

# SPECIFICITY OF SOCIO-DEMOGRAPHIC FORECASTING FOR THE RUSSIAN SOCIETY

# ESPECIFICIDAD DE LOS PRONÓSTICOS SOCIODEMOGRÁFICOS PARA LA SOCIEDAD RUSA

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#### Abstract.

The study of demographic processes in Russian society involves socio-demographic forecasts. The article pays attention to the theoretical understanding of the category "demographic projection", it describes four classifications of demographic projections; It presents a practical synthesis of the currently existing socio-demographic forecasts for the Russian society in the medium term. The demographic situation in Russia is assessed as critical because Russian society has to recognize the fact of the birth crisis. The article discusses the causes of the Russian demographic crisis, presents statistical data on demographic indicators of births and deaths, and describes three groups of scenarios for medium-term demographic forecasting.

**Keywords:** socio-demographic projection, demographic trends, demographic scenarios, the demographic crisis, social development, the Russian population, Russian society, post-Soviet Russia.

El estudio de los procesos demográficos en la sociedad rusa implica pronósticos sociodemográficos. El artículo presta atención a la comprensión teórica de la categoría "proyección demográfica", describe cuatro clasificaciones de proyecciones demográficas; Presenta una síntesis práctica de los pronósticos sociodemográficos actualmente existentes para la sociedad rusa en el mediano plazo. La situación demográfica en Rusia se evalúa como crítica porque la sociedad rusa debe reconocer el hecho de la crisis del nacimiento. El artículo analiza las causas de la crisis demográfica rusa, presenta datos estadísticos sobre indicadores demográficos de nacimientos y defunciones, y describe tres grupos de escenarios para el pronóstico demográfico a mediano plazo.

Palabras clave: proyección sociodemográfica, tendencias demográficas, escenarios demográficos, crisis demográfica, desarrollo social, población rusa, sociedad rusa, Rusia post-soviética.



## Introduction.

Preservation of the integrity of the Russian state, its further development and vitality depend on sustainable demographic growth, which guarantees the society of this state the continuous reproduction of human generations.

This indisputable truth was proclaimed by many outstanding scientists and thinkers from different countries: A. Smith, S. Montesquieu, M.V. Lomonosov, D.I. Mendeleev and many others. They, each in his time and in different ways expressed the main idea that the main wealth of any country is its people, without which there is no, and there can be no state. In this case the integrity of the country and state is provided by its native population patriotically bred, with a steady value and orientation unity and well-formed civil position [Vaskov, et al., 2018].

The demographic situation in Russia has now become one of the most important socio-economic problems, which is constantly growing into a political, and then into strategic and foreign policy problem [Shakhbanova, et al., 2019].

Demographic processes in Russian society are multidimensional in nature, and contain a number of socio-demographic indicators that reflect the specifics of the demographic situation [Kasyanov, 2015]. The list of these indicators includes the reproduction of the population and the change of generations; the nature and pace of population growth, natural increase (the change in birth and death rates); quantity and quality of population; specificity of a family and age-sex structure; frequency of marriage and divorce; migration and urbanization processes, as well as the specifics of the national and religious composition [Shakhbanova, et al., 2019].

Demographic processes embodied in such a significant number of aspects are in close and direct interaction with social development. Moreover, we can assume that they depend on social development and, in turn, have an impact on it, thereby facilitating or complicating socio-economic transformations, narrowing or expanding the socio-political capabilities of a particular society. Therefore, demographic processes in Russia are studied systematically - they play an important role in the economic and socio-political spheres of life of the state and civil society.

The study of demographic processes involves the mandatory forecasting of the sociodemographic situation both in a single country and in the world as a whole.

The demographic projection is a scientifically based prediction of the main parameters of the population movement and the future demographic situation: birth and death statistics, migration, age-sex and family structure of the population, qualitative and quantitative characteristics of the population [Denisenko, 2010]. For social and economic planning, it is necessary to know the prospective size of the age-sex and family composition of the population, as well as its qualitative characteristics, the future professional and educational structure.

Many domestic experts in the field of demography (A.I. Antonov, V.N. Arkhangelsky, A.G. Vishnevsky, V.N. Gerasimov, I.A. Gundarov, S.V. Zakharov, N.V. Kadurina, A .V. Korolenko, V.M. Medkov, and others) point to the demographic crisis formed in Russian society in the post-Soviet space. Among the most obvious characteristics

of the demographic crisis are the following: low birth rates in relation to high death rates, negative natural growth resulting in the long-term reduction in population, as well as demographic aging and outflow of the population from the eastern regions of Russia [Zakharov, 2004].

### Materials and methods.

Based on the fact that demographic projections are associated with the study of demographic processes, it is worth focusing on the fact that the subject of this publication involves both an appeal to the theoretical aspect of this problem and a practical generalization of the results of sociopolitical studies regarding demographic forecasting for Russian society.

In this article, the demographic projection is based on both theoretical and methodological knowledge, and the analysis of the general patterns of population development, taking into account key trends in the reproduction of the Russian population in the near historical perspective. Among the trends, modern demographers, sociologists and political scientists indicate the following: a decrease in mortality and an increase in life expectancy, the preservation of a certain differentiation in the development of various regions, due to economic, sociocultural and ethnic factors.

Demographic projections have their own methodological features (depending on whether they relate to the country as a whole or to its part). The reliability of demographic projections depends on: 1) the accuracy of the source information; 2) the validity of hypotheses about changes in socio-demographic processes under the influence of the totality of socio-economic conditions; 3) the length of the period for which the projection is made [Denisenko, 2010].

## Research results and their discussion.

Modern demographic projection is more accurate: today the level of theoretical and applied demography is very high; the possibilities of mathematical calculations are obvious, in particular, through computer technology. For example, since the early 1990s, standard application of software packages have been widely used in demographic forecasting. They significantly save the time required for carrying out predictive calculations, allow calculating various scenarios of possible population dynamics, and make calculations with incomplete or defective data.

The results of a demographic projection are usually presented in the form of a prospective calculation of the population, i.e. the calculation of the number of age-sex structure of the population according to some hypotheses regarding the future dynamics of certain births and deaths rate characteristics. Such calculations are usually carried out in several ways. Demographic projection is considered to be the most accurate way of perspective estimates of population reproduction

According to V.M. Medkov, the demographic projection implemented by modern scholars, involves an appeal to a number of interrelated economic and social phenomena, which is why it is complex and multidimensional [Medkov, 2003]. Such multidimensionality makes up a special demographic policy, which is an important link in all the activities of a particular state and society. Moreover, the demographic policy



necessarily keeps track of migration flows, which also affect the total population of the country.

In order to determine the optimal options for reproduction both in the country as a whole and in the regions, it is necessary: firstly, the preparation of multivariate demographic projections; secondly, the assessment of possible modes of population reproduction. As A.I. Antonov, A.I. Medkov and V.N. Arkhangelsky emphasize in their monograph devoted to the analysis of demographic processes in Russia of the 21st century, four classifications of demographic projections can be distinguished [Antonov, Medkov, Arkhangelsky, 2002].

1. Classification according to the length of the forecast horizon: a) short-term (5-10 years); b) medium-term (25-30 years); long-term (more than 30 years).

With regard to this classification, the following fact should be noted: the wider the forecast horizon, the less accurate the forecast.

2. Classification by the number of forecasting objects: a) single (change in one variable); b) multiple (change in two or more variables).

3. Classification according to the type of representation of the predicted value: point demographic forecasts, (the value of which is represented by one number) and interval.

Classification by the purpose of forecasting. The following four forecast groups are distinguished here:

1) Analytical forecasts are used to obtain a real situation in a particular socio-political sphere and in specific territorial boundaries. Analytical forecasts demonstrate the absence or presence of possible changes in the composition of the population. Quite often, to resolve political incidents (curious cases), the results of analytical long-term forecasts are used.

2) Warning-forecasts allow reflecting the possible consequences of an already existing demographic situation. They form the ground for overcoming the negative demographic situation and finding the way to solve the crisis.

3) Prescriptive forecasts are used in order to develop certain prescriptions to the state to achieve the necessary balance in the demographic sphere.

4) Functional forecasts. This type of forecast is used to achieve the practical goals of various organizations, firms, corporations, and government bodies. For example, this can be an electoral forecast, a forecast of needs for health services or education [Chikaeva, et al., 2018].

Note that the creation of a development strategy for Russian society is also based on the results of demographic projections. Moreover, especially in this situation, medium-term and long-term forecasts are important, since they allow to cover a significant period and provide the opportunity for large-scale decisions. Thus, programs of the development of social infrastructure, medicine and health care, industrial and agricultural production, territorial redistribution of the population, dynamics of income and employment, living standards and quality of life are based on the results of the demographic forecasting [Gafiatulina, 2015]. The demographic projection helps to establish both the quantity and structure of future labor resources, as well as to assess the possible needs of various socio-demographic groups of the population in all kinds of goods and services. A demographic projection is required when assessing the development of the social sphere, which is later used in the development of relevant state social security programs and raising the general standard of living of the population. For example, the demographic projection makes it possible to determine with a sufficient degree of accuracy the total number of pensioners, their marital status and the level of material and economic well-being [Kasyanov, Popov, 2018].

On this basis, it is advisable to say about the ever-increasing need for the implementation of forecasting for characterizing the family structure of the population. The family is not only a regular consumer of manufactured goods and social services, but also the main indicator of the total population growth of the country [Vereshchagina A.V., Gafiatulina, 2016]. That is why the scope of demographic forecasting involves such an aspect as calculating the number of single people, young families, single-parent families, marriage unions and divorces.

Thus, we have presented a detailed definition of the concept of demographic projection, and further we can turn to the analysis of the current demographic projections for Russian society, as well as their specific features.

First, we stipulate that such forecasts are carried out relatively often; however, the degree of their frequency is determined by the duration of the forecast. So, short-term demographic forecasts for Russian society are made by researchers relatively often - in contrast to long-term ones.

As part of this publication of interest to us is the medium-term demographic projection for the next 20-25 years. In this regard, we operate the data obtained by Russian scientists (political scientists, sociologists and demographers) not in 2019, but a few years earlier. It is connected with the fact that work on the medium-term socio-demographic forecast takes much more time and requires significant statistical evidence. For a more complete analysis of existing socio-demographic projections, we turn to the general demographic situation in post-Soviet Russia.

Due to the political program of stimulation of birth rate, i.e. payable to "maternity capital" for every second child seems obvious tendency to reduce mortality and increase the birth rate in Russia. Undoubtedly, this trend was formed not at once, but this measure should be qualified as a success. Here are some statistical examples: for 2011, the population of Russian society for the first time significantly increased by 188.9 thousand people (or 0.1%). Positive trends continued according to current statistics in 2012: the number of permanent population of Russia as of 01.07.2012 amounted to about 143.1 million people, and from the beginning of the year increased by 85.6 thousand people, and for 2013 the population of Russia amounted to 143 347 059 people. [Demography, el. resource].

However, there is a question, what is the specificity of socio-demographic forecasts for Russian society over the next two decades?

An important role in international politics belongs to demographic projections made by UN staff. This is due to the fact that the results of these calculations are needed when developing an international development strategy, in making decisions regarding socio-

political, socio-economic and environmental problems. According to the UN forecast, Russian society is undergoing a deep demographic crisis, and already at the beginning of the 22nd century according to the worst-case scenario, Russia's population may drop to 53 million people. With a more optimistic demographic forecast, the same organization reports about 116 million, but the average forecast is 80 million. Moreover, in accordance with the UN forecast, by 2025-2045 the Russian state will lose about 11 million people, mainly for one reason - the alcoholism of most of the population [News Time. October 5, 2009].

Since it is ascertained that there is a demographic crisis in Russian society, it can be said that the well-known medium-term forecasts for the coming decades are generally not optimistic.

As for the causes of the Russian demographic crisis, there are several groups of opinions regarding predominant factors.

- Economic and demographic factors associated with a decrease in the birth rate in industrial and post-industrial countries and societies. This kind of phenomenon is caused by modifications of the structure of employment and a marked demographic decline of motivation.

- Socio-economic factors associated with the deterioration of social and economic living conditions in a particular state, the inability to support a family and have children.

- Socio-medical factors related to the sharp decline in the quality of life and health of the population, an increase in the number of patients with drug and alcohol addiction, which not only leads to an early death, but can also create a tendency to degeneration of the gene pool.

- Socio-ethical factors related to socio-psychological decadence in society, the consequence of which is the fact of mass depression, the destruction of the institution of public morality.

For a long time now, there has been the expression "Russian cross," - on the demographic chart, the fertility line is steadily falling down amid the fact that the mortality line is rising.

Here is a good example with respect to the last years: the death rate and birth rate for 2018 statistics. Statistical data are presented in table 1 [el. resource, 2018].

Year	Birth rate	Mortality
2015	1,94	1,99
2016	1,79	1,89
2017	1,69	1,82

Table 1.

Overall, since 2013 natural population growth has not been fixed. About such a situation, the Russian demographer S.V. Zakharov said that this situation is associated with a negative population growth observed in any developed country [Zakharov, 2014].

However, demographers and sociologists are forced to ascertain the situation in the Russian society as a deep crisis.

In this article, we turn to the analysis of the demographic projection until 2050 made by Russian demographers A.G. Vishnevsky and E.M. Andreev. These authors note that the main task of the medium-term demographic projection is a certain attempt to trace the modification paths with the application of 12 different but probable scenarios. In essence, these scenarios can be divided into three groups [Vishnevsky, Andreev, 2007]:

- The first group of possible scenarios includes scenarios with zero net migration, which allow calculating and assessing the change in population based solely on a statistical analysis of its natural movement - birth and death. Guided by the logic of these scenarios, the natural population growth in Russian society in the coming years will be unfavorable. This means that the total number of the Russian population will decrease.

- The second group involves demographic scenarios with a relatively constant figure of the Russian population over the period from 2000 to 2045. Note that these scenarios show a favorable positive natural population growth (increasing through the migration factor). In other words, the one it should be in order Russian society remained demographically stable and anti-crisis until 2045.

- The third group involves scenarios with an ever-increasing number of Russian populations. Data obtained through these demographic scenarios allow assessing the level of migration in Russia required for the growth of the country's population.

As a result, according to A.G. Vishnevsky and E.M. Andreev, in 25-30 years Russia's population may be reduced by almost 25 million people, and it will happen, at least in two directions: towards reducing the natural birth rate and towards reducing the mortality age. The authors suggest that even the influx of migrants will not be able to fundamentally reverse the current crisis of the demographic situation in the Russian society [Wisniewski, Andreev, 2007]. In this regard, it should be noted that the main indicator of the demographic situation is the net reproduction rate of the Russian population. It illustrates the level of substitution of the parent generation by the child generation under an understandable and logical condition: throughout the life of those born, age-related mortality rates will be the same as in the year of birth. It is for this reason that the demographic situation in today's Russia is perceived by society and is assessed by sociologists-forecasters as critically acute. Correcting this situation is difficult, it is necessary to increase the number of large families and the flow of migrants [Gryshai, et al., 2018].

Analyzing the scenarios presented by A.G. Vishnevsky and E.M. Andreev, the results of their socio-demographic projection can be summarized as follows. There is very low probability that after 25 years a sudden turn in the direction of increasing the birth rate will occur in developed countries and Russian society will demonstrate similar to these countries level of social and economic development. On the contrary, it can be assumed that after 25-30 years the low birth rate will remain the same. The worst-case scenario, according to N.V. Kadurina, suggests the following indicators: the Russian population in the next two to three decades will be about 86.5 million people. An increase in the birth rate to two children per woman under unchanged death rate would increase the number by



approximately 8 million people to 94.5 million; however, such an increase seems unlikely [Kadurina, 2014].

The lack of growth in the birth rate can lead to problems even in stabilizing the population: for example, in 2020 a total birth rate of 3.03 will be required; in 2025 - 3.41; in 2030 - 3.58; in 2035 - 3.77; in 2040 - 4.12; in 2045 - 4.53 and in 2049 - 4.80 children per woman [Sinelnikov, 2014]. However, the main problem is that most Russian women, regardless of their marital status, today prefer to have one child. This fact cannot even affect the stabilization of the socio-demographic situation. Moreover, forecasters do not suggest major changes in this direction. In addition, the birth of 4-5 children by one woman today is in principle excluded for various reasons. First of all, for economic reasons, for unsatisfactory living conditions for several children, and because modern women lack the necessary amount of energy and vitality for raising a large number of children and caring for a large family.

The apparent inability to maintain permanent number of Russian population at the expense of only the balance of births and deaths forces us draw the eye to such an important factor of socio-demographic dynamics as migration. For the growth of the Russian population there should be an interval from 76 to 118 million people (from 1.5 to 2.4 million people per year) [Kadurina, 2014].

Let us analyze another well-known forecast made by the UN staff for Russia until 2025. The population by 2020 will reach 134.8 million, and by 2025 - will decrease to 131.4 million people. The proportion of children under the age of 15 years by 2020 will amount to 15.9 million people, and by 2025 will begin to decline to 15.2 million people. At the same time, the proportion of elderly people under the age of 60 years is steadily increasing from 22.9 to 24.9 million people. Therefore, according to the UN forecast, a decrease in the total population of Russia is also logical [UN Demographic Forecast].

In terms of socio-demographic policy, the fulfillment of such forecasts, undoubtedly, cannot bring anything good to the Russian country. The population will age, women will prevail in it, which, in one way or another, will affect Russia's participation in world economic processes, lower its foreign policy rating, and the quality of labor resources will also noticeably decrease and entail a decrease in the quality of production [Gafiatulina, Vorobyev, et al., 2018].

It is the lack of balance in the Russian demographic processes, the birth crisis that led to the adoption by the Government of the Russian Federation in 2007 of the "Concept of the Demographic Policy of the Russian Federation for the period until 2025". Under this concept, at the state level, material support is provided to poor or single-parent families - they are given lump-sum payments, child allowances, housing subsidies, "maternity capital" for a second child. However, it must be remembered that payments of "maternity capital" will be made until 31 December 2021 - at the end of this program, a significant demographic decline is likely to be expected. Despite the fact that many experts doubt the viability of such programs, we believe that with their long-term action they will help to mitigate the negative consequences of the demographic crisis.

## Conclusions

In conclusion, it is advisable to add that the demographic situation is complex and characterized by a certain variability, sometimes sudden. It is thought that if the influx of

migrants does not weaken, and in most families of Russian society, at least two children are born, the demographic situation can conditionally stabilize. Nevertheless, we have to admit the fact that any demographic decline is the result of a violation of the general economic balance in the state. Thus, overcoming the demographic crisis in Russian society must begin with the implementation of appropriate reforms in the field of economics and domestic politics. Even the most optimistic of the current forecasts of the demographic future of Russia signal the need for a strong demographic policy aimed at increasing the birth rate, and attention to an important factor in demographic dynamics - migration in order to stabilize the population of Russia.

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