many years has been on the agenda in Russia, is particularly acute for older people. Certainly, pensions currently do not enable a person to have a decent life; the guarantee of a high living standard for people who created the country's wealth with their long-term labor is a primary task of a social welfare state.

The acceleration of the aging of the population places increased demands on the health-care system. Among the greatest problems are the necessity to bring its structure in line with the age structure of the population and ensuring the availability of medical services for the elderly. The issues of the social well-being of older people are very important. First of all, it is necessary to provide an opportunity to work to all pensioners who want to work and have the appropriate physical capacity. A job, an opportunity to bring benefit to the family and the society as a whole, and increasing of the length of one's active life, greatly contribute to the overall increase in life expectancy. It is necessary to provide to the elderly an opportunity to self-actualize in a creative sense. In the West the elderly are very active, viz., go to universities, clubs, and studios, paint, make verses, write, and sing, while in Russia the scale of the active creative life in older age groups is very restricted. At the same time, the experience of communication with people who use their creativity in their old age proves how much it contributes to their physical health and longevity. It is necessary to provide the elderly with the opportunity to receive highquality social services. This is a very serious task, taking into account the increase of the proportion of persons over 75 years as part of the population (in 2010 it was 5.4% against 2.4% in 1970 [7, 12]).

The aging of the population is an objective and generally progressive process for a civilized country. It cannot be avoided under any circumstances. As well, THE PECULIARITIES OF DEMOGRAPHIC AGING

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in prospect the demographic aging in Russia will only continue, creating a whole range of economic and

social problems. Thus, society should prepare itself for

this. The future depends on whether we can reconsider

our attitude to old age.

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REFERENCES

- Global Demographic Barometer. http://demoscope.ru/ weekly/2010/0423/barom01.php. Cited September 5, 2012.
- 2. http://demoscope.ru/weely/2011/0467/barom06.php. Cited September 5, 2012.
- 3. European Demographic Barometer. http://demoscope. ru/weekly/2012/0511/barom01.php. Cited September 5, 2012.
- A Report of the Second Assemble on Aging Problems, Madrid, April 8–12, 2012, New York: World Health Organization, 2002. http://social.un.org/ageing-workinggroup/documents/mipaa-ru.pdf. Cited September 5, 2012.
- 5. Demografichekii entsiklopedicheskii slovar' (Demographic Encyclopedic Dictionary), Moscow, 1985.
- 6. Karachurina, L.B., A bachelor program of discipline "Demography" on specialization no. 080100.62 "Economics", High School of Economics. http://demoscope.ru/weekly/2012/0499/index.php. Cited September 6, 2012.
- 7. Itogi Vsesoyuznoi perepisi naseleniya 1970 goda. Tom II: Pol, vozrast i sostoyunie v brake naseleniya SSSR, soyuznykh i avtonomnykh respublik, kraev i oblastei (The Results of All-Union Census of 1970. Vol. II: Gender, Age, Marital Status of the Residents of USSR, Union and Autonomous Republics, Krais, and Oblasts), Moscow, 1972.
- 8. Itogi Vsesoyuznoi perepisi naseleniya 1979 goda. Tom II: Pol, vozrast i sostoyunie v brake naseleniya SSSR,

soyuznykh i avtonomnykh respublik, kraev i oblastei (The Results of All-Union Census of 1979. Vol. II: Gender, Age, Marital Status of the Residents of USSR, Union and Autonomous Republics, Krais, and Oblasts), Moscow, 1989.

- Vozrastnoi sostav naseleniya RSFSR po dannym Vsesoyuznoi perepisis naseleniya 1989 g. (Age Composition of the Residents of RSFSR According to the Data of Al-Union Census of 1989), Moscow, 1990.
- 10. Vozrastno-polovoi sostav i sostoyanie v brake: Itogi Vserossiiskoi perepisi naseleniya 2002 g. (Age-Gender Composition and Marital Status: The Results of Russian Census of 2002), Moscow: Fed. Sluzhba Gos. Stat., 2004, vol. 2.
- 11. Demograficheskii ezhegodnik Respubliki Komi 2010 (Demographic Reference Book of Komi Republic, 2010), Syktyvkar: Komistat, 2010.
- 12. The Russian Census of 2010: Number and Settlement Places of the Russian Residents. http://www.gks.ru/ free_doc/new_site/perepis2010/croc/perepis_itogi1612. htm. Cited September 6, 2012.
- 13. Chislennost', razmeshchenie, vozrastno-polovoi sostav naseleniya: Itogi Vserossiiskoi perepisi naseleniya 2010 goda. Respublika Komi (The Results of Russian Census of 2010 in Komi Republic: Population, Settlement, and Age-Gender Composition), Syktyvkar: Komistat, 2012, vol. 1.
- Zaionchkovskaya, Zh.A., Federal districts of migration on the map of Russia, *Reg.: Ekon. Sotsiol.*, 2012, no. 3 (75), pp. 3–18.
- Rybakovskii, L.L., Peculiarities of current demographic situation, in *Demograficheskie perspektivy Rossii* (Demographic Prospects of Russia), Moscow, 2008, pp. 94–104.
- Suspitsyn, S.A., Forecasts and assessment of spatial economic transformations based on complex hierarchical calculations of development of multiregional system in Russian Federation, *Reg.: Ekon. Sotsiol.*, 2010, no. 3, pp. 3–22.

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