

Russian model of population ageing (in the case of the Northern regions)*

The article dwells on the characteristics of the Russian model of population ageing, conditioned by the demographic wave, migration and short life expectancy. It has been revealed that Russia is approaching the demographic ageing model, typical of developed countries. The article describes the specific features of demographic ageing in Russia's Northern regions. These features are conditioned by the 'younger' age structure of the population, low life expectancy, and large-scale migration outflows in the last two and a half decades. In addition, the article analyzes economic consequences of population ageing and defines the main social problems of old age.

Age structure of population, demographic ageing, factors of ageing, economic load, social problems of elderly people, Northern regions.



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Population ageing, defined as an increase in the share of elderly and old people in the total number of population, caused by long-term changes in its reproduction, is an acute present-day issue. It is a global phenomenon, which takes place in almost all the countries of the world, it affects all population groups and has a great impact on every aspect of

human life. In the sphere of economy it affects economic growth, savings, investments and consumption, labour markets, pensions, taxation and transfers between generations. In the social sphere it affects family structure and living conditions, housing demand, migration trends, epidemiologic situation and the need for health-care services.

* The research was funded by the Russian Humanitarian Science Foundation and the Government of the Komi Republic, project No. 12-13-11003 'Economic and social aspects of demographic ageing in the Northern region (in the case of the Komi Republic)'.

In the political sphere, population ageing can influence election results and a system of political representation [1].

In Russian studies on ageing, this issue is considered, in the first place, in the context of increasing economic burden on the working-age population. Recently, the rate of Russia's population ageing has accelerated significantly due to a number of reasons, therefore, this issue is becoming more and more acute, requiring extensive studies on the problems of population ageing, not limiting them to the issues of economic dependency only. At the same time, in the present study we will adhere to the 'economic threshold of old age' adopted in Russia as the borderline of old age, rather than the figure of 60 years, which is traditionally used in Russian research on old age. The 'economic threshold of old age' means the retirement age, which is 60 years for men and 55 years for women. On the one hand, both thresholds of old age used in the world practice (60 years according to the methodologies of J. Beaujeu-Garnier – E. Rosset and J. Sandberg, and 65 years by the UN methodology [2]) are linked to the upper limit of working age as well, since it is the number of persons of retirement age that mainly determines the economic aspects of population ageing. And as for Russia, the retirement age is gender-differentiated here. On the other hand, the borderlines of old age established at 60 and 65 years have been introduced into scientific practice in the 1950s – 1960s already, and, in our opinion, there are certain reasons to consider them somewhat outdated with regard to the social aspects of demographic ageing. In this respect, at present, it is more logical to study people aged 75 and older (*senile age* – in gerontology).

It is common practice to distinguish *ageing from the bottom*, caused by the gradual reduction in the number of children, due to the decline in birth rates; and *ageing from the top*, caused by the increasing number of old

people due to the reduction of old age mortality along with a relatively slow increase in the number of children [3, p. 117]. The direction and intensity of migration processes can also have a significant impact on the changes in the age structure of population. Since territorial mobility rates are the highest among able-bodied people, the intensive migration outflow contributes to the ageing of the population's age structure due to the reduction in the share of working-age persons, while the positive balance of migration facilitates the rejuvenation of population. In addition, population ageing rates may be determined by the peculiarities of the territory's demographic history. When the people born in the periods of high fertility reach the old age threshold established in the country, the population ageing rates are, no doubt, increasing.

In the first half of the 20th century, in the period of intensive reduction of birth rate and the increase of average life expectancy due to child mortality reduction, the population in the developed countries was ageing mostly *from the bottom*. Recently, it has been ageing *from the bottom* due to the low birth rate, as well as *from the top* due to the increase in life expectancy caused by the further reduction of mortality from chronic diseases, cardiovascular diseases and neoplasms in the middle and older age.

In Russia, the situation is somewhat different. In general, over the last half a century, the share of the population over working age increased more than twice: from 10.2% in 1959 to 22.2% in 2010. (*tab. 1*). This means, no matter what scale of the old age is used, Russia's population is still characterized as *old*. However, in Russia, intensive ageing *from the top* was characteristic mainly for two periods: for the intercensal period of 1959 – 1970, when the share of persons over working age increased in the RSFSR from 10.2% to 15.4% along with a less significant reduction in the number of children; and especially for the period of 1979 – 1989, when the share of

Table 1. Age structure of Russia's population according to the censuses [4, 5, 6, 7, 8]

Year	Share of population			Share of able-bodied population among the people aged 16 and older, %
	under working age, %	working age, %	over working age, %	
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

* RSFSR.

the retirement age population increased from 16.3% to 18.5% along with the increase in the number of children.

It is necessary to point out that both of these time periods are characterized by the achievement of maximum levels of life expectancy of Russia's population. In the mid-1960s, life expectancy in Russia reached 64.6 years for men (in 1964 – 1965) and 73.5 years for women (in 1967 – 1968); after that, the stagnation and decline in its value were observed for almost two decades. As for the indicators of life expectancy in 1986 – 1987, that amounted to 70.1 years for the whole population, 64.9% for men and 74.5% for women [9], they have until recently remained the highest in the entire Russian history. Only in 2011, after several years of sustained reduction of mortality, the life expectancy of 70.3 years for both sexes [10] exceeded the record level of 1986 – 1989 (maximum value for women was surpassed in 2009 already).

It should be noted that the period of 1979 – 1989 fully corresponds to the above definition of ageing *from the top*. The demographic processes *from the bottom* (we mean birth rate increase in the first half and the middle of the 1980s due to the Resolution of the Central Committee of the Communist Party of the Soviet Union and the USSR Council of Ministers dated January 22, 1981 'On the measures for enhancing state support to families with children' [11]) at that time, on the contrary, contributed to the rejuvenation of Russia's population.

However, in 1970 – 1979, the share of children declined much more considerably than the share of persons of retirement age increased. At that, the share of people over working age in the adult (16 years and older) population of the RSFSR in 1970 – 1979 even decreased (from 21.6% to 21.3%), i.e. it can be stated that in the 1970s Russia did not experience ageing *from the top* at all. The population was ageing mainly due to low fertility. However, it was influenced by migration outflow to other Soviet republics, typical for that period.

In 1989 – 2002, in the conditions of mortality crisis in Russia, the rates of increase in the share of retirement age people were also much lower than the rate of decrease in the share of children. And the growth of the share of persons over working age in the adult population was very slight, declining from 24.5% in 1989 to 25.1% in 2002. It is based on a very low life expectancy of Russia's population in this period. At the same time, in the conditions of migration inflow from the former Soviet republics, the Russian Federation witnessed a notable increase in the share of working age population (from 57.0% to 61.3%), as well as in its number (from 83.7 million people in 1989 to 88.9 million people in 2002). Therefore, migration helped to curb the pace of population ageing. In addition, by the end of the period under review, the number of generations, reaching the retirement age, all in all, declined.

Thus, in 2002, the men born in 1942 and women born in 1947 reached their retirement age. It also narrowed down the scale of demographic ageing in Russia.

Since 2000, there has been an increase of fertility levels in Russia. Consequently, the last intercensal period is characterized by the reduction in the rates of ageing *from the bottom*: from the decrease in the share of children from 26.1% in 1989 – 2002, to 10.5% for 2002 – 2010. Since 2004, positive trends have been also typical of the mortality level as well. Nevertheless, the increase in the rates of ageing *from the top* has not been registered yet. In 1989 – 2002, the share of the population over working age increased by 10.8%, and for the last intercensal period – by 8.3%. In other words, even under the conditions of a sustainable seven-year increase of life expectancy (in comparison with 2003, the growth was 5.5 years, to 68.8 years in 2010. [10]) and reduction in the pace of ageing *from the bottom*, Russia's population is still ageing to a greater extent due to low fertility.

External migration continues to curb the pace of ageing. However, at present, the most numerous generations of the Russians, i.e. the generations of the post-war period characterized by the compensatory recovery of fertility, are reaching retirement age. And the number of people born in the 1990s, who are now approaching working age, is declining. Therefore, the share of able-bodied people in the composition of Russia's population, despite the positive balance of migration, in the period of 2002 – 2010 remained virtually unchanged. At the same time, the share of retirement age people in the adult population increased more significantly than in the previous intercensal period. In the next few years, the pace of ageing *from the top* will only increase. Especially if the tasks of increasing the population's life expectancy will be still fulfilled successfully. In other words, Russia is approaching the model of demographic ageing, characteristic for developed countries.

A younger age structure has been formed in the Northern territories (the article considers the RF subjects that are located entirely in the Far North and the territories equated to them) by 1989 due to the significant role of migration in this area (*tab. 2*). The share of children and able-bodied population in almost all the Northern regions exceeded the national average. Only in the Republic of Tyva, the share of working-age population was slightly below average regarding a very significant share of children.

Accordingly, the percentage of retirement age population in the Northern regions was significantly lower than the national average. The share of population over working age was comparable to the national average only in the Republic of Karelia and the Arkhangelsk Oblast: 16% and 15.4% vs. 18.5% in the RSFSR in general. The share of retirement age population in Chukotka and Yamalo-Nenets autonomous okrugs was almost 10 times lower than the national average, in Khanty-Mansi Autonomous Okrug and the Magadan Oblast – 5 times lower, in Taimyr (Dolgano-Nenets) and Evenk autonomous okrugs and Kamchatka Krai – 3.5 – 4 times lower, in the Republic of Sakha (Yakutia), Nenets Autonomous Okrug, the Republic of Tyva, the Murmansk Oblast, the Komi Republic and the Sakhalin Oblast – 1.8 – 2.8 times lower.

In addition, population ageing in Russia's Northern regions also has certain features conditioned by the peculiarities of demographic processes. Life expectancy indicators in virtually all the Northern RF subjects (except for Khanty-Mansi and Yamalo-Nenets autonomous okrugs) lag behind the national average [12], curbing the rate of ageing *from the top*. In this respect, the example of the Tyva Republic is of a particular interest, because here the state of affairs concerning population mortality is one of the most unfavorable in the country: in the 1990s life expectancy in the republic differed by more than 10 years

Table 2. Age structure of the population in the Northern regions of Russia according to the censuses* [6, 7, 8]

Region	Share of population			Share of able-bodied population among the people aged 16 and older, %
	under working age, %	working age, %	over working age, %	
1989				
RSFSR	24.5	57.0	18.5	24.5
Republic of Karelia	25.6	58.4	16.0	21.5
Arkhangelsk Oblast	26.6	58.0	15.4	21.0
<i>including Nenets Autonomous Okrug (AO)</i>	<i>30.9</i>	<i>61.4</i>	<i>7.7</i>	<i>11.1</i>
Sakhalin Oblast	27.2	62.7	10.1	13.9
Komi Republic	28.0	62.1	9.9	13.8
Murmansk Oblast	27.4	64.0	8.6	11.8
Tyva Republic	37.3	54.9	7.8	12.4
Republic of Sakha (Yakutia)	32.5	61.0	6.5	9.6
Evenk AO	33.0	61.7	5.3	7.9
Kamchatka Krai	28.2	66.5	5.3	7.4
Taymyr (Dolgano-Nenets) AO	34.0	61.5	4.5	6.8
Magadan Oblast	29.4	66.9	3.7	5.2
Khanty-Mansi AO	33.2	63.3	3.5	5.2
Yamalo-Nenets AO	32.8	65.2	2.0	3.0
Chukotka AO	30.6	67.5	1.9	2.7
2002				
Russian Federation	18.1	61.3	20.5	25.1
Republic of Karelia	18.0	62.9	19.1	23.3
Arkhangelsk Oblast	18.7	62.7	18.6	22.9
<i>including Nenets AO</i>	<i>25.4</i>	<i>63.0</i>	<i>11.6</i>	<i>15.5</i>
Sakhalin Oblast	18.6	66.5	14.9	18.3
Komi Republic	19.8	66.1	14.1	17.6
Murmansk Oblast	18.1	68.4	13.5	16.5
Kamchatka Krai	18.8	68.9	12.3	15.1
Magadan Oblast	19.1	69.8	11.1	13.7
Republic of Sakha (Yakutia)	26.5	63.5	10.0	13.6
Evenk AO	26.9	63.8	9.3	12.7
2010				
Russian Federation	16.2	61.6	22.2	26.5
Republic of Karelia	16.0	61.2	22.8	27.1
Arkhangelsk Oblast	16.7	61.6	21.7	26.1
<i>including Nenets AO</i>	<i>22.7</i>	<i>63.0</i>	<i>14.3</i>	<i>18.5</i>
Sakhalin Oblast	16.7	63.7	19.6	23.5
Murmansk Oblast	16.2	65.5	18.3	21.8
Komi Republic	17.7	64.7	17.6	21.4
Kamchatka Krai	17.1	65.6	17.3	20.9
Magadan Oblast	16.8	66.5	16.7	20.1
Republic of Sakha (Yakutia)	23.3	64.0	12.7	16.6
Khanty-Mansi AO	20.4	69.0	10.6	13.3
Chukotka AO	22.4	67.3	10.3	13.3
Tyva Republic	30.5	59.7	9.8	14.1
Yamalo-Nenets AO	22.0	70.2	7.8	10.0
Taymyr (Dolgano-Nenets) AO	...	...	...	...
Evenk AO	...	...	...	...
* ranked according to the decrease in the share of population over working age ... data not available				

from the national average, there were periods when this figure for men did not reach 50 years [13]. Consequently, in 1989 – 2002, the Republic of Tyva experienced not the increase but, on the contrary, the decrease in the share of population over working age from 7.8% to 6.3%, and among adult population – from 12.4% to 9.5%.

Fertility rates in some regions of the Asian North and Nenets Autonomous Okrug exceed the national average [12]; this fact contributes to the reduction of ageing *from the bottom*. In the 1989 – 2002 period, the percentage of children decreased in Tyva and Yakutia, Nenets, Evenk, Yamalo-Nenets, Taimyr (Dolgano-Nenets) and Chukotka autonomous okrugs less significantly than in the Russian Federation on the whole (*tab. 3*). At the same time, in 2002 – 2010, the rate of decline in the share of children in Yakutia, Nenets and Yamalo-Nenets autonomous okrugs was higher than in the country as a whole, which indicates the intensification of demographic transition among the indigenous peoples of the North. In other words, the demographic ageing *from the bottom* in almost all of the European North and in a number of regions of the Asian North has recently been more intensive, than the national average.

In addition, the ageing of population in the Northern regions is facilitated by migration outflow from the Northern territories, going on for 3 decades already. As a result, the rates of increase in the share of population over working age significantly exceed the national average indicators.

In the Northern territories, the scale of migration outflow, 70% of which is comprised by able-bodied population, has been growing up to the mid-1990s. As for Russia in general, this period was characterized by the largest scales of migration inflow from the Near Abroad. Therefore, the 1989 – 2002 intercensal period witnessed the most significant differences in the growth rates of the

share of retirement age population. The share of population over working age has increased over this period by 10.8% in Russia in general, while in Chukotka Autonomous Okrug it has increased 3.5-fold, in the Magadan Oblast – 3-fold, in Kamchatka Krai and Yamalo-Nenets Autonomous Okrug – 2.3-fold.

The growth rates of retirement age people among adult population differed more substantially from the national average. At that, such an excess was observed along with the fact that life expectancy in the majority of the Northern territories was lagging behind the national average. A special situation, as it was mentioned earlier, was developed in the Tyva Republic, where the role of migration turned out to be less significant than the extremely unfavorable role of mortality. Premature mortality in Tyva in the 1990s was so significant that there was no population ageing in the period of 1989 – 2002. On the contrary, the share of population over working age decreased by almost 20%, and its percentage in the composition of the adult population – by 23%.

Population outflow from the Northern territories was significant virtually up to the end of the 1990s. Some researchers call 1999 the year of the second change in the dynamics of the Northern population, because after the 1998 default due to the slump of the ruble exchange rate the opportunities of exporting industries broadened and the attractiveness of the Northern regions began to rise once again. This reduced the differences between the ageing rates in the Northern regions and the national average. Nevertheless, in the intercensal period of 2002 – 2010, the growth rates of retirement age population in all the Northern regions were considerably higher than in Russia as a whole. In these years, the national average share of population over working age increased by 8.3%; at the same time, in Yamalo-Nenets Autonomous Okrug – by almost 70%, in the Republic of Tyva, Khanty-Mansi and

Table 3. Changes in the age structure of the population of Russia's Northern regions between the censuses of 1989 and 2002 and the censuses of 2002 and 2010*

Region	Rate of increase (decline) in the share of population			Rate of increase (decline) in the share of population over working age among the people aged 16 and older, %
	under working age, %	working age, %	over working age, %	
Between the censuses of 1989 and 2002				
Russian Federation	-26.1	7.5	10.8	2.4
Tyva Republic	-9.1	8.9	-19.2	-23.4
Republic of Karelia	-29.7	7.7	19.4	8.4
Arkhangelsk Oblast	-29.7	8.1	20.8	9.0
<i>including Nenets AO</i>	<i>-17.8</i>	<i>2.6</i>	<i>50.6</i>	<i>39.6</i>
Komi Republic	-29.3	6.4	42.4	27.5
Sakhalin Oblast	-31.6	6.1	47.5	31.7
Taymyr (Dolgano-Nenets) AO	-24.1	9.4	53.3	36.8
Republic of Sakha (Yakutia)	-18.5	4.1	53.8	41.7
Murmansk Oblast	-33.9	6.9	57.0	39.8
Evenk AO	-18.5	3.4	75.5	60.8
Khanty-Mansi AO	-31.3	11.2	94.3	69.2
Yamalo-Nenets AO	-24.1	8.1	130.0	103.3
Kamchatka Krai	-33.3	3.6	132.1	104.1
Magadan Oblast	-35.0	4.3	200.0	163.5
Chukotka AO	-24.2	3.9	252.6	222.2
Between the censuses of 2002 and 2010				
Russian Federation	-10.5	0.5	8.3	5.6
Arkhangelsk Oblast	-10.7	-1.8	16.7	14.0
<i>including Nenets AO</i>	<i>-10.6</i>	<i>0.0</i>	<i>23.3</i>	<i>19.4</i>
Republic of Karelia	-11.1	-2.7	19.4	16.3
Komi Republic	-10.6	-2.1	24.8	21.6
Republic of Sakha (Yakutia)	-12.1	0.8	27.0	22.1
Sakhalin Oblast	-10.2	-4.2	31.5	28.4
Murmansk Oblast	-10.5	-4.2	35.6	32.1
Kamchatka Krai	-9.0	-4.8	40.7	38.4
Magadan Oblast	-12.0	-4.7	50.5	46.7
Chukotka AO	-3.4	-4.0	53.7	52.9
Tyva Republic	-10.0	-0.2	55.6	48.4
Khanty-Mansi AO	-10.5	-2.0	55.9	51.1
Yamalo-Nenets AO	-11.6	-0.4	69.6	63.9
Taymyr (Dolgano-Nenets) AO	...	...	...	...
Evenk AO	...	...	...	...
* ranked according to the growth in the increase rates of the population over working age. ... data not available Sources: calculated according to [6,7,8].				

Chukotka autonomous okrugs – by 54-55%, in the Magadan Oblast – by 50%, in Kamchatka Krai, the Murmansk and Sakhalin oblasts – by 30-40%, in the Republics of Yakutia and Komi and Nenets Autonomous Okrug – by 23-27%, in the Arkhangelsk Oblast in general and the Republic of Karelia – by 17-20%.

This resulted in the fact that the degree of demographic ageing in the Northern territories approached the national average. The maximum difference in the share of population over working age in 2010 did not exceed three times (Yamalo-Nenets Autonomous Okrug), while in 1989 it was almost 10 times (Chukotka

and Yamalo-Nenets autonomous okrugs). In Karelia the percentage of retirement age population is already higher than in the Russian Federation as a whole, in the Arkhangelsk Oblast it is very close to the national average.

The process of population ageing, which will intensify in the near future under the influence of Russia's demographic history, will affect the economic and social sphere in particular. The most significant consequence consists in the increase of economic (demographic) dependency on the able-bodied population. Dependency ratio is the number of people under and over working age per 1000 working age people. Depending on the purposes of the analysis, one can study the regularities of economic dependency in general and separately, considering people under working age and people of retirement age.

In the 1990s, when fertility rates were low and the level of premature mortality was extremely high, Russia witnessed a significant decline in dependency ratio (*tab. 4*).

Moreover, the reduction of the general level of economic dependency in a number of the Northern regions was greater than in the country as a whole: in Khanty-Mansi, Taimyr (Dolgano-Nenets) and Yamalo-Nenets autonomous okrugs, in Tyva, Karelia, the Murmansk and Arkhangelsk oblasts (*tab. 5*). At the same time, in Russia, economic dependency at the expense of people over working age has increased markedly, and in the Northern regions (except for the Republic of Tyva), that in this period were characterized by a significant excess of the national ageing rates, the degree of increase proved quite high.

As it was noted, the country has been experiencing birth rate increase since 2000, and there has been a sustainable increase in the life expectancy of its population since 2004. However, due to a considerable migration inflow from the Near Abroad, the dependency ratio of Russia's population went on declining in the last inter-census period as well.

Table 4. Economic dependency ratio according to population censuses, per 1000 able-bodied people*

Region	1989		2002		2010	
	Persons under and over working age	Persons over working age	Persons under and over working age	Persons over working age	Persons under and over working age	Persons over working age
Russian Federation	754	325	630	334	623	360
Tyva Republic	821	142	672	105	675	164
Republic of Karelia	712	274	590	304	634	373
Arkhangelsk Oblast	724	266	595	297	623	352
<i>including Nenets AO</i>	<i>629</i>	<i>125</i>	<i>587</i>	<i>184</i>	<i>587</i>	<i>227</i>
Sakhalin Oblast	595	161	504	224	570	308
Republic of Sakha (Yakutia)	639	107	575	157	563	198
Komi Republic	610	159	513	213	546	272
Murmansk Oblast	563	134	462	197	527	279
Kamchatka Krai	504	80	451	179	524	264
Magadan Oblast	495	55	433	159	504	251
Chukotka AO	481	28	427	96	486	153
Khanty-Mansi AO	580	55	420	97	449	154
Yamalo-Nenets AO	534	31	418	65	425	111
Taymyr (Dolgano-Nenets) AO	626	73	486	103	...	...
Evenk AO	621	86	567	146	...	...

* Ranked according to the decrease of economic dependency ratio in 2010.
 ... data not available
 Sources: calculated according to [6,7,8].

Table 5. Changes in economic (demographic) dependency ratio*

Region	In 1989 – 2002		In 2002 – 2010	
	Due to the persons under and over working age, %	Due to the Persons over working age, %	Due to the persons under and over working age, %	Due to the Persons over working age, %
Russian Federation	-16.4	2.8	-1.1	7.8
Republic of Sakha (Yakutia)	-10.0	46.7	-2.1	26.1
Tyva Republic	-18.1	-26.1	0.4	56.2
Yamalo-Nenets AO	-21.7	109.7	1.7	70.8
Arkhangelsk Oblast	-17.8	11.7	4.7	18.5
<i>including Nenets AO</i>	<i>-6.7</i>	<i>47.2</i>	<i>0.0</i>	<i>23.4</i>
Komi Republic	-15.9	34.0	6.4	27.7
Khanty-Mansi AO	-27.6	76.4	6.9	58.8
Republic of Karelia	-17.1	10.9	7.5	22.7
Sakhalin Oblast	-15.3	39.1	13.1	37.5
Chukotka AO	-11.2	242.9	13.8	59.4
Murmansk Oblast	-17.9	47.0	14.1	41.6
Kamchatka Krai	-10.5	123.8	16.2	47.5
Magadan Oblast	-12.5	189.1	16.4	57.9
Taymyr (Dolgano-Nenets) AO	-22.4	41.1	...	...
Evenk AO	-8.7	69.8	...	...

* Ranked according to the increase of the overall economic (demographic) dependency in 2010.
... data not available
Sources: calculated according to [6,7,8].

At the same time, most of the Northern regions in 2002 – 2010 were characterized by the increase in the level of total demographic dependency. Only the Republic of Sakha (Yakutia), where a slight increase in the number of population was registered in the last intercensal period, is characterized by the decrease of demographic dependency that is even more significant, than in Russia as a whole. There has been a zero increase in economic dependency in Nenets Autonomous Okrug. According to the estimates of regional statistical offices, in the Northern regions demographic dependency started increasing in 2006 – 2007. [13]. In general, for 2002 – 2010, the degree of its increase ranges from 0.4% in Tyva to 16% in Kamchatka Krai and the Magadan Oblast.

During the last inter-census period, dependency ratio in Russia increased more significantly than in 1989 – 2002 at the expense of people over working age. At the same time, in the Northern regions, except for Tyva,

Karelia and the Arkhangelsk Oblast as a whole, the rate of increase in economic dependency caused by the retirement age population has decreased. This, taking into account the fact that life expectancy in the Northern territories is approaching to that of the Russian average, can be regarded as the evidence of a more successful implementation of Northern pensioners' resettlement programmes in the 2000s.

As it has already been stated, Russia's population no doubt exceeded the threshold of old age in 2002. The population age structure in the Northern regions, except for Karelia and the Arkhangelsk Oblast cannot be considered 'old' yet. At least, not by all the known scales of old age: the share of retirement age population (men aged 60 and older, women aged 55 and older) does not exceed 20%. At the same time, the Russian North, experiencing population decline due to migration outflow from the second half of the 1980s, is characterized by the high rates of ageing. The sectoral system of economic management and inconvenient

living conditions make special requirements to the characteristics of population's health, and accordingly, to its age structure. In addition, it should be taken into account that the Northern regions have a reduced retirement age, which is an additional factor increasing the economic pressure on the working population.

However, let us take a look at the number and age structure of the population, putting aside unfavourable trends of their changing. According to the 2010 census, Russia's population comprises 142.9 million people. Is it much or little? In 2002, the population was 145.2 million people, in 1989 – 147.0 million people. Evidently, the population is decreasing more and more rapidly, because in recent years there has been a sharp decline in external migration that compensated for this loss. But as early as 1979, the population of the RSFSR was smaller than it is now, it amounted to 137.4 million people. In 1970 it was 130.0 million people, in 1959 – 117.5 million people, in 1926 – 92.7 million people. The share of Russia's working age population over the period under review was smaller than at present: in 1926 it amounted to 51.7%, in 1959 – 58.4%, in 1970 – 56.0%, in 1979 – 60.4%, in 1989 – 57.0%, in 2002 – 61.3%, in 2010 – 61.6%. Even considering the forecasted reduction in the share of working age population by 2020 – 2025 to 57.6 – 57.9% [14], it will remain higher than in 1989.

Thus, all the 'Great construction projects of communism' (and the results were very impressive indeed: during the 1920s – 1980s the agrarian state has turned into the mighty industrial power) were carried out using less human resources but exceedingly labour-consuming technologies. Today, given the objective necessity of transition to innovation economic development based on advanced labour-saving technologies, the increase in the population and the number of labour resources should not be considered as the priorities of demographic development, especially while the level of hidden and

open unemployment remains high even in the conditions of economic growth. The overall unemployment level in Russia in 2000 amounts to 6 – 10% of the economically active population. In the transition to labour-saving innovation economy, it is very likely to increase significantly. Especially given the fact that the external migration from the Near Abroad, in spite of its recent reduction, will still provide Russia's labour market with human resources. And the better Russia's economy develops, the greater will be the inflow of immigrants.

One should not forget about a large number of working pensioners, who can give their young counterparts a good run for their money due to a high professionalism and more modest requirements to remuneration. According to experts, about 30% of pensioners have to work, because it is impossible to live on a pension alone. At the same time, the Pension Fund fails to cover up to 50% of the population's pension provision. And in the conditions of increase in ageing rates, the situation with pension provision will only worsen. Accordingly, the pension reform in Russia is inevitable. In the industrialized countries (with high labour productivity and significant pension contributions) the retirement age is much higher, and what is more, the reforms, aimed at its further increase, are being carried out. In our opinion, the pension reform in Russia will be implemented in the nearest decade already (and the society has to be prepared for this, and informed about the probable changes in the threshold of retirement age), which will help mitigate the negative economic consequences of population ageing.

The policy of economic modernization, announced in the country, is inextricably linked to the necessity of labour productivity enhancement. According to expert estimations, if Russia intends to become a full-fledged member of the G8 and maintain its position in the BRIC countries, then labour productivity in Russia's economy has to increase 3.6 – 4.1-fold by 2030 [15, p. 8].

It is emphasized that the reduction of opportunities for the growth of labour supply will not be compensated by the enhancement of labor productivity, induced by the growth of capital. However, the change in the country's labour potential is not always connected with the change in the number of working-age population. Even if the amount of labour resources is stable and declining, the labour potential can grow through the enhancement of qualitative characteristics: enhancement of educational and professional level, improvement of health, development of population's physical fitness, enhancement of cultural level, etc. In addition, the increased efficiency of the obsolete production facilities modernization, which will be carried out in the country in the near future within the framework of the governmental policy, can provide higher growth rates of Russia's economy [15, p. 9-10].

Thus, from the economic viewpoint, the increase in the pace of Russia's population ageing does not pose as serious a threat as it is traditionally believed. Perhaps, the social aspects of demographic ageing are more important, especially for Russia, where the standard of living is not very high. The world studies on demographic ageing are focused first of all on the ways of improving the lives of elderly people. So, the International Plan of Action on Ageing, developed in Madrid in 2002, focuses on three priority areas: 1) elderly people and the development of society; 2) enhancement of health and welfare of elderly people; 3) creation of convenient and favorable conditions for their living. The Plan contains recommendations in seven spheres: health and nutrition; protection of elderly people as consumers; housing and environment; family; social security; income security and employment; education [16]. In Russia, the studies on population ageing, public opinion and practice in relation to elderly people should also focus on these directions. In Russia, the acute issue of poverty alleviation is

especially urgent with regard to elderly people: obviously, the current pensions do not ensure decent living standards. While the priority social task of the government is to provide the people, who worked for the benefit of the country, with comfortable and decent living. And the assertions, that the government lacks funds for establishing decent pensions, are simply ridiculous.

The increasing rates of population ageing make greater demands to the health care system. One of the most significant problems consists in the necessity to bring its structure in compliance with the population's age structure, as well as the availability of medical services for elderly people. Besides, the attitude toward elderly people in medical institutions should be changed. It is known that they are not 'priority' patients for an ambulance; that their complaints are often disregarded in polyclinics; and hospitals do not provide them with the same treatment that is prescribed for younger patients.

The issues of social well-being of elderly people are also very important. How to change one's life and attitude in old age? How to delay the 'onset' of old age and turn the whole life into a single continuous creative process? In the first place, it is necessary to provide job opportunities to all the pensioners, who are willing and able to work. Gerontologists note that the main task of an ageing society is to motivate and promote active longevity of population. On the one hand, it is necessary to eliminate age discrimination with regard to employment. It is well known that nowadays, it is virtually impossible for pensioners and even persons of pre-retirement age to find a job. Moreover, employers often dismiss elderly personnel under some pretext, disregarding the fact that their significant professional experience and desire to work can compensate for their physical ageing. Age should not be an obstacle either for employment or for further education, if there are no other restrictions.

On the other hand, elderly persons must be constantly reminded that the process of individual ageing is accelerated by a sharp decline in the physical activity, intellectual activity and workload. An occupation, an opportunity to do good to their relatives and society on the whole, the increase in the duration of active life contribute very much to the increase in the life expectancy of an individual.

It is necessary to provide the people of older age with an opportunity to realize their creative potential. Elderly people in the Western countries are very active: they attend universities, hobby groups, working teams; they draw, write verses and prose, sing. As for Russia, the active creative life of the elderly is very limited. At the same time, the experience of communicating with pensioners, who implement their creative potential, shows, how much it contributes to the strengthening of their physical health and longevity.

People of senile age should be provided with quality social services. This issue is very urgent, if we take into account the increase in the share of people over 75 years (in 2010 it was 5.4% of the total number of population [8] compared to 2.4% in 1970 [4]). At present, caring for infirm old people is predominantly an obligation of their relatives. Specialized old people's homes take in mainly elderly people who have no relatives. Moreover, society tends to form a very negative opinion about the people who 'sent their mother (fathers rarely live to a senile age) to a retirement home'; so, even if they have such an opportunity, the people, who do not belong to marginal groups, choose to take care of their old parents at home on their own. But let us take a look at the situation from another angle. An old person aged about 80 can rely mainly on the care of his/her daughter (less likely, daughter-in-law), who herself is at least 50 – 60 years old. Perhaps, she is still working or wants to carry on, as 50 – 60 years is, in fact, the age of artistic maturity of an individual. She has grown-up children aged

about 30 – 35, who are still learning to stand on their own feet and require her support as well. In addition, her first grandchildren are now passing from childhood to adolescence, bringing a lot of problems that need to be addressed timely and very delicately, which also requires grandmother's attention. At the same time, her elderly mother, in addition to age and physical weakness, has a whole bunch of diseases that require specialized medical attention. And this situation is typical of a well-to-do multi-generational family.

In our opinion, in the first place, it is necessary to change the attitude of society to the issue of providing social services to elderly people in caregiving facilities. Elderly persons themselves as well as their grown-up children should not consider it shameful or embarrassing. Secondly, certain reforms should be introduced into the system of caregiving facilities itself so that, for instance, law abiding people would not live alongside ex-offenders. And at present, it is the rule rather than exception, because the residents of old people's homes are, for the most part, lonely old persons; and among them there are quite a few people who spent most of their lives in prison. Thirdly, it is necessary to build comfortable retirement homes for the elderly. There are more than enough financial mechanisms for providing the citizens with proper social care and specialized medical attention. Fourthly, caregiving facilities of various formats should be established. For example, old people's homes functioning only in winter are very convenient in rural areas, because in summer the old prefer to live at home and work in their gardens, which also increases the duration of their active life. This issue, no doubt, requires special consideration and solution.

Another problem of Russian society is connected with the change in the attitude toward people of older ages. A Soviet song went: 'The young are welcomed everywhere, the old are honoured everywhere'. And these

words were quite true. At present, *ageism*, i.e. the discrimination of the elderly, is manifested more and more frequently due to many reasons. In particular, according to some viewpoints, ageism is connected with the fact that Russia is, in its essence, a 'warrior' country that corresponds to the 'aggressive' average age of its population – 35-40-45 years, and all the other ages (both younger and older) are less valuable. Another viewpoint claims that in the society with an established cult of beauty and physical strength, old people are 'not glamorous', which means, they are 'second-rate'. But in any case, ageism indicates the spiritual degradation of society, and it is society itself that needs treatment.

Population ageing is, indeed, an objective and, all in all, a progressive process for a civilized country. It cannot be avoided under any circumstances. And in Russia, in favourable conditions, it will only increase due to the peculiarities of Russia's demographic history, as well as the progress in enhancing the life expectancy of its population. Russia is approaching the model of demographic ageing of developed countries. The same is true for its Northern territories. Therefore, the society should be prepared for the increase of demographic ageing. And the society should not see only negative sides in ageing. The future depends on the fact whether we will be able to revise our attitude toward old age.

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