

Improving the environmental quality of life of citizens

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Abstract. At the present stage of society's development, issues related to improving the environmental quality of life of the population while maintaining the level of quality in other aspects – social and economic – are becoming increasingly developed. One of the possible solutions to this problem is a potential mechanism associated with changing the place of residence of citizens to regions and territories with a more favorable ecological and social situation while reducing the level of economic burden. This mechanism can be implemented in the context of solving the problem of early retirement of citizens, taking into account compensation payments, including at the expense of existing real estate. The purpose of the study: to develop a mechanism for improving the environmental quality of life of the population in the context of solving the problem of reducing pension costs through compensation payments of citizens. Research methods: comparison, analysis and synthesis, generalization, method of retrospective analysis and forecasting of ecosystem development. As a result of the study, approaches are proposed to choose options for improving the environmental quality of life of citizens, as well as substantiating the conditions of compensation payments due to the sale of excess value of real estate objects of citizens potentially suitable for early retirement

1 Introduction

Ecological quality of life has become a new direction in the research of scientists. Ensuring a high standard of environmental quality of life for the population is becoming one of the main tasks in the activities of State bodies. The ecological quality of life is particularly relevant for able-bodied elderly citizens who have reached the pre-retirement or retirement age, which is connected with the desire to maintain and increase the working capacity and generally improve the quality of life. On the other hand, it is this category of the working-age population that is better able to move in order to improve the environmental quality of life as well as to reduce current expenditures. Changing the environment of active work requires the identification and development of new approaches

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and tools to improve the ability to choose the most attractive habitats in terms of quality [1]. And if the measures implemented by the State to change the conditions of active work do not take into account the characteristics of certain categories of citizens, citizens living in places with adverse climatic conditions, citizens of certain unique professions or citizens with changed life situation, then developed mechanisms should help such categories of citizens. Citizens exercise their right to early retirement as well as to change their place of residence in places with higher quality of environment. At the same time, it should be borne in mind that the proposed mechanisms should take into account the interests of all parties involved in their formation and implementation. Interested parties in this case, in addition to the citizens themselves, should include public authorities, real estate agencies, financial institutions.

At the same time, research by specialists [3] shows that over the past 100 years, one of the most effective ways to save money from political and economic shocks is real estate. This is due to a number of historical and economic reasons that have not lost their relevance today. Thus, currently in the Russian Federation there is a potential volume of investment, which represents the real estate of citizens, which can be effectively used to ensure conditions for their early retirement.

Thus, the relevance of the topic of the presented research is due to the need to develop a mechanism that has the ability to search and justify the optimal option for terminating the labor activity of certain categories of citizens, subject to taking into account the interests of government bodies and the capabilities of various areas of the service sector.

2 Materials and Methods

As part of the research, the mathematical and methodological foundations for the formation of one-time pension payments (OPP) were considered, and it was also substantiated that if citizens make one-time compensation payments (OCP) to government bodies (GOB) for early retirement with the required parameters, then the new the option of pension legislation will become possible to implement in practice. To solve such problems, an algorithm was proposed to justify the size of the OCP to GOB for the early retirement of citizens [4].

The practical application of the proposed algorithm in the practice of public administration involves the development of a number of organizational and technical measures that make it possible to implement the principle of involving all stakeholders. To solve this problem, it is necessary to: identify the circle of citizens who are potential users of the mechanism in the future; economic sources that will guarantee the implementation of an individual pension project (IPP) if it is acceptable to the user [5].

Thus, solving the issue of early retirement due to personal circumstances requires the development of a new economic mechanism that will streamline the interaction of several subjects: citizens-potential users and the Social Fund

The Russian Federation (SF RF), the regions of the intended residence of citizens and interested real estate operators. The volume of the conducted research allowed us to form a model for determining the conditions for early retirement for citizens of the Russian Federation for personal reasons. This model is based on various manipulations with real estate and is presented in Fig. 1.

In fact, this model is the order of implementation in practice of both the social functions of the state to citizens and the sequence of solving commercial projects. The model has three main stages and is based on the formation of a PPI.

The first stage is designed to determine the initial design data. During it, the citizen (applicant) independently determines the desired amount of his future pension, the date of retirement and the set of support options necessary for him. To make planning more

convenient, the applicant must use a specialized calculator for calculating future pensions published on the website of the Social Fund of the Russian Federation. Such a calculator can be based on a computer program [6] and include the main design parameters in terms of the amount of financial costs to the state due to the early retirement of the applicant. Thus, I use it. this calculator at the initial stage, the applicant decides whether it is necessary to use such an option of legislation in relation to him or whether it is not expedient (or expensive) such a decision. If the applicant's decision on early retirement is made, then he applies to the Social Fund

Of the Russian Federation on this issue. Thus, at the time of applying to pension structures, the applicant has already formed proposals for his retirement, and he is already oriented in the amount of financial costs that he needs to attract.

The appeal is submitted in the form of an application, which is drawn up and transmitted to the employees of the Social Fund of the Russian Federation, indicating the main design parameters that became known to the citizen based on the results of preliminary calculations[7]. Having accepted the document from the applicant, employees of the Social Fund of the Russian Federation translate it into digital form and open an electronic version of the project aimed at coordinating the actions of individual Federal bodies[8].

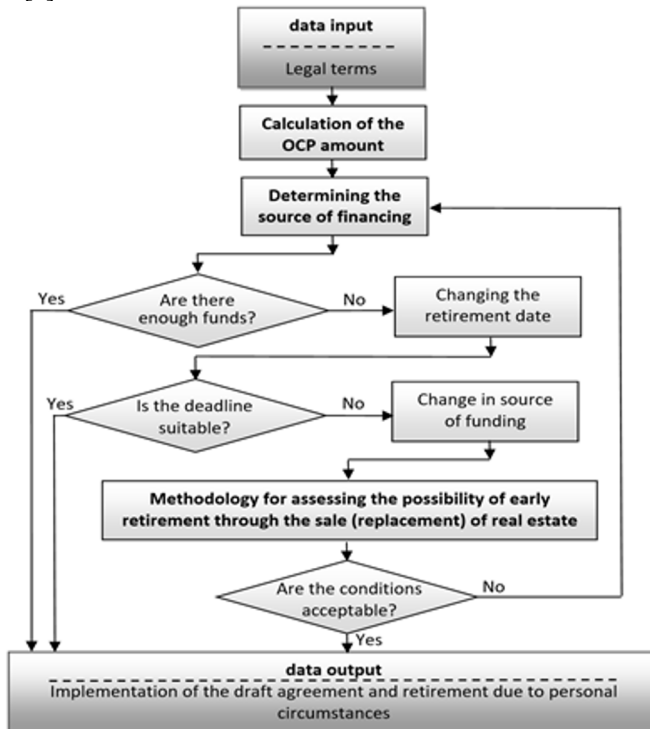


Fig. 1. Flow diagram of the model for justifying the conditions for the retirement of citizens earlier than the established period using funding sources that sell real estate

The measures of the second stage are a set of measures for interaction between the Federal Tax Service and the leadership of the regional branch of the Social Fund of the Russian Federation. In the first case, the financial viability of the applicant is determined, and in the second case, an order for the development of an IPP for early retirement is being developed.

If the proposed measures are successful, the staff of the Social Fund of the Russian Federation develops a PPI in accordance with the personal wishes of the applicant. As a result of joint planning, an application is formed to the Social Fund of the Russian Federation, which allows one to simultaneously purchase from the state all the missing individual pension points (IPP). At present, such a purchase is impossible; however, in the future of introducing the mechanism being developed, such changes in the pension provision mechanism of the Russian Federation will be necessary.

The main event of the third stage is the selection of financial guarantors for a one-time payment of the IPP. As such, the guarantors may be: the applicant's own savings, bank loans; money received from the sale or exchange of existing real estate objects; funds received from the sale of securities or any other valuable property, as well as subsidies for the transfer of real estate to the ownership of the state.

The final stage of the algorithm is designed to coordinate the possibilities of IP payment sources with the start dates of the IPP. During this stage, the conditions of retirement, the date of transfer and the volume of guaranteed sources are consistently adjusted. In the event that any of the parameters of the IP does not correspond to the volume or capabilities of the applicant, then a return is made to the stage of adjustment of the IPI.

3 Results and Discussion

When verifying the proposed model, analytical calculations were performed to substantiate the personal conditions for early retirement in the period of early 2019 [9]. As initial data, it was assumed that the initial capital of the applicant's IPB is 210. When designing, several options were considered, ranging from replacing housing in your own region, and ending with moving to another region.

The results of analytical calculations of the application of the proposed model are shown in Table 1.

From the data given in table 1, it is easy to see that early retirement with the involvement of a housing replacement mechanism is acceptable, while the pension level will be comparable to the salary level in those regions where the applicant is planning to move to stay in retirement. As an example, the average salary level in the Tver, Pskov and Novgorod regions in 2019 was about 35 thousand rubles, therefore, taking into account the personal income tax, workers received about 32-33 thousand rubles. [10], which corresponds to the level of the OPP given in the calculations for the historical period of the Russian Federation under consideration.

The considered option of replacing real estate will make it possible to complete the formation of the IPP for early retirement, which is based on the relocation of citizens from cities with high real estate costs to provincial cities or resort towns [11].

Analyzing the results obtained, it should be noted that the developed set of measures will not allow citizens to retire as a rule in society, however, it will allow for a more flexible attitude to the life systems of citizens who cannot continue their work further due to some life circumstances.

Nevertheless, the methodology for assessing the possibility of early retirement due to personal circumstances with the function of involving real estate manipulation will allow to increase the funds of social housing in large cities and become one of the tools of renovation. Also, the proposed set of measures and analytical calculations can be used as calculations to substantiate legislative initiatives in the field of improving the pension system of the Russian Federation [12].

Table 1. Results of applying the developed model to solve the problem of early retirement for personal reasons based on the sale (replacement) of real estate.

Region	Area, m ²	Cost, million rubles	Reduction of term, months	Pension amount, thousand rubles	Average salary in the housing replacement region, thousand rubles
Available housing			Conditions for early retirement		
Option for replacement (sale) object					
Moscow	63.2	6.64	50	32.1	60.0
Moscow region	65.2	4.09			
Moscow	58.2	6.11	70	35.2	35.9
Tver region	60.1	2.4			
Moscow	35.3	3.71	79	36.7	117.8
Selling	-	-			
Saint Petersburg	72.1	5.51	51	28.9	46.9
Leningrad region	71.5	3.69			
Saint Petersburg	54.2	4.14	53	29.7	32.5
Novgorod region	56.3	2.08			
Saint Petersburg	35.3	2.7	65	31.7	72.7
Selling	-	-			
Moscow region	54.2	3.4	40	25.5	38.9
Krasnodar region	56.1	2.62			
Leningrad region	67.1	3.46	42	24.8	31.7
Pskov region	65.2	2.78			

It should be noted that the proposed measures make it possible to create a mathematical basis for a significant change in pension legislation in the Russian Federation. It is likely that in the future, based on the proposed mechanism, it will be possible to come to a tendency to reduce the retirement age. Since the retirement period will be determined by the volume of pension deposit accounts, and not by the normatively established deadlines for retirement.

The results obtained during the study allow us to conclude that the modernization of the existing model of the pension system through the implementation of the developed measures will move our country to a new stage of pension reform, which will allow certain groups of citizens to retire already in the OPP deposit security format [13].

However, to more fully assess the potential of the proposed measures, it is necessary to consider groups of potential users of the newly formed option of the pension legislation of the Russian Federation. An analysis of existing publications [14], as well as some government programs for the development of problem sectors of the economy [15] made it possible to determine the range of such categories of citizens. Figure 2 shows the identified groups of the most likely categories of citizens - potential users of the early retirement mechanism.

The categories of citizens presented in Figure 2 may be potential users of the mechanism, taking into account the previously presented models.

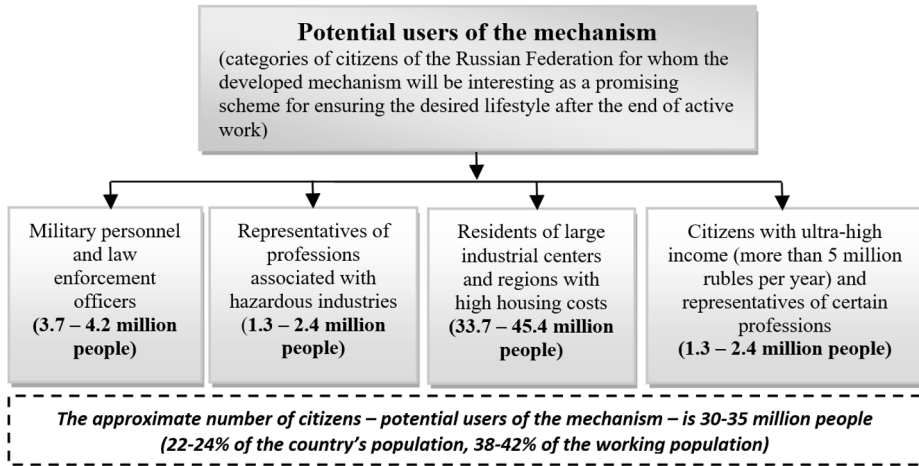


Fig. 2. Results of the analysis of the developed measures for the most likely categories of citizens - potential users of the mechanism

4 Conclusion

The developed mathematical apparatus opens up new prospects for improving the environmental quality of life of citizens. Firstly, a mechanism appears to move to locations with higher environmental quality. Secondly, citizens have the opportunity to have more flexible pension provision, which in each specific case will dictate their requirements for the retirement age. And thirdly, the presence of a specific amount of compensation for early retirement gives citizens the right to independently draw a conclusion about their career success and financial viability in order to receive special conditions within the framework of the pension legislation of the Russian Federation.

Thus, the developed mathematical apparatus embodies three main directions of development of the pension system of the Russian Federation. These are variability, flexibility and financial solvency. But the capabilities of the presented algorithm are significantly limited in practice. For many categories of citizens, this approach is not acceptable, despite the potential of their financial assets, located mainly in real estate, equipment and securities. This circumstance will not allow using the considered promising option of the pension system of the Russian Federation. In this connection, there is a need to justify new models of early retirement at the request of a citizen (for personal reasons), allowing to replace a direct financial injection with an equivalent replacement of property, equipment or securities for the implementation of the IPP for early retirement.

The proposed mechanism would significantly expand the list of categories of citizens interested in early retirement, while opening up prospects for solving certain social problems in the regions. At the same time, individual service sectors could significantly increase their socio-economic efficiency and open new markets for the sale of their services. These industries include the following areas, which should be called service operators:

- public services are a type of specialized services that include a set of measures for individual design, as well as control over the legality of the exercise of citizens' rights in the field of pension legislation;

- banking is a type of services designed to ensure payment for a pension project, as well as to monitor the movement of funds both directly from a citizen and from a creditor bank (in case of insufficiency of the borrower’s own financial resources);
- real estate services are services for the sale or replacement of property owned by the applicant for the implementation of his IPP.

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