The Impact of Retirement Age Increasing on Demographic Processes in Russia and its Arctic Territories

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Abstract

The paper deals with the assessment of the impact of the retirement age increasing on demographic processes in Russia and its Arctic territories. The aim of the research is the consideration of the question whether the effect of the change in the retirement age for Russia on the whole and the Russian Arctic in particular is justified from the standpoint of demographics. There are the following objectives: 1) to assess the number of able-bodied population of Russia taking into account changes in retirement age; 2) to evaluate medical and demographic reserves and the validity of the retirement age increasing for the Russian Arctic's population. The trivariant long-term forecast of the number of the able-bodied population that points out the feasibility of the retirement age increasing for Russia on the whole from the standpoint of economic demands has been formulated. It has been determined that Russia is characterized by steady growth in life expectancy, which is the basis of retirement age increasing. The indicators of the retirement age in Russia which will be fixed by 2028 as a whole conform to European standards. The comparison of actual values of average age of death of the Russian Arctic's population with the retirement age and trends research points out the baselessness of pension age increase for the residents of Arctic regions. These areas are characterized by low medical and demographic reserves insufficient to increase the retirement age.

Keywords: Russia, The Arctic, Retirement Age Increasing; Demographic Processes.

Introduction

The problem solving of population ageing in terms of ensuring the balanced functioning of any pension systems leads, in particular, to retirement age increasing (Chai and Kim, 2018; Attanasio et al, 2016) . The relevance and value of considering the effect of retirement age increasing on economic and social processes naturally lead to active research in all countries of the world (Amaglobeli et al, 2019; Staveley-O'Carroll and Staveley-O'Carroll, 2017).

In modern world practice, the average normal retirement age is 61.7 years for men and 60.5 years for women, but the retirement age in different regions of the world is different. Thus, the average retirement age in Europe (including Russia) is 64.4 years for men and 63.1 years for women; in America - 62.7 and 61.6; in Asia and the Pacific, 60.2 and 58.3; in Africa, 59.7 years for men and 59.1 years for women.

The research of the impact of retirement age increasing on the economy and social processes is a relatively new line of research for Russia. This is due to the fact that until 2019 (beginning of the rising of the retirement age in Russia), the retirement age in Russia has remained unchanged since 1932. In Russia, in accordance with the Federal law of 03.10.2018 No. 350-FZ "On amendments to certain legislative acts of the Russian Federation on the issues of assignment and payment of pensions", a phased ten-year period of the retirement age increasing began. As a result, by 2028 the retirement age for Russia's residents will be increased by 5 years (60 years for women and 65 for men).

The relevance of considering of the impact of retirement age increasing on social, economic and demographic processes in Russia is determined not only by the novelty of such a problem, which determines the scientific interest and special social acuteness focus of the problem (Mao et al, 2019). Its urgency is generated by the specific character of Russia's socio-economic space as well, i.e. the availability of a number of territorial problems and problems of Russia's socio-economic development which are caused by the factor of uneven development, differences in economic specializations of Russia's vast territory, interregional differences in medical-demographic characteristics of the population. Thus, in Russia there exists a special regional aspect of the impact of retirement age increasing on social and economic processes in Russia's specific territories. So, for the Russian Arctic's population a number of privileges and preferences, including age retirement benefits are provided in order to encourage people to remain in these areas. These benefits also take into account the negative impact of the specific "Arctic" factors on the state of human health. Thus, with these benefits some problems can be solved: firstly, the problem of "empty space"; secondly, the problem of availability of labor resources necessary for the realization of ambitious goals of natural resources development in the Russian Arctic; thirdly, government social purpose i.e. negative influence of the Arctic on humans (Korchak et al, 2019; Larchenko L.V. et al, 2016; Skufina et al, 2015) . Before 2019 (the year of retirement age increasing) the Arctic's inhabitants retired 5 years earlier than people in other Russia's territories (women at 50, men at 55 years). However, the regional aspect of the influence of the retirement age change on social and economic processes in the Russian Arctic is virtually unexplored.

A relatively small number of the research concerning regional aspects of the problem of the retirement age increasing, including the authors' research can be grouped into three thematic areas. Firstly, the effect on economic production factors is examined. Using groundwork of the world of science (Staveley-O'Carroll and Staveley-O'Carroll, 2017; Bongaarts, 2015; Ushakov et al, 2017), it is possible to forecast the impact of retirement age increasing on the labor market, demographic characteristics of the population and GRP production. The conclusions are drawn on the link between retirement age increasing (which increases able-bodied population), and opportunities for social and economic development of the country as a whole and individual regions, in particular Arctic ones (Samarina et al, 2018; Skufina et al, 2019b). Secondly, the problems of economic growth. In this case, the research is based, as a rule, on well-developed approaches of economic-mathematical modeling corrected to qualitative assessment of the factors and conditions of economic growth of certain countries and regions (Baranov and Skufina, 2018; Chakraborty, 2004; Li et al, 2007; Mitchell, 1993)). It has been ascertained that the retirement age increasing in Russia will have a positive impact on the economic growth of Russia and its regions (Baranov et al, 2018; Skufina et al, 2019a). Thirdly, in this research it has been proved that special attention should be paid to the impact of regional specificity on the Arctic's economic development, migration processes and medical-demographic characteristics of the population. There is a contradiction – on the one hand, there is a growing need for able-bodied population of the Arctic in connection with the necessity of the realization of large projects concerning development of transport infrastructure, projects of exploitation of natural resources. On the other hand, there is an outflow of employable population in

the Arctic (Samarina et al, 2019). At the same time pension benefits of the Arctic inhabitants are a factor which has a positive influence on citizens' decision not to leave the Russian Arctic's territory until their retirement age.

Before 2019 (the year of retirement age increasing) the Arctic's inhabitants retired 5 years earlier than people in other Russia's territories (women at 50, men at 55 years). In the new conditions according to pension law, the Arctic's inhabitants will also retire 5 years earlier than people in other areas of Russia, but now this period is increased in proportion to other residents. In such a way, women working in the Arctic territory will retire at 55 and men at 60 years. But is this proportional change in retirement age, taking into account the Arctic's negative impact on medical and demographic state well-founded ? How will the retirement age increasing affect Russia's labor force as a whole? All these and related problems have not been completely solved yet regarding their scientific and practical significance.

The aim of the paper is the examination of the following question: whether the effect of the retirement age change for Russia and the Russian Arctic in particular, in the context of demographics is justified?

Tasks:

•   to assess the number of able-bodied population of Russia taking into account changes in retirement age;

•   to evaluate medical-demographic reserves and the validity of retirement age increasing for the Russian Arctic's population.

Methodological prerequisites and results of impact evaluation of retirement age increasing on able-bodied population in Russia

Among lots of demographic characteristics, the object of attention we have chosen is the able-bodied population. This is due to two factors. Firstly, the retirement age increasing extends the period of working age population, thus increasing the working-age population size in the country. That is, from the standpoint of assessing the impact of retirement age changes this indicator directly depends on the changes in the retirement age. Secondly, the changes in the able-bodied population have direct influence on economic growth. Therefore, this indicator largely characterizes the feasibility of retirement age increasing from the standpoint of the development of national production factors.

The data of the Federal Service of State Statistics concerning population size, age and sex composition, mortality, fertility and other demographic indicators form the information base of the able-bodied population forecast.

Table 1 presents the authors' predictive estimates concerning the growth of able-bodied population in Russia caused by the retirement age increasing. The forecast methodology is based on the use of the official forecast of able-bodied population size, which was compiled by the Federal State Statistics Service of the Russian Federation in 2017. The methodology of our forecast is to impose on this forecast the fact of an increase in the retirement age, taking into account the age and sex structure of the population. The forecast of the Federal State Statistics Service for the period up to 2036 is made in three versions. Accordingly, our forecast is made in three versions as well.

Table 1: The forecast of able-bodied population (thousand people) taking into account the retirement age increasing

Years	Forecast according to the "old" scheme of retirement (55 years for women, 60 for men) (thousand people)			Forecast according to the "new" scheme of retirement (60 years for women, 65 for men) (thousand people)		
	Low	*Medium*	*High*	*Low*	*Medium*	*High*
2019	82187	82240	82274	82187	82240	82274
2023	78462	79250	79947	82052	82872	83602
2028	77072	78958	80561	85397	87485	89278
2029	77038	79161	80955	85331	87685	89695
2034	76118	79481	82130	87790	91656	94795
2036	75046	79039	82208	87070	91662	95410

The forecast was prepared in three variants for the period up to 2036. For comparison, there is a forecast of the Federal Service of State Statistics of the Russian Federation, compiled for the preservation of an "old" scheme of the retirement (the left part of the table 1).

The analysis of forecasting results indicates the following important facts: in case, if there was not retirement age increasing (saving working age for women 16-54 years, men 16-59 years, retirement, respectively 55 and 60 years), further decline in the working age population in all three options would be projected. Thus, the retirement age increasing from 2019 (the retirement age is 60 years for women, 65 for men) has halted a steady trend of decline in the able-bodied population in Russia.

Thus, from a purely economic position, it should be determined that the retirement age increasing had a positive impact on the able-bodied population in Russia. It is a necessary and expedient option for the economic development of the country.

Methodical prerequisites and results of the assessment of medical-demographic reserves and the reasonableness of the retirement age increasing for the Russian Arctic's population

The major factor in the justification of retirement age increasing in all countries of the world is the availability of sustainable global growth in life expectancy. It should also be noted, at least two positive factors, objectively characterized global trend of retirement age increasing: firstly, there is a steady increase of healthy life, and secondly, there is a global trend of increasing lag between retirement age increasing and life expectancy increasing, including healthy life) (Barr and Diamond, 2009; Holzmann, 2013).

A survey of the literature concerning changes in pension law, allows us to establish the following: the basis of the decision on the possibility of increasing the age of eligibility for awarding of insurance old-age pensions in most countries is primarily the sustainability of the positive changes in indicators of lifetime. Therefore, this indicator will be the main one in the feasibility analysis of the retirement age increasing for Russia on the whole and its Arctic territories in particular.

The information base of the research contains data of Federal State Statistics Service of the Russian Federation, the International Social Security Association (International Social Security Association – ISSA), Social Security Administration (US Social Security Administration – SSA) and World Health Organization – WHO).

The research has shown that scheduled in Russia age of eligibility for a pension (65 years for men and 60 women) as a whole corresponds to the average age of retirement in Europe – 64.4 years for men and 63.1 years for women (calculated by the authors according to the data from 44 countries

presented in the analytical report prepared by the ISSA and SSA).

For regions of the Russian Federation's Arctic zone pensionable age is 60 years for men and 55 for women (compared to 55 years and 50 which had place before 2019). A comparison of life expectancy of the Arctic regions' population (tab. 2) with the retirement age shows that before the pension reform, lifetime after retirement age of the Arctic's inhabitants as a whole corresponded to the indices of the European average male population and was higher for female one.

Table 2: Life expectancy for Russia and the Russian Arctic's regions, 2008-2017 (based on the materials from the Date of the Federal State Statistics (Date of the Federal..., 2018)

Russian Arctic's regions	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
life expectancy (men), years										
Murmansk Region	60,7	61,2	62,7	63,0	63,9	65,1	64,0	64,5	65,7	66,5
Nenets Autonomous Area	56,1	59,3	59,1	60,6	62,0	60,2	64,7	65,2	63,9	65,9
Yamal-Nenets Autonomous Area	66,0	67,8	65,6	65,6	66,3	66,5	67,0	66,9	67,1	69,0
Chukotka Autonomous Area	56,3	53,7	52,7	57,5	56,6	58,6	58,8	59,3	59,7	60,3
Russia	*61,8*	*62,8*	*63,1*	*64,0*	*64,6*	*65,1*	*65,3*	*65,9*	*66,5*	*67,5*
life expectancy (women), years										
Murmansk Region	72,7	73,0	73,9	74,6	75,3	75,3	75,7	75,7	75,6	76,3
Nenets Autonomous Area	71,9	71,3	71,4	73,5	75,9	75,2	76,2	76,9	78,4	77,2
Yamal-Nenets Autonomous Area	74,7	75,5	74,6	74,9	75,1	75,9	76,9	76,4	77,0	77,9
Chukotka Autonomous Area	64,2	64,6	63,6	66,3	64,9	66,4	66,6	69,7	69,6	71,7
Russia	*74,2*	*74,7*	*74,9*	*75,6*	*75,9*	*76,3*	*76,5*	*76,7*	*77,1*	*77,6*

In the Russian Arctic's regions until the beginning of pension reform, the average life expectancy after retirement age was 10.4 years for men and 25.8 for women (the difference between life expectancy and age of retirement on average for Europe is +12.5 years for men and 19 years for women). In the Murmansk region lifetime after retirement age was 11.5 years for men and 26.3 years for women; in the Nenets Autonomous district - 10.9 years and 27.2 years, respectively; in the Yamalo-Nenets Autonomous district – 14 years for men and 27.9 years for women; in the Chukotka Autonomous area - 21.7 years for women. Chukotka Autonomous Okrug is stood out among the above-listed regions. The difference between life expectancy and retirement age for men in Chukotka was 2.4 times lower than in European countries, and was only 5.3 years.

After increasing the age of eligibility for awarding of insurance old-age pensions to 5 years life expectancy after retirement age (while maintaining the existing level of lifetime) will reduce for the Arctic zone's regions and is expected to average 5.4 years for men and 20.7 years for women (with a minimum value in the Chukotka Autonomous district +0.3 years for males).

When considering the compliance of two indicators – life expectancy (tab. 2) and the average age of the deceased (tab. 3) in Russia and Arctic regions it has been revealed the divergence of their values. For Russia on the whole, the deviation of the value of the prognostic index of life expectancy from the actual average age of death in the period 2008-2016 was slight, in the range of exceeding the prognostic index above the actual one to 0.1-0.2 years. For the Russian Arctic's regions such

deviation was considerable. So, in the Murmansk region the actual age of the death for men in 2011, 2014, 2016, were on average 7.1 years lower than life expectancy; in the Nenets Autonomous district in 2011-2016 – 9.5 years (men) and 19.5 years (women); in the Chukotka Autonomous district the real age of the death for men in the period 2008-2014, the average was 4.9 years lower than life expectancy, women – 10.9 years in the period 2011-2016, the only exception is the Yamalo-Nenets Autonomous Okrug, where the divergence values of these indicators exceeded the national average, but it is not as critical as in other regions of the Arctic zone of the Russian Federation.

Table 3: The average age of death for Russia and the Russian Arctic's regions, 2008-2016

Russian Arctic's regions	2008	2009	2010	2011	2012	2013	2014	2016
average age of death (men) years								
Murmansk Region	60,7	61,2	62,7	56,9	63,9	65,1	56,8	57,6
Nenets Autonomous Area	56,0	59,3	59,0	51,0	47,1	54,4	54,6	57,1
Yamal-Nenets Autonomous Area	66,0	67,8	65,5	65,9	66,1	66,3	64,5	66,9
Chukotka Autonomous Area	51,1	48,2	52,7	51,5	52,8	53,9	54,8	59,7
Russia	*61,8*	*62,7*	*63,1*	*64,0*	*64,5*	*65,1*	*65,2*	*66,4*
average age of death (women), years								
Murmansk Region	72,6	73,0	73,9	74,6	75,3	75,2	75,7	49,0
Nenets Autonomous Area	71,6	70,8	71,1	72,9	47,6	74,6	45,2	41,3
Yamal-Nenets Autonomous Area	74,5	75,2	74,5	75,0	51,7	75,6	76,4	76,7
Chukotka Autonomous Area	64,2	64,6	63,5	55,4	57,2	54,3	56,2	56,4
Russia	*74,1*	*74,6*	*74,8*	*75,5*	*75,7*	*76,2*	*76,4*	*76,9*

The comparison of actual values of average age of the death of the Arctic regions' inhabitants with the age of retirement has shown that in 2016 the life expectancy after retirement age of the average male resident of the Nenets Autonomous district was 2.1 years, in Murmansk Region – 2.6 years, the Chukotka Autonomous district – 4.7 years; only in Yamalo-Nenets Autonomous district, this index corresponded both to the national average value, and the European one - 11.9 years. The actual lifetime after retirement age of an average woman, living in Yamalo-Nenets Autonomous district was 26.7 years; in the Chukotka Autonomous district - 6.4 years, whereas in the Murmansk Region and the Nenets Autonomous district in 2016, women on average did not live to the retirement age and died prematurely (1 and 8.7 years, respectively). By 2016, in comparison with 2008, there was a significant reduction in the number of actual lived years (with the exception of the Yamalo-Nenets Autonomous district). We can assume that in the long term, in conditions of retirement age increasing only men and women living in the Yamal-Nenets Autonomous Okrug will be able to live to the age of retirement.

Conclusions

The carried out research made it possible to draw the following conclusions:

1. The research of world practice of the retirement age establishing has shown that the retirement age increase corresponds to the global trends. The reasons of retirement age increasing to 65 years for men and 60 for women in Russia were sustainable positive changes in the indices of lifetime.

2. The comparison of the indices of life expectancy of the Russian Arctic's inhabitants with the age

of retirement (until 2019) has shown that the residual life corresponded to the values of the European average male populations and higher than ones for women. However, the comparison of actual values of average age of death of the Russian Arctic regions' inhabitants with the age of retirement shows a downward trend in the number of actual lived years, and the groundlessness of the retirement age increasing for the Arctic regions' residents. With the exception of the Yamalo-Nenets Autonomous district, the values of the new retirement age for the Arctic's residents (60 years - men, 55 - women) will exceed average lifetime.

3. Thus, the retirement age increase without significant policy changes in the health system of the Russian Arctic, will not allow achieving significant economic effect. Thus, in case of legislative implementation of important changes in the pension system in Russia it is advisable to take into consideration regional specificity, in particular regions of the Arctic.

Acknowledgment

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