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LABOR POTENTIAL OF THE THIRD AGE POPULATION IN THE LABOR MARKET OF THE REPUBLIC OF KARELIA

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Abstract

Demographic aging of the population (increase in the number and proportion of older persons) leads to an increased burden on the pension and social security systems, decreasing the number of employed in the economy. That's why, it is more relevant to involve third age population in the work. The research subject is the older population's labor potential of the Republic of Karelia. The purpose of the study is to determine the methodology and conduct assessment of the third age population's labor potential, as well as the level and factors affecting its use. Basing on the research results, it is proposed to formulate recommendations on increasing the involvement of the older population in the region's work activities. Taking into account the complexity of the involved issues, the Russian and foreign studies of demographers, sociologists, economists, philosophers, gerontologists, psychologists, etc., have become the theoretical base of the research. Applied statistics and econometric methods were used as main methods of research. Statistical data published in open sources, as well as the results of the questionnaire survey, conducted in 2017 on the territory of three municipal entities of the Republic of Karelia, were considered as a source of data. 527 questionnaires were collected, consisting of 24 pages and 80 questions.

Keywords

Aging population - Employment - Working pensioners - Regional economics - Republic of Karelia

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Introduction

At present, the aging of the population has become a serious challenge for many countries of the world and their regions. As a result of the decline in both the birth rate and mortality, the proportion of older persons gradually increases¹. The need for medical services is increasing, the amount of pension payments and social benefits is increasing, which in turn leads to a deficit of the corresponding budgets. In this regard, governments of different countries are reforming the health and pension systems. However, a number of economic and social problems remain unresolved, the most crucial ones are connected with the adaptation of labor markets to changing conditions².

The described changes in the number and structure of the population significantly transform the labor potential of countries and individual regions and raise the issue of more active use of the older people potential in the economy³. 10 years ago, the labor potential of the older population was extremely poorly employed⁴, then in recent years the share of the employed population has significantly increased: in particular, in the European Union among the population aged 55-64, from 38.4% in 2002 to 51.8% in 2014. At the same time, the problem of demographic aging for a number of countries will become more acute every year, which is confirmed by the UN forecasts. The largest proportion of the older population is observed in Europe. Table 1 shows the proportion values of people aged 60 years and older in 2017 and projected values for 2050 for certain European countries.

	2017	2050
Europe in general	24.7	34.5
Estonia	25.9	36.6
Spain	25.3	41.9
Poland	24.0	39.5
Germany	28,0	37.6
Russia	21.1	28.8

Source: compiled from Population Division data (2017). World Population Prospects: The 2017 Revision, Key Findings and Advance Tables

Table 1
Proportion of the 60 + aged population

Against the background of Europe, the Russian Federation looks like a country with a fairly young population. In 2017, the proportion of people aged 60 and over was 21.1%, by 2050, it is projected to increase to 28.8%. But these values, according to the scale of J. Bozhe-Garnier-E. Rosset, correspond to a very high level of demographic old age⁵.

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¹ J. S. Grigsby, "Paths for future population aging", The Gerontologist, Vol. 31 num 2 (1991): 195-203.

² Ph. Cummins; B. Harootyan & S. Kunkel, "Workforce Development in the United States", Facilitating Opportunities for Work at Older Ages Public Policy & Aging Report, Vol: 25 num 4 (2015): 150-154.

³ J. Fuchs, "Demografie und Fachkräftemangel", Bundesgesundheitsblatt - Gesundheitsforschung – Gesundheitsschutz, Vol: 56 num 3 (2013): 399-405 y J. Fuchs, "Demografische Effekte auf das künftige Arbeitsangebot in Deutschland - eine Dekompositionsanalyse", Schmollers Jahrbuch, Vol: 129 num 4 (2009): 571-595.

⁴ M. Dietz & U. Walwei, "Germany – no country for old workers?", Zeitschrift für Arbeitsmarkt Forschung, Vol: 44 num 4 (2011): 363-376.

⁵ E. Rosset, Ageing process of the population (1964).

At the same time, the process of population aging in Russia has a number of peculiarities. The increase in life expectancy is not so great as in the developed countries of Europe and North America. Accordingly, aging happens, mainly, due to a decrease in the birth rate. Employment of pensioners is also lower than in European countries: according to data for mid-2017, only 22% of the workforce was employed. However, it is worth noting that the regions of the country vary greatly in the number and structure of the population, due to the high differentiation of natural-climatic and socio-economic factors.

In this regard, the choice of the one of the Russian regions - the Republic of Karelia as an object of the third age population's labor potential study looks actual.

The need to involve older people in labor activity occurs due to the insufficient quality of their lives. Among the older population, compared to the younger, the proportion of people living independently is higher⁷, but their incomes are often low.

The purpose of the study is to assess the labor potential of older people in the Republic of Karelia, as well as the level and factors affecting its use, to make recommendations on increasing the involvement of this population in the economic activity of the region.

The consequences of population aging cover many spheres of society, changing its-self and institutional rules, within which it operates. That's why scientists and specialists from different fields of knowledge - demographers, sociologists, economists, philosophers, gerontologists, psychologists, etc., were engaged in this problem. Often, the study is interdisciplinary.

Initially, the developed countries faced the problem of population aging. It's where the first studies of demographic aging were carried out. Just at the beginning of the twentieth century, people began to talk about the demographic revolution, this term attracted special attention and became widely used in the scientific community, thanks to the work of Adolph Landry⁸. Ideas of A. Landry were continued and developed by French scientist Alfred Sauvy⁹ who became the founder of the National Institute of Demographic Studies of France.

Among other studies, it is worth mentioning the study of the American psychologist Bernis Neugarten¹⁰. In the 70s, she divided the elderly into two groups: the Young Old and the Old Old, thus marking the special significance of the "young old people" in society. A little later, the English historian Peter Laslett singled out four stages of a person's life, the last ones are the "third age" and the "fourth age" ¹¹.

⁶ The number of working pensioners in Russia decreased by half a million. Retrieved from: https://ria.ru/society/20170831/1501481526.html.

⁷ J. Bongaarts & Z. Zimmer, "Living Arrangements of Older Adults in the Developing World: An Analysis of the Demographic and Health Survey Household Surveys", The Journals of Gerontology: Series B, vol: 57 num 3 (2002): 145-157.

⁸ A. Landry, La révolution démographique: études et essais sur les problèmes de la population (INED, 1934).

⁹ A. Souvy, Richesse et population (Payot: Paris, 1943).

¹⁰ B. L. Neugarten "Age groups in the American Society and the Rise of the Young Old". Political Consequences of Aging, Annals of the American Academy of Social and Political Science, vol: 415 (1974).

¹¹ P. Laslett, "The emergence of the Third Age", Ageing and Society, num 7 (1987): 133-160.

In Russia, the study of population aging is carried out in several directions. Influence of demographic factors on socio-economic processes was shown in the studies of A.G. Vishnevsky¹², E.Y. Varshavskaya, M.B. Denisenko¹³, N.M. Rimashevskaya¹⁴, S.V. Ryazantsev¹⁵, etc. The study of the labor potential of certain regions was carried out by A.A. Shabunova¹⁶, E.A. Chekmareva¹⁷, Maslova¹⁸ etc. In the works of these scientists, a comprehensive assessment of the labor potential of regions is presented, with the quantitative and qualitative characteristics. At the same time, despite a large number of studies, there is no consensus in the scientific community regarding the boundaries of the third age. For example, according to the methodology for determining the third age, developed by the Institute of Social and Economic Problems of the Population of the Russian Academy of Sciences, the main criterion of the third age is the person's resource potential, which is determined by individual frames¹⁹. In the European literature the elderly population of more than 60 or 65 years is traditionally emphasized.

At the same time, despite the diversity of approaches, researchers agree that people of the third age differ in the energy, health, strength and desire to continue their professional activities, although, according to formal criteria, they may no longer belong to the group of the employable population. A number of studies are devoted to factors that limit the use of the labor potential of older people. For example, such factors as slow adaptation to new information technologies. At the same time, their use is ineffective: for elderly people, surfing the Internet takes more time and requires more effort than for young people²⁰. However, often, not objective, but subjective factors become determining: stereotypes and prejudices, for example, ageism²¹. It is shown that age discrimination is the most common type of discrimination²².

P. Laslett, A fresh map of life: The emergence of the Third Age (paperback ed.) (George Wiedenfield and Nicholson: London, 1991).

¹² A. G. Vishnevsky, Selected demographic works: in 2 volumes. Vol. 2: Economic demography. Analysis of demographic processes (Nauka: Moscow, 2005).

¹³ E. Y. Varshavskaya & M. B. Denisenko, "Mobility of foreign workers in the Russian labor market", Sociological research, num 4 (2014): 63-73.

¹⁴ N. M. Rimashevskaya, The older generation as a resource of socio-economic modernization of Russia (Economic Education: Moscow, 2014).

¹⁵ S. V. Ryazantsev; N. P. Gusakov & R. V. Manshin, "Problems of the population aging in Russia", Scientific review, Series 1, Economics and Law, num 1 (2014): 83-87.

¹⁶ A. A. Shabunova, "Economic assessment of the labor potential losses of the population", Economic and social changes: facts, trends, forecast, num 4 (2008): 53-61.

¹⁷ E. A. Chekmareva & G. V. Leonidova, "Regional dimensions of labor potential", Population, num 1 (2016): 54-66 y E. A. Chekmareva & A. I. Rossoshansky, "Comprehensive assessment of the unrealized labor potential of Russian regions", Public Administration, electronic bulletin, num 63 (2017): 280-296.

¹⁸ I. S. Maslova, The labor potential of Soviet society: the theory and methodology of research (IE RAS: Moscow, 1987).

¹⁹ V. G. Dobrokhleb, "Resource potential of the elderly population of Russia", Sociological research, num 8 (2008): 55-61.

²⁰ B. Meyer; R. A. Sit; V. A. Spaulding; S. E. Mead & N. Walker, Age group differences in the world wide web navigation. Proceedings of the SIGCHI conference on Human factors in computing systems (CHI'97). Atlanta, Georgia, March 22-27, 1997 (ACM Press: New York, 1997).

²¹ J. Macnicol, Age Discrimination: An Historical and Contemporary Analysis (Cambridge University Press: Cambridge, 2006).

²² Tackling age discrimination beyond the workplace: reports of three seminars held at the Law Society, London, in February 2006. Age Concern England – ACE (London: Age Concern Reports, 2006).

In a number of countries, for example, in Asian ones, the non-use of the older population's labor potential is not connected with discriminatory attitudes, but with the respect of traditions about the care for the elder generation by the younger one²³.

A review of previous studies makes it possible to formulate a hypothesis about the presence in the Republic of Karelia of the older persons group, which it is possible and appropriate to involve in labor activity in the region.

Research methods

The labor potential study of the older age groups population involved the analysis of statistical information from open sources, using methods of applied statistics.

Given the small amount of data, generated by the authorities, an economic and sociological survey was also conducted, for which a 24-page questionnaire with 80 questions was developed. The questions of the questionnaire are based on the concept of labor potential by N.M. Rimashevskaya²⁴, the answers are coded using the sociological scales by Likert or Thurstone.

Based on the data on the population, the size was calculated and the parameters of the representative sample were determined. Pensioners of the Republic of Karelia were selected as the target population: 55-72 years aged men, 50-72 years aged women. The age limits are conditioned by the fact that most of the municipal districts of the Republic of Karelia are equated to the regions of the Far North. According to the legislation, people who have worked for at least 20 calendar years in the localities equivalent to the Far North regions have the right to receive an early old-age insurance pension, from 50 years for women and from 55 years for men. The upper value of 72 years, as the end of the third age, was established on the basis of the data from the Pension Fund of the Russian Federation, according to which, after this age people quickly reduce their employment.

According to the Federal Statistics Service of the Republic of Karelia, the size of the general population is just over 200 thousand people. Accordingly, for the representativeness of the sample from the general population of such a volume, it is sufficient to study 400 or more of its representatives²⁵.

Within the framework of the questionnaire survey it was planned to cover 500 respondents – pensioners of the Republic of Karelia, including employees.

As a criterion for the representativeness of the sample (its repetition of the structure of the general population), the ratio of the number of working pensioners to the total number of pensioners was chosen, which in the Republic of Karelia averaged at 26.6%. This criterion was most closely matched by the Sortavalsky and Medvezhiegorsk municipal districts of the republic. The socio-economic and geographic location of these municipalities fully reflects the situation in the region. The third municipal entity was Petrozavodsk, the capital of the

²³ L. G. Martin, "The status of south Asia's growing elderly population", Journal of Cross-Cultural Gerontology, Vol: 5 num 2 (1990): 93-117.

²⁴ N. M. Rimashevskaya, The older generation as a resource of socio-economic modernization of Russia (Economic Education: Moscow, 2014).

²⁵ I. V. Timakov, "A methodology for studying the labor potential of older people in the Northern border region", Economics and Entrepreneurship, num 9 (part 3) (2017): 1126-1132.

region, with 44% of the population of the Republic of Karelia²⁶. With this in mind, the planned sample consisted by 50% of pensioners living in the city of Petrozavodsk. The remaining 50% were distributed among the municipal districts of the Republic of Karelia - Medvezhiegorsk and Sortavalsky.

The sample also took into account the following parameters:

- proportions between the urban and rural population;
- sex-age structure of the general population;
- the ratio of working and non-working pensioners in the structure of the general population.

In fact, in a questionnaire survey conducted in the fourth quarter of 2017, 527 respondents were interviewed, which is 5% more than the planned sample.

Actual and planned indicators for all parameters are presented in Table 2.

	Planned sample		Actual sample		Mistakes in
					the sample,
Respondents	Volume	%	Volume	%	%
Total	500	100	527	100	
Including:					
In the municipal					
entities:					
Petrozavodsk	250	50	278	52	2.0
Sortavala	98	20	98	19	1.0
Sortavalsky region -					
village	27	5	27	5	0.0
Medvezhiegorsk	98	20	98	19	1.0
Medvezhiegorsk					
region - village	27	5	26	5	0.0
According to the					
sex:					
women	335	67	350	66	1.0
men	165	33	177	34	1.0
According to the					
employment:					
employed	150	30	179	33	3.0
unemployed	350	70	348	67	3.0

Source: compiled by the authors

Table 2
Actual and planned indicators of the sample

Based on the questionnaire, a database mock-up was developed in the SPSS system. The data from the questionnaires are entered in the database, which is a matrix of the "object-attribute" type.

Next, a descriptive (or exploratory) data analysis was conducted, which was used to solve two problems:

²⁶ Republic of Karelia 2017: Statistical Digest. Ed.: L.S. Korol, A.A. Boykova et al. (Petrozavodsk: Kareliyastat, 2017).

- 1. additional control of the empirical data input with the subsequent rejection of incorrect ones:
- 2. the primary quantitative description of the data using a system of statistical indicators, which made it possible to obtain the first idea of the formed characteristic space.

The subsequent analysis of the third age population's labor potential and its motivation was carried out in several directions: the quality of labor potential, the level of its use, the motivation of employers and older persons, the main types of behavior were analyzed. For this purpose, statistical and econometric methods were used.

Results

Quality of older persons' labor potential

As of 01.01.2017, with a total population of the Republic of Karelia, 627.1 thousand people, the share of the population at working age is 55.2%, and 26.6% over the employable age. At the same time, from 1995 to 2017, the employable population decreased by 22.6%, the population, older than the employable age, increased by 17.6% or 25.0 thousand people²⁷.

The quality of the third age population's labor potential can, first of all, be characterized by its professional competences and health.

The level of the third age population's education is highly differentiated. Among the respondents, approximately equal shares have secondary vocational education (technical college, college) and higher professional education (university) - 35.5% and 33.2%, respectively. A large proportion (20.1%) has only an initial vocational education (technical school). General secondary education (10-11 grades) is obtained by 4.7% of the population, incomplete general secondary education (7-9 grades) is obtained by 3.0%, incomplete higher education (after the 3rd year of university) is obtained by 2.3%, postgraduate education (aspirantura, doctorantura) - 0.8%, the elementary education - 0.4%.

The conducted correlation analysis showed that the relationship between employment and education level is insignificant (Pearson coefficient - 0.16). This may indicate the greater value of specific human capital (experience, knowledge gained in a particular enterprise, in a particular industry) compared with the level of education.

The list of available specialties is also wide: there are teachers, lawyers, economists, engineers, nurses, locksmiths, mechanics and many others. At the same time, the level of modern technologies possession is quite low: 64.6% have general skills (PC, office, Internet), only 7.4% have specialized skills (science, design, engineering, enterprise management, reporting, marketing) and 1.1% have specialized production skills (automation of production, automation of technological lines, elements of high-tech infrastructure). A high proportion of people who do not have modern technologies skills at all - 26.9%. Undoubtedly, this factor is a deterrent, when hiring older people. Another characteristic of the labor potential is health. Note that only 34.1% of respondents do not have chronic diseases, the main chronic diseases are circulatory system diseases (cardiovascular) (there are 19.3%).

²⁷ Official site of the Territorial Body of the State Statistics Service of the Republic of Karelia. Retrieved from: http://krl.gks.ru/wps/wcm/connect/rosstat_ts/krl/ru/municipal_statistics/

At the same time, less than 7% of respondents have chronic illnesses, not allowing to work. Disabled people are 10.5%, including the first group of disability - 1.0%, the second - 5.9%, the third - 3.6%.

An additional factor that reduces the quality of labor potential is the provided medical care, namely, the degree of its accessibility and level.

Only 8.7% of respondents are completely satisfied with the availability of medical services, 38.4% are more satisfied, 36.3% - partially satisfied, 11.6% - unsatisfied in general, 5.0% - completely dissatisfied. An analysis of the causes of dissatisfaction showed that the main ones are the shortage of specialists (doctors, nurses) with the required specialization (38.3% of respondents had this problem), as well as bureaucratic barriers to the treatment of diseases (34.3%). Other identified reasons: lack of funds for medicines and treatment (25.2%), lack of necessary qualification of specialists (19.7%), payment for medical services from the list of compulsory medical insurance (14.6%), shortage of medications (preferential, in pharmacies) (8.5%), transport inaccessibility of medical institutions (7.6%) and information barriers in the treatment of diseases (5.7%).

At the same time, only 6.7% of respondents were completely satisfied with the quality of medical care, 56.9% were faced with poor organization of outpatient facilities, 35.3% with indifferent attitude, "working for report" health workers, 31.1% with low qualifications and inexperience of specialists, 10.2% - with poor work of hospitals (refusal in bed, lack of medication, lack of medicines, poor sanitary condition of hospitals), 8.9% - with poor functionality and poor quality of medical equipment, 7.8% with poor ambulance work.

The survey showed that the problems of medical care quality in comparison with its availability are more acute. At the same time, of course, the identified problems are complex and largely occur due to the inadequate funding of the health care system.

However, it is also necessary to stimulate the prevention of diseases and the promotion of health among older persons. For this purpose, in addition to social reasons, there are also economic ones: the prevention of disease is cheaper than its treatment. Currently, only 33.3% of the respondents regularly undergo prophylactic examinations. 11% are regularly engaged in physical culture, sports, Nordic walking, active tourism; 9.7% monitor the balance and quality of food (water, vitamins, dietary supplements, etc.). 16% refused bad habits: alcohol, cigarettes, etc. Such indicators should be much higher.

Using the labor potential of older people

According to official statistics, the employment of the elderly population in Karelia as of 01.01.2017 was 31%. Statistical data on the use of the third age population's labor potential were practically confirmed by the results of the survey: 34.1% of respondents reported about their employment. At present, employers of the Republic of Karelia do not seek to use the labor potential of older people. In most organizations, the policy of rejuvenating the staff is being carried out, this was noted by 37.8% of working respondents, while only 14.9% pursue a systematic policy of preserving experienced staff, including older employees. The majority (63%) of older persons work in state and budgetary organizations, 60.9% of them are in the sphere of health and social services (33.3%), education and science (27.6%). Private companies employ 27.5%, individual entrepreneurship 8.0%, public organizations, funds, associations 1.4%.

Refusal to the employment of older persons are related with:

- stereotypes of management ("young more effective", etc.) 28.2%;
- deterioration of the physical abilities 23.1%;
- morbidity risk of the pensioner 17,9%;
- weak motivation of the pensioner 15.4%;
- high demands on working conditions (working hours, etc.) 14.1%;
- high demands for wages, position 12.8%;
- risk of sudden retirement lack of career prospects 11.5%;
- low qualification 9.0%.

Thus, the non-use of the older persons' labor potential by employers is a consequence of a whole range of factors, none of which can clearly be considered dominant.

The ageism is the most powerful reason. The problem of age discrimination, indeed, is present in the Republic of Karelia, but it is not a mass one. It is confirmed that 24.1% of respondents faced age discrimination, 7.5% of them experience constant age discrimination. At the same time, the main manifestations of discrimination are the threat of layoff (28.0%), lack of career opportunities (18.7%), understatement of wages (12.0%), deterioration of working conditions (10.7%), constant unreasonable criticism by the administration (9.3%), the lack of additional benefits (9.3%).

However, despite the high proportion of non-working pensioners, many organizations, employing older people, use their strengths, in particular: professional experience and knowledge. This was reported by 71.6% of respondents, 16.5% denied the existence of the transfer of experience, 11.9% found it difficult to answer. But it is worth noting that this system does not have an institutional form: in 46.8% of organizations, workers independently seek advice or voluntarily offer their help (advice). Only in 28,4% of organizations there are internships, in 12,1% - individual training (personal mentor, coach), in 7.5% - group training (regular groups for updating skills of the youth), in 5.2% small groups are formed, including representatives of different generations, to perform a specific task.

Behavior typology of older persons

The existing demand for labor and the level of motivation among employers divided respondents into the following groups:

- 1). Do not work 66.0%, including:
- 10.3% in the job search (no suitable work);
- do not seek work, but have a desire to work 8.2%;
- do not have a desire to work, including 47.5% for health reasons.
- 2). Work for hire (agreement, contract, etc.) 31.2%.
- 3). Engaged in business, self-employment 2.9%.

Given the age discrimination by the administration of the organization and the complexity of its leveling, as well as any other type of discrimination, self-employment looks like one of the promising employment options for older people. In a third of cases, the current self-employment of older persons occurs due to non-financial factors: the desire to realize their potential, the habit of working, etc. For comparison: non-financial factors determine hiring at work two times less, contributing 17.2%.

Accordingly, the increase in self-employment of the third age population can be carried out through institutions supporting the opening and running of small businesses (training programs, access to credit resources, etc.), and through increasing the perception of the significance of this type of activity.

In general, the analysis of the classification in terms of the level and type of older persons' motivation made it possible to distinguish three types of behavior, with the help of which, it is possible to describe the 76% of older population's actions of the Republic of Karelia:

- 1. Not employment due to other priorities (27.8%), lack of health and psychological preparedness (14.3%).
- 2. Employment for hire as a consequence of the availability of financial motivation to work (25.7%).
 - 3. Job search as a consequence of financial motivation (8.2%).

For the region, in order to reproduce the regional labor potential, the second and third groups are of greatest interest. In this case, the actions of the governing bodies should, first of all, be directed to the third group and all those who have the desire and search for work: the employment of this category of citizens, other things being equal, is easier and besides the economic effect, it will have a social one.

Let's note that, having non-financial motivation to work, older people in half of the cases do not search for work, and with financial motivation - in one case out of three. Financial motivation assumes more active actions on employment, however, as it was noted above, non-financial motivation can lead to the development of entrepreneurship and self-employment, resulting in the appearance in the region of both new industries and additional jobs.

For pensioners who have the status of a labor veteran, additional benefits and payments are provided in accordance with federal and regional legislation. In this case, the possibility of obtaining the veteran of labor status significantly affects the behavior of older persons. Among respondents who do not have this status, more than half (54.2%) are ready to work for its achievement, 11.1% - cannot do this for health reasons, 34.7% do not want it. This testifies to the rather high efficiency of this institution in stimulating older people to continue working. The increase in efficiency directly depends on increasing the social status of veterans and providing them with better financial support. Now only 28.1% of respondents see the role of labor veteran as a social status, 50.6% see financial support in it, and 21.3% - do not see any significant role in it. The receipt of benefits does not in any way affect the standard of living for 26.1% of people who have the veteran of labor status and who receive the corresponding benefit. For 15.6% of veterans of labor, the received benefits are significant for financial support, and in their absence, they would have to give up the most necessary needs. 58.2% of respondents who receive benefits say that their absence would reduce the standard of living and force them to reduce consumption of their usual benefits.

The majority of older persons (81.9%) are not ready to change their place of residence for the sake of work, 10.0% are ready to move within Karelia, 2.9% are ready to move to a large metropolitan city of Russia, the same percent is ready to move to another region of Russia and 2,4% - abroad. This confirms that the work of regional employment centers and institutes for obtaining additional education and advanced training will ensure targeted spending of funds, which, unfortunately, is often not offered for younger age groups.

Discussion

The generalization of the conclusions made on the basis of the data analysis on the Republic of Karelia and their transfer to other regions of the Russian Federation is limited by the fact that all Russian regions have their sex and age structure of the population, differing in the number of urban and rural population and the demand for labor in connection with various regional economic potential. This factor also limits the possibility of comparing the results with earlier studies.

According to the sociological monitoring of the quality of population's labor potential in the Vologda region, conducted by the Institute for the Social and Economic Development of Territories of the Russian Academy of Sciences in 2016, 36.8% of pensioners have motivation for work²⁸. This is practically the same as the city of Vladimir in 2002-2003 - 39.2%. The main factor is the insufficiency of pension provision (it is fair for 17.3% of respondents) and the desire to earn (16.7%). The main reasons for the termination of work are deterioration of health (13.8%), reduction of the company's staff (7.3%), desire to rest $(4.6\%)^{29}$.

In the Republic of Karelia, the proportion of people wishing to continue working is higher - 52.5%, while the contribution of the health factor is comparable. A great motivation to continue working exists due to low incomes. The possibility of earlier retirement in accordance with the Law of the Russian Federation no. 4520-1 of 19 February 1993 "On State Guarantees and Compensations for Persons Working and Living in the Far North and Equivalent Territories", on the one hand, reduces the threshold age of pensioners, including in their number more people who have retained interest in the work. However, 35.9% of respondents consider this law as an opportunity to retire early without working, 8.6% see in it the opportunity to reduce the work load and compensate the reduction of wages, due to the pension. Accordingly, for 44.5% of respondents, an early pension is an additional factor in the reduction or termination of employment.

When interpreting the results of the study, it is worth considering the large volume of the questionnaire - 80 questions. Interviewers noted that some respondents were tired of answering questions. Accordingly, the answers to the last sections may be less thoughtful and factored. Other inaccuracies are related to the peculiarities of the used scales. For example, when using the Likert scale, the distortion of answers can occur because of the desire to respond the way that it is perceived most favorably (this trend is known as "faking good"). Respondents also tend to agree with the "acquiescence bias" they have proposed and to avoid extreme assessments ("central tendency bias")³⁰. The Thurstone scale allows to level out the subjectivity of expert assessments³¹, but its development requires significant time and labor costs³².

²⁸ E. A. Chekmareva & A. I. Rossoshansky, "Comprehensive assessment of the unrealized labor potential of Russian regions". Public Administration, electronic bulletin, num 63 (2017): 280-296.

²⁹ N. M. Rimashevskaya, The older generation as a resource of socio-economic modernization of Russia (Economic Education: Moscow, 2014).

³⁰ P. M. Fayers & D. Machin, Quality of Life: The Assessment, Analysis and Interpretation of Patient-reported Outcomes (John Wiley & Sons Ltd: Chichester, 2000).

³¹ B. F. Green, Measurement of the installation. Mathematical Methods in Modern Bourgeois Sociology. Ed. Osipova G.V. (Progress: Moscow, 1966)

³² M. I. Zaitseva, "Scaling methods for measuring the installation", Social Studies, num 5 (1970): 220-243.

Conclusion

Demographic aging is one of the leading global challenges of our time. In different regions, with different institutional and socio-economic conditions, the aging of the population proceeds in different ways. And it is the specific features of the regions that determine the mechanisms of society's adaptation to changes in its age structure.

As part of the study, demographic aging was shown in the Russian regions and in the Republic of Karelia in particular, as well as the negative consequences of this process. Employment of the third age people is a little more than a third part, but the potential and motivation to work have 18.5%. Involvement of this group of people in the work activity will reduce the burden on the pension system, solve a number of social problems in the region, will improve consumption and ensure the self-realization of the designated category of persons.

At the same time, involvement in labor activity implies:

- 1). To increase the labor potential of older persons, it is necessary to form and expand their competencies in working with specialized production technologies. In particular, this is possible by creating courses at employment centers. Targeted expenditure of funds in the organization of educational programs will be provided due to the low readiness of older persons to change their place of residence.
- 2). To increase the possibility of using the labor potential of older people, avoiding a decline in its quality, the procedure for compulsory medical examination of the entire population of the older age and the facilitated procedure for the passage of after-hour medical examination should be established. Health groups should carry out the work on a regular basis and in all regions of the republic.

In addition, a comprehensive solution to public health problems (increased accessibility and, especially, quality of care) is needed. First of all, it is required to:

- increase the number and qualification of specialists (staff);
- provide the work for specialists of all required qualifications in the districts, for the provision of all needed medical services;
 - ensure the availability of multifunctional and high-quality medical equipment;
 - improve the organization quality of the outpatient and ambulance services;
- improve the mechanisms of public procurement of free medicines within the framework of general requirements for public procurements, etc.
- increase the level of those people in retirement and pre-retirement age, who assure preventive procedures for their health and lead a healthy lifestyle.

It is desirable to create such a system of stimulating the medical workers, which would eliminate indifferent attitude towards patients and work "for the report".

3). To protect older persons from age discrimination, the Council of Veterans of the Labor Union Organizations in the Republic of Karelia needs to intensify its work. Conciliation commissions should be established to deal with emerging conflicts, as well as general educational activities should also be conducted. Such conflicts and the form of responsibility of the administration, in case of committing illegal actions, should be widely covered in the media and on the web sites of state and municipal authorities.

- 4). Along with leveling age discrimination, taking into account the complexity of this process, as well as leveling out any other type of discrimination, it is necessary to increase the self-employment of the third age population: and with the help of institutions, supporting small business opening and running (training programs, access to credit resources, etc.), and by increasing the perception of the significance of this type of activity. It is especially effective to offer training programs to people who have non-financial motivation for work. Non-financial motivation is often not accompanied by a job search, therefore information about employment opportunities through self-employment should be disseminated first of all, not in the employment centers, but through the media and leisure facilities of older persons.
- 5). To stimulate employment of the third age population at the federal level, it is necessary to raise the social status of veterans and provide them with better financial support.
- 6). At the level of organizations that have retired staff, it is necessary to institutionalize informal practices of transferring professional experience, knowledge, skills from older colleagues to younger ones. This will make the transfer of professional experience a mass phenomenon, involving in it all employees of the company. The world practice has already identified the most promising schemes: the establishment of a personal mentor, coach, regular groups of advanced training, etc. The use of these practices will increase the effectiveness of training.

The foregoing allows us to confirm the hypothesis about the presence in the Republic of Karelia of the older persons group, which it is possible and appropriate to involve in labor activity in the region.

With the involvement of motivated, but not working citizens in the labor activity, the index of third age population's employment comparable to the European average (52.6%) will be achieved. However, this will make it possible to compensate the decline in the number of the employable population from 1995 to 2017 by only a third. Accordingly, in order to maintain the level of production, it is necessary both to substantially increase the efficiency of the labor resources use (to reduce labor intensity), and to improve the health of citizens and, accordingly, the number of those who can be included in labor activity.

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