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POPULATION DYNAMICS IN THE NORTHWESTERN FEDERAL DISTRICT REGIONS: RETROSPECTIVE AND PROSPECTS (2000–2045)



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The diversity of regions within the Northwestern Federal District – shaped by historical, geographical, natural, climatic, socio-economic, and socio-cultural factors – results in marked differentiation not only in their demographic situations but also in the trajectories of demographic change. Sound territorial development management requires understanding of both retrospective trends and future prospects of population dynamics. Furthermore, it is essential to account for the effects of government socio-economic and demographic policies, notably pension reform and pro-natalist measures, on the evolution of different age groups. This study aims to assess the past population dynamics of the regions of the Northwestern Federal District and their short- to medium-term prospects, with a focus on changes in age structure. The analysis draws on official data from Rosstat. The main research methods include retrospective analysis of permanent resident population change, cohort-component population projections, and a typology of regions based on population dynamics. The study identifies region types according to both retrospective (2000–2024) and prospective (up to 2035 and 2045) population trends, including the contributions of major age groups (below working age, working age, and above working age). Comparing the regional typologies across different time periods makes it possible to assess likely population trends over the coming decades. Continued population growth is expected in the Nenets Autonomous Area and the Leningrad Region. Sustained population decline is projected for the Arkhangelsk, Vologda, Murmansk, Novgorod, and Pskov regions, as well as the Republic of Karelia and the Komi Republic. Stability at baseline levels or a shift from growth to decline is expected in the Kaliningrad Region and Saint Petersburg.

Population dynamics, retrospective analysis, demographic projection, regional typology, Northwestern Federal District regions.

Introduction

The Northwestern Federal District (NWFD) is characterized by a unique geographical position: it has access to four seas – the Baltic, the White, the Barents, and the Kara – and possesses ice-free seaports, as well as abundant forest and mineral resources. The district encompasses territories with both a relatively temperate northern climate and those lying beyond the Arctic Circle, including parts of the Republic of Karelia and the Komi Republic, the Arkhangelsk Region, the Nenets Autonomous Area, and the Murmansk Region. It shares borders with several strategically important foreign states, contains an exclave region (Kaliningrad Region), and is distinguished by unique socio-cultural characteristics – such as a diverse ethnic composition, specific value orientations, and distinctive migration attitudes – as well as by particular socio-economic conditions (Shabunova et al., 2023). The NWFD occupies a special place among Russia's federal districts, as it brings together highly urbanized territories, regions with a pronounced industrial specialization, and Arctic and border subjects alike (Voloshen, 2025).

The diversity of the district's territories manifests itself in a marked differentiation in the nature and trends of their demographic development. A typology of Russia's regions by population dynamics over the post-Soviet period (1991–2024), carried out by A.E. Krupko and co-authors, showed that three subjects of the NWFD experienced favorable demographic dynamics during this period (the Leningrad and Kaliningrad regions, the City of St Petersburg), whereas the remaining eight experienced unfavorable dynamics, and among them, four had catastrophic dynamics (the Republic of Karelia, the Komi Republic, the Arkhangelsk Region, and the Murmansk Region) (Krupko et al., 2025). According to another typology – this one developed by O.L. Rybakovskii and based on the relative level of population reproduction (the vitality index and its component factors) – three subjects of the NWFD are classified as

disadvantaged in reproductive terms (the Leningrad Region, the Pskov Region, and the Novgorod Region); four are disadvantaged to a lesser degree (the Republic of Karelia, the Arkhangelsk, Vologda, and Kaliningrad regions); two are regions with the country's lowest level of depopulation (the Murmansk Region and the Komi Republic); and one is well-off (the Nenets Autonomous Area). The author singles out the City of St Petersburg separately as a representative of the metropolitan macroregion, where reproduction indicators are improving as a result of a rising birth rate that draws on the neighboring Leningrad Region (since women from the surrounding regions often travel to the capital cities to give birth) (Rybakovskii, 2024a). Moreover, the subjects of the NWFD vary noticeably in terms of net migration and its relationship with natural population decline. The leaders in net migration – which exceeded natural population loss several times over and compensated for it during the 1992–2022 period – were the City of St Petersburg, the Leningrad Region, and the Kaliningrad Region. The regions that only partially compensated for natural loss through net migration over this period were the Novgorod Region and the Pskov Region. In the other subjects of the NWFD, the share of net migration loss was comparable to the share of natural population decline over the period under review (these subjects being the Arkhangelsk, Vologda, Murmansk regions, the Republic of Karelia, and the Komi Republic) (Rybakovskii, Rybakovskii, 2023).

In several studies, the typologies of the demographic situation and its dynamics are supplemented with related economic, social, and environmental indicators. Thus, in the work of L.L. Emel'yanova and V.K. Ezhova, types of the NWFD regions were identified according to their geo-demographic situation (Emel'yanova, Ezhova, 2018). The first type – a stable geo-demographic situation, with positive natural and net migration increases combined with high positive dynamics in the economic and social indicators – is represented by the federal city of St Petersburg. The second type – characterized

by a stable geo-demographic situation driven by both natural increase and, to a greater extent, external net migration, with positive dynamics in the majority of economic and social indicators but also with negative manifestations of self-preservation behavior and possible tension in the ethno-demographic sphere – comprised three regions: the Nenets Autonomous Area, the Kaliningrad Region, and the Leningrad Region. Here, the Nenets Autonomous Area fell into Subtype A, which features a young and growing population, positive natural increase, a minimal demographic burden, and high positive dynamics in the economic and social indicators, whereas the Kaliningrad and Leningrad regions were assigned to Subtype B, which is marked by an aging population, negative natural increase offset by positive net migration, and average positive dynamics in the economic and social indicators. The third type – an unstable geo-demographic situation driven by high levels of negative natural increase and by migration outflow that is only partially compensated for by external and internal migration, accompanied by average positive dynamics in several economic and social indicators and by calm ethno-demographic development – included four regions: the Vologda, Novgorod, Murmansk, and Arkhangelsk regions. The first two were placed in Subtype A, which is characterized by an old population, negative natural and net migration increases, a high demographic burden, and high and average positive dynamics in the majority of economic and social indicators; the latter two were assigned to Subtype B, which is characterized by an aging population, negative natural and net migration increases that are partly compensated for by external migration, a demographic burden that is average for the region, and positive dynamics in the economic and social indicators at the regional average level. The fourth type – a negatively developing geo-demographic situation, with negative or zero natural increase, high net migration outflow, low positive dynamics in the economic and social indicators, negative self-preservation behavior, and possible ethno-demographic

tension – encompassed three regions: the Pskov Region, the Republic of Karelia, and the Komi Republic (Emel'yanova, Ezhova, 2018).

In addition, attempts have been made to classify the regions of the NWFD according to the prospects for changes in their population size, particularly in their rural populations. Thus, based on the projected changes in the size of the rural population over the period 2015–2035, the subjects of the NWFD were divided into regions with a steadily growing rural population (the Murmansk Region), those with unstable population dynamics (the Leningrad, Kaliningrad, and Pskov regions, and the Komi Republic), and those with a steadily declining rural population (the Vologda, Arkhangelsk, and Novgorod regions, and the Republic of Karelia) (Likhacheva et al., 2016; Korolenko, 2017).

The differences in the nature and dynamics of the demographic processes occurring in the regions of the NWFD call for attention to be paid to their long-term trends – both those that were observed in the past and those that are expected over the coming decades. Understanding the prospects for demographic development appears to be especially important in the light of assessments of the effectiveness of state socio-economic and demographic policy, in particular from the standpoint of the influence exerted by the pension reform and by state policy measures to raise the birth rate on the population dynamics of the main age groups (children, people of working age, and people above working age). In this connection, studies that compare retrospective and forward-looking trends in the population dynamics of Russia's regions, including the subjects of the NWFD, are acquiring scientific novelty and importance.

The foregoing considerations determined the aim of the present work, which was to assess the population dynamics of the regions of the NWFD both retrospectively and prospectively over the short and medium term, with an emphasis on the dynamics of the age structure. The objectives of the study are: (1) to

identify the specific features of the population dynamics of the subjects of the NWFD in 2000–2024 and to distinguish types of regions according to the character of these dynamics; and (2) to assess the projected population dynamics of the subjects of the NWFD and to identify the specificities of the regions based on the character of these projected dynamics.

Materials and methods

The methodological framework of the study consisted of a retrospective analysis of changes in the size of the resident population, the construction of a population projection using the cohort-component method (the age-shift method), and a typology of the regions by population dynamics, including an assessment of the contribution made by the dynamics of the various age groups. The retrospective analysis of the resident population dynamics of the NWFD regions was conducted over the period 2000–2024. When evaluating the trends in the change in the size of the main age groups, particular attention was paid to the influence exerted by the pension reform in Russia, since the gradual raising of the retirement age threshold that began in 2019 has had a predictable effect on the numbers of people of working age and of people above working age.

The demographic projection of the population using the cohort-component method involves estimating the future size and gender-and-age structure of the population by “advancing” the age groups into older ages, taking into account the current parameters of fertility, mortality, and migration. The algorithm for forecasting by means of this method consists of several stages: 1) the collection of statistical data on the baseline (initial) distribution of the population by gender and age, as well as on gender-and-age-specific fertility, mortality, and migration rates; 2) the

choice of the projection period and of the projection step; 3) the actual “advancing” of the age groups—taking into account survival rates, each gender-and-age cohort in the population is moved forward by one time unit and simultaneously becomes older; 4) the incorporation of gender-and-age-specific fertility patterns – calculating the number of births to women of reproductive age using age-specific fertility rates, and distributing the newborns by gender while accounting for their survival to the end of the interval; 5) the incorporation of gender-and-age-specific migration patterns – calculating the net migration balance for each gender-and-age group; 6) the calculation of the population by gender and age for the first projection year; and 7) the repetition of the calculation on the basis of the new gender-and-age structure for each subsequent year until the end of the projection period¹. In the present study, the demographic projection was carried out for the 11 subjects of the NWFD and for the federal district as a whole. The projection period was set at 21 years, with a step of one year. The calculations were performed using the MS Office Excel software package.

The projection was built according to two scenarios. The first is an inertial scenario that assumes that the prevailing trends in fertility, mortality, and migration will persist throughout the entire projection period at the level of the base year (2023 / early 2024). The second is a fertility-increase scenario. It is based on the assumption of an even year-on-year change in the fertility indicators, in line with the target values for the total fertility rate (TFR) set out in the Unified Plan for Achieving the National Development Goals of the Russian Federation up to 2030 and for the Outlook up to 2036². This second scenario is normative in character, as it takes

¹ National Research Council (2000). *Beyond Six Billion: Forecasting the World's Population*. Washington, DC: The National Academies Press. DOI: 10.17226/9828; L.L. Rybakovsky (Ed.). (2005). *Practical Demography*. Moscow: Center for Social Forecasting. Pp. 234–235.

² The TFR value should reach 1.593 by 2030 and 1.8 by 2035, meaning that the country's birth rate must increase by 28% by 2035. Source: Unified Plan for Achieving the National Development Goals of the Russian Federation up to 2030 and for the Outlook up to 2036. Government of the Russian Federation. Available at: <http://static.government.ru/media/files/ZsnFICpxWknEXeTfQdmcFHNei2FhcR0A.pdf>

into account the parameters of population dynamics that are necessary and that correspond to Russia's national interests (Rybakovskii, 2023). The projection was carried out for both the short term (up to 2035) and the medium term (up to 2045). Despite its undeniable advantages, demographic projection has its limitations. First, it rests on methodological assumptions³. Second, it is most effective in the context of a stable society, in the absence of wars, revolutions, pandemics, and natural disasters, since it is unable to foresee abrupt changes in institutional structures or sudden scientific and technological breakthroughs (Kashepov, 2023b). Epidemiological, geopolitical, and socio-economic shocks are destabilizing factors and can impair the quality of the projected data.

The typology of the NWFD regions by population dynamics (both retrospective and projected) was based on two criteria: the direction of change in the indicator (growth or decline), and the direction of change in the size of the main age groups of the population (those of working age, those below working age, and those above working age).

The information base of the study consisted of official statistical data from Rosstat on the regions of the NWFD, including the data needed for constructing the demographic projection. These data cover the size of the resident population by gender and age at the beginning of the year, both in single-year and in five-year age groups⁴; the number of deaths by gender and by five-year age groups (for 2023)⁵; the number of births

by gender (for 2022 and 2023)⁶; age-specific fertility rates (for 2023)⁷; and the number of arrivals and departures by gender and by five-year age groups (for 2023)⁸.

Results

Population dynamics of the regions of the NWFD in 2000–2024

From 2000 to 2024, the size of the resident population of the NWFD as a whole decreased by 483,200 persons (by 3%; *Tab. 1*). The population decline in the district during this period was driven by a decrease in the number of people below working age and of working age (by 385,800 and 540,000 persons, respectively; *Tab. 2*). In only four of the eleven subjects of the NWFD did the population increase, but the contribution of the main age groups to this change differed: in the City of St Petersburg, the increase was driven by all age groups; in the Leningrad and Kaliningrad regions, by the populations of working age and of above working age; and in the Nenets Autonomous Area, by the population of above working age. The most substantial increases in population took place in the Leningrad Region (a 21% rise by 2024) and in the City of St Petersburg (an 18% rise). Although, in absolute terms, the greatest contribution to this process was made by the working-age population, the relative rates of population increase proved to be higher for the older age group (which grew by 31% and 28% by 2024 in the Leningrad Region and the City of St Petersburg, respectively).

In the remaining seven regions of the NWFD, the population declined from 2000 to 2024: in the Republic of Karelia, the Komi Republic, and the

³ The assumptions are listed in: Demographic Development of the Regions of the Northwestern Federal District: The Sixth Regional Demographic Report (2025). A.A. Shabunova, O.N. Kalachikova, A.V. Korolenko, A.A. Sokolova, A.A. Kolesov, A.A. Larina; A.A. Shabunova (Ed.); Vologda Research Center of the Russian Academy of Sciences. Vologda: VolRC RAS. Pp. 34–35.

⁴ Population of the Russian Federation by Gender and Age as of January 1, 2024. Rosstat. Available at: <https://rosstat.gov.ru/folder/11110/document/13284>

⁵ Number of Deaths by Gender and Five-Year Age Groups. EMISS. Available at: <https://www.fedstat.ru/indicator/58775>

⁶ Data provided by Rosstat upon request.

⁷ Age-Specific Fertility Rates. EMISS. Available at: <https://www.fedstat.ru/indicator/30973>

⁸ Number of Arrivals and Departures by Gender, Age, and Migration Flows. Migration (Data Dashboards). Rosstat. Available at: <https://rosstat.gov.ru/folder/12781>

Table 1. Resident population dynamics of the NWFD regions, 2000–2024,* as of the beginning of the year, thousands of persons

Region	Year										2024 to 2000	
	2000	2005	2010	2015	2018	2020	2021	2022	2023	2024	+/-	%
NWFD	14323.6	13793.5	13604.2	13843.6	13952.0	13982.0	13942.0	13901.1	13867.3	13840.4	-483.2	96.6
Regions with a growing population												
<i>Regions where the population is growing thanks to all age groups</i>												
City of St Petersburg	4741.9	4686.5	4832.8	5191.7	5351.9	5398.1	5384.3	5377.5	5600.0	5597.8	+855.9	118.0
<i>Regions where the population is growing thanks to the working-age population and the population above working age</i>												
Leningrad Region	1686.7	1681.4	1704.9	1775.5	1813.8	1875.9	1892.7	1911.6	2023.8	2035.8	+349.1	120.7
Kaliningrad Region	958.8	942.1	938.6	968.9	994.6	1012.5	1018.6	1027.7	1032.3	1033.9	+75.1	107.8
<i>Regions where the population is growing thanks to the population above working age</i>												
Nenets AA	41.2	41.9	42.1	43.4	44.0	44.1	44.4	44.5	41.4	42.2	+1.0	102.4
Regions with a declining population												
<i>Regions where the population is declining on account of the populations below working age and of working age</i>												
Republic of Karelia	735.5	689.6	648.7	632.5	622.5	614.1	609.1	603.1	527.9	523.9	-211.6	71.2
Komi Republic	1057.9	982.9	912.0	864.4	840.9	820.5	813.6	803.5	726.4	720.6	-337.3	68.1
Arkhangelsk Region**	1349.1	1299.2	1237.5	1183.3	1111.0	1136.5	1082.7	1114.3	964.3	955.8	-393.3	70.8
Vologda Region	1299.6	1245.8	1208.4	1191.0	1176.7	1160.4	1151.0	1139.5	1128.8	1121.3	-178.3	86.3
Murmansk Region	941.1	856.9	799.8	766.3	753.6	741.4	732.9	724.5	658.7	656.4	-284.7	69.7
<i>Regions where the population is declining on account of all age groups</i>												
Novgorod Region	718.6	674.5	639.7	618.7	606.5	596.5	592.4	586.1	575.9	571.4	-147.2	79.5
Pskov Region	793.2	734.5	681.9	651.1	636.5	626.1	620.2	613.4	587.8	581.1	-212.1	73.3

* The current population estimate for the beginning of 2023 and 2024 is calculated based on the results of the 2020 All-Russian Population Census, conducted as of October 1, 2021, taking into account the natural and net migration increases for the relevant period. The current population estimate for the beginning of 2022 is given without taking the census results into account.

** Here and throughout: excluding the Nenets Autonomous Area.

Sources: EMISS. Available at: <https://fedstat.ru>; Population of the Russian Federation by gender and age: statistical bulletin. Rosstat. Available at: <https://gks.ru/folder/11110/document/13284>

Table 2. Dynamics of the main age groups of the population of the NWFD regions, 2000–2024, as of the beginning of the year, thousands of persons

Region	Below working age					Working age					Above working age				
	2000	2018	2024	2018	2024	2000	2018	2024	2018	2024	2000	2018	2024	2018	2024
				to 2000, %					to 2000, %					to 2000, %	
NWFD	2632.6	2362.4	2246.8	89.7	85.3	8707.7	7878.9	8167.7	90.5	93.8	2983.3	3710.7	3425.9	124.4	114.8
Regions with a growing population															
Regions where the population is growing thanks to all age groups															
City of St Petersburg	762.3	822.9	851.4	107.9	111.7	2889.8	3087.7	3357.2	106.8	116.2	1089.8	1441.4	1389.2	132.3	127.5
Regions where the population is growing thanks to the working-age population and the population above working age															
Leningrad Region	301.4	277.8	285.9	92.2	94.9	1001.6	1030.2	1247.4	102.9	124.5	383.7	505.7	502.5	131.8	131.0
Kaliningrad Region	183.8	175.6	180.3	95.5	98.1	589.3	566.7	612.1	96.2	103.9	185.7	252.3	241.5	135.9	130.0
Regions where the population is growing thanks to the population above working age															
Nenets AA	10.9	10.9	9.3	100.0	85.3	25.8	25.0	25.4	96.9	98.4	4.5	8.1	7.5	180.0	166.7
Regions with a declining population															
Regions where the population is declining on account of the populations below working age and of working age															
Republic of Karelia	147.9	114.5	89.3	77.4	60.4	447.9	339.1	293.0	75.7	65.4	139.6	168.9	141.6	121.0	101.4
Komi Republic	231.8	171.0	133.5	73.8	57.6	677.9	480.1	421.4	70.8	62.2	148.1	189.8	165.7	128.2	111.9
Arkhangelsk Region	275.8	208.4	168.3	75.6	61.0	824.1	605.3	538.0	73.4	65.3	249.2	297.3	249.6	119.3	100.2
Vologda Region	259.7	227.7	211.8	87.7	81.6	760.1	638.1	630.7	83.9	83.0	279.8	310.8	278.8	111.1	99.6
Murmansk Region	183.6	140.9	123.2	76.7	67.1	633.6	445.6	398.1	70.3	62.8	123.9	167.1	135.2	134.9	109.1

End of Table 2

Region	Below working age					Working age					Above working age				
	2000	2018	2024	2018	2024	2000	2018	2024	2018	2024	2000	2018	2024	2018	2024
				to 2000, %					to 2000, %					to 2000, %	
Regions where the population is declining on account of all age groups															
Novgorod Region	132.5	107.2	99.4	80.9	75.0	409.5	319.4	318.9	78.0	77.9	176.6	179.9	153.2	101.9	86.7
Pskov Region	142.9	105.5	94.4	73.8	66.1	448.0	341.6	325.6	76.3	72.7	202.3	189.5	161.1	93.7	79.6
Note: Below working age in 2000, 2018, and 2024 – the population aged 0–15 years; working age in 2000 and 2018 – males aged 16–59 and females aged 16–54; in 2024 – males aged 16–62 and females aged 16–57; above working age in 2000 and 2018 – males over 60 and females over 55; in 2024 – males over 63 and females over 58. Sources: EMISS. Available at: https://fedstat.ru ; Population of the Russian Federation by gender and age: Statistical bulletin. Rosstat. Available at: https://gks.ru/folder/11110/document/13284															

Arkhangelsk, Vologda, and Murmansk regions, the decline was driven by the populations below working age and of working age; in the Novgorod and Pskov regions, it was driven by all age groups. The most significant population losses over this period – amounting to nearly one-third – were experienced by the Komi Republic and the Republic of Karelia (declines of 32 and 29%, respectively) and by the Murmansk and Arkhangelsk regions (declines of 30 and 29%, respectively). At the same time, whereas in the Komi Republic, in Karelia, and in the Arkhangelsk Region the younger age group contracted more sharply (by 42, 40, and 39%, respectively), in the Murmansk Region it was the working-age population that shrank the most (by 37%).

It is noteworthy that in the City of St Petersburg and in the Leningrad Region, the increase in the working-age population by 2024 proved to be more substantial than it had been by 2018 (16% vs. 7% and 25% vs. 3%, respectively). In the Kaliningrad Region, moreover, an increase in this indicator replaced the decline that had been observed in the period from 2000 to 2018. In the Nenets Autonomous Area, the rate of decline of the working-age population by 2024 was smaller than it had been by 2018 (2% vs. 4%), while in the other regions it either remained at the same level (22% in the Novgorod Region and 16–17% in the Vologda Region) or grew only marginally (by no more than 10%). At the same time, in the majority of the regions that displayed an upward trend in the size of the population above working age, the rate of this growth had slowed down by 2024 (compared with the rate observed

by 2018). In those subjects of the NWFD where the size of the older age groups was declining, the rate of this decline had accelerated by 2024. The trends that are observed here are in many respects – though not exclusively⁹ – attributable to the effects of the pension reform and to the raising of the working-age threshold.

A comparison of the dynamics of the working-age population between 2000 and 2024, using the old and the new age boundaries, makes it possible to assess the direct impact of the pension reform. In the City of St Petersburg and in the Leningrad Region, had the old retirement-age threshold been retained, the increase in the number of working-age people over this period would have been 9% and 17%, respectively, whereas, thanks to the raising of the threshold, the indicator rose to 16 and 25%, respectively. In the Kaliningrad Region, the implementation of the pension reform made it possible to avoid a contraction in the number of working-age people and even to increase it, albeit only slightly (by 4%). In the remaining regions of the NWFD, by 2024 the pension reform had not solved the problem of the decline in the working-age population, but it had markedly reduced it. Thus, for example, thanks to the reform, the size of the working-age population increased by 8% in the Republic of Karelia and in the Pskov Region, by 7% in the Komi Republic, the Arkhangelsk Region, the Vologda Region, the Kaliningrad Region, the Novgorod Region, and the City of St Petersburg, and by 6% in the Nenets Autonomous Area, the Leningrad Region, and the Murmansk Region (Tab. 3).

⁹ The decline in the growth rate of the population above working age is also linked to excess mortality among the elderly during the coronavirus pandemic (Kashepov, 2023a).

**Table 3. Change in the size of the working-age population of the NWFD regions, 2000–2024
(with and without the pension reform taken into account)**

Region	Change in working-age population (without pension reform*)		Change in working-age population (with pension reform**)		Increase in working-age population in 2024 due to the pension reform	
	2024 compared to 2000, +/- thousand persons	2024 compared to 2000, %	2024 compared to 2000, +/- thousand persons	2024 compared to 2000, %	thousand persons	%
NWFD	-1 056.9	87.9	-540.0	93.8	+516.9	106.8
Republic of Karelia	-176.0	60.7	-155.0	65.4	+21.1	107.7
Komi Republic	-284.2	58.1	-256.6	62.2	+27.7	107.0
Nenets Autonomous Area	-1.7	93.5	-0.3	98.7	+1.3	105.5
Arkhangelsk Region	-322.3	60.9	-286.1	65.3	+36.1	107.2
Vologda Region	-171.9	77.4	-129.4	83.0	+42.5	107.2
Kaliningrad Region	-15.7	97.3	+22.8	103.9	+38.5	106.7
Leningrad Region	+172.6	117.2	+245.8	124.5	+73.2	106.2
Murmansk Region	-258.8	59.2	-235.5	62.8	+23.3	106.2
Novgorod Region	-112.7	72.5	-90.7	77.9	+22.1	107.4
Pskov Region	-145.9	67.4	-122.4	72.7	+23.5	107.8
City of St Petersburg	+259.7	109.0	+467.4	116.2	+207.6	106.6

* Preserving the working-age limits at 16–59 years for males and 16–54 years for females.

** In accordance with the gradual raising of the retirement age, in 2024 the working-age for males was 16–62 years and for females 16–57 years. Calculated from: Rosstat data.

Projected population dynamics of the regions of the NWFD up to 2045

According to the inertial scenario of the projection, the population of the NWFD will decline by 5% to 13,202,900 persons by 2035, and by 12% to 12,214,600 persons by 2045 (Tab. 4). By 2035, a population decline is expected in eight of the eleven subjects of the district; by 2045, it is expected in nine subjects. The most substantial declines are expected in the Pskov Region (by 13% by 2035 and by 26% by 2045), in the Arkhangelsk Region (by 11 and 22%, respectively), and in the Komi Republic (by 11 and 22%, respectively). Population growth is projected for the Nenets Autonomous Area (by 29% by 2035 and by 66% by 2045) and for the Leningrad Region (by 4 and 3%, respectively). The population of the Kaliningrad Region will not change substantially by 2035, although a decline (by 4%) is expected by 2045.

The fertility-increase scenario, while not fundamentally altering the character of the NWFD's demographic dynamics, will markedly "soften" the negative trends. According to this

scenario, the population of the district will decline by a mere 2% to 13,499,600 persons by 2035, and by 8% to 12,788,300 persons by 2045. In other words, the demographic policy measures will make it possible to avoid the loss of 296,700 persons by 2035 and of 573,700 persons by 2045. Thanks to the implementation of this scenario, the rate of population decline will slow down most noticeably in the Murmansk Region and in the republics of Komi and Karelia. In the Kaliningrad Region, the raising of the birth rate will make it possible to increase the population somewhat by 2035 and to avoid its contraction by 2045. The greatest increase in the indicator is expected in the Nenets Autonomous Area (by 34% by 2035 and by 77% by 2045). According to this scenario, a population decline of 2.5% by 2035 and of 8% by 2045 is projected for the federal district as a whole, although this decline will, nevertheless, be smaller than that in the inertial scenario.

Drawing on the population projection data, the regions of the NWFD were distributed into types and subtypes based

Table 4. Projected population dynamics of the regions of the NWFD up to 2035 and 2045 (inertial scenario and fertility-increase scenario), thousands of persons

Region	Scenario	Year			2035	2045
		2024(b)	2035	2045	to 2024, %	
NWFD	S1(in)	13840.4	13202.9	12214.6	95.4	88.3
	S2(f)		13499.6	12788.3	97.5	92.4
1. Regions with a steadily growing projected population						
1.1. Regions where the population will be growing thanks to all age groups						
Nenets AA	S1(in)	42.2	54.4	70.1	128.9	166.1
	S2(f)		56.5	74.9	133.9	177.4
1.2. Regions where the population will grow thanks to the working-age population (throughout the entire projection period) and the population above working age (starting in 2035)						
Leningrad Region	S1(in)	2035.8	2112.2	2097.8	103.8	103.0
	S2(f)		2152.7	2180.9	105.7	107.1
2. Regions whose projected population will remain at the base-year level or even grow somewhat under the fertility-increase scenario						
2.1. Regions where the working-age population (up to 2035) and the population above working age (starting in 2035) will grow						
Kaliningrad Region	S1(in)	1033.9	1028.5	992.6	99.5	96.0
	S2(f)		1050.8	1037.6	101.6	100.4
2.2. Regions where it is mainly the population above working age that will increase						
City of St Petersburg	S1(in)	5597.8	5475.0	5139.7	97.8	91.8
	S2(f)		5595.4	5368.2	100.0	95.9
3. Regions with a declining projected population (under both scenarios)						
3.1. Regions where the populations below and above working age will be declining while the working-age population grows (up to 2035)						
Murmansk Region	S1(in)	656.4	624.3	598.5	95.1	91.2
	S2(f)		641.0	632.2	97.7	96.3
3.2. Regions where the size of the working-age population will remain at the base-year level (up to 2035) but where the populations below and above working age will be declining						
Vologda Region	S1(in)	1121.3	1022.7	921.8	91.2	82.2
	S2(f)		1047.3	969.9	93.4	86.5
Novgorod Region	S1(in)	571.4	517.5	462.4	90.6	80.9
	S2(f)		528.9	485.2	92.6	84.9
3.3. Regions with a declining population across all age groups						
Republic of Karelia	S1(in)	523.9	472.5	423.0	90.2	80.7
	S2(f)		484.7	447.6	92.5	85.4
Komi Republic	S1(in)	720.6	641.3	564.4	89.0	78.3
	S2(f)		658.5	596.7	91.4	82.8
Arkhangelsk Region	S1(in)	959.6	849.7	744.9	88.5	77.6
	S2(f)		869.9	783.6	90.7	81.7
Pskov Region	S1(in)	581.1	503.4	430.3	86.6	74.1
	S2(f)		514.7	451.8	88.6	77.7
Note: Here and throughout, 2024(b) is the base year; S1(in) is the inertial scenario; S2(f) is the fertility-increase scenario. Calculated from: Rosstat data.						

on the character of their demographic dynamics over the short term (up to 2035) and the medium term (up to 2045)¹⁰. The

first type was composed of those subjects whose projected population is growing steadily (under both the inertial scenario

¹⁰ Demographic Development of the Regions of the Northwestern Federal District: The Sixth Regional Demographic Report (2025). A.A. Shabunova, O.N. Kalachikova, A.V. Korolenko, A.A. Sokolova, A.A. Kolesov, A.A. Larina; A.A. Shabunova (Ed.); Vologda Research Center of the Russian Academy of Sciences. Vologda: VolRC RAS. P. 47.

and the fertility-increase scenario). Within this type, two subtypes of regions were distinguished. Subtype 1.1 comprises the Nenets Autonomous Area, whose population will be growing throughout the projection period thanks to all its age groups. The favorable demographic outlook for this autonomous area is to a large extent linked to its more advantageous “starting” position – specifically, to its young age structure (in 2024, 22% of the population was below working age). Compared with the inertial scenario, the fertility-increase scenario will ensure a larger increase in its population (by 5% by 2035 and by 11% by 2045), and especially in its younger age group (higher by 22% by 2035 and by 42% by 2045). Subtype 1.2 is represented by the Leningrad Region, whose population will grow thanks to its working-age cohorts (throughout the entire projection period) and to the members of its older ages (starting in 2035). The implementation of the fertility-increase scenario will substantially slow down the rate of decline of the population below working age (by 14% by 2035 and by 20% by 2045, compared with the inertial scenario).

The second type comprises those regions whose projected population will remain at the level of the base year – or may even grow somewhat – under the fertility-increase scenario. The Kaliningrad Region proved to be the sole representative of Subtype 2.1, which will be characterized by an increase in the number of working-age people (up to 2035) and in the population above working age (starting in 2035). The fertility-increase scenario will make it possible to reduce the decline in the size of the region’s younger age category (by 12% by 2035 and by 19% by 2045, compared with the inertial scenario). Subtype 2.2 was likewise represented by only one subject of the NWFD – the City of St Petersburg – where an increase in the size of the older age category is expected throughout the projection period. Thanks

to the fertility-increase scenario, the populations below working age and of working age in the region will contract to a lesser extent by 2035 and 2045.

In the regions of the third type, a decline in the size of the resident population is projected under both scenarios. Subtype 3.1 comprises the Murmansk Region, where a contraction in the size of the younger and older age groups will be combined with a growing working-age population (up to 2035). Raising the birth rate in the region will not lead to an increase in the size of the younger age group, but it will curb the rate of its decline (reducing it by 14% by 2035 and by 22% by 2045, compared with the inertial scenario). The regions assigned to Subtype 3.2 – the Vologda Region and the Novgorod Region – are those where the size of the working-age population will remain at the base-year level (up to 2035) but where the populations below and above working age will be declining. The fertility-increase scenario will slow the rate of population decline in these regions, though only slightly (by 2% by 2035 and by 4% by 2045). Its implementation will noticeably reduce the intensity of the decline in the younger age group (by an average of 11% by 2035 and by 19% by 2045). The most unfavorable demographic dynamics are projected for the regions of Subtype 3.3: a decline in the population of all the age categories. This group comprises the Republic of Karelia, the Komi Republic, the Arkhangelsk Region, and the Pskov Region. In these regions, raising the birth rate – as in the case of the Subtype 2.2 regions – will help to brake the rate of population decline, though not to any substantial degree (a reduction of 1–2% by 2035 and of 3–4% by 2045, compared with the inertial scenario). It is nonetheless worth noting that the effect of the implementation of the demographic policy measures, in terms of restraining the unfavorable dynamics in the size of the younger-age population, will be noticeable:

across this type of region as a whole, the rate of decline will slow down by an average of 12% by 2035 and by 19% by 2045.

In those subjects of the NWFD where an increase in the working-age population is projected for the period up to 2035, the observed growth will be driven by the effect

of the pension reform. After 2030, however, this effect will begin to weaken, and the trend toward a contraction in the size of the working-age cohort will resume (*Tab. 5*).

A comparison of the types of population dynamics across the NWFD regions for different time intervals – both retrospective

Table 5. Projected dynamics of the main age groups of the population of the NWFD regions up to 2035 and 2045 (inertial scenario and fertility-increase scenario), thousands of persons

Region	Scenario	Below working age				Working age				Above working age						
		Year			2035	2045	Year			2035	2045	Year			2035	2045
		2024(b)	2035	2045	to 2024, %	2024(b)	2035	2045	to 2024, %	2024(b)	2035	2045	to 2024, %			
NWFD	S1(in)	2246.8	1662.0	1499.7	74.0	66.7	8167.7	8098.5	7087.4	99.2	86.8	3425.9	3442.4	3627.5	100.5	105.9
	S2(f)		1958.7	1922.1	87.2	85.5		8098.5	7238.7	99.2	88.6		3442.4	3627.5	100.5	105.9
1. Regions with a steadily growing projected population																
1.1. Regions where the population will be growing thanks to all age groups																
Nenets AA	S1(in)	9.3	10.0	13.9	107.5	149.5	25.4	36.5	46.7	143.7	183.9	7.5	7.9	9.5	105.3	126.7
	S2(f)		12.1	17.8	130.1	192.0		36.5	47.6	143.7	187.2		7.9	9.5	105.3	126.5
1.2. Regions where the population will grow thanks to the working-age population (throughout the entire projection period) and the population above working age (starting in 2035)																
Leningrad Region	S1(in)	285.9	235.8	211.8	82.5	74.1	1247.4	1342.0	1272.5	107.6	102.0	502.5	534.4	613.6	106.3	122.1
	S2(f)		276.3	271.5	96.6	95.0		1342.0	1295.8	107.6	103.9		534.4	613.6	106.3	122.1
2. Regions whose projected population will remain at the base-year level or even grow somewhat under the fertility-increase scenario																
2.1. Regions where the working-age population (up to 2035) and the population above working age (starting in 2035) will grow																
Kaliningrad Region	S1(in)	180.3	126.5	120.7	70.2	66.9	612.1	644.0	587.0	105.2	95.9	241.5	258.0	284.9	106.8	118.0
	S2(f)		148.8	154.7	82.5	85.8		644.0	598.0	105.2	97.7		258.0	284.9	106.8	118.0
2.2. Regions where it is mainly the population above working age that will increase																
City of St Petersburg	S1(in)	851.4	675.1	571.0	79.3	67.1	3357.2	3280.5	2864.1	97.7	85.3	1389.2	1519.3	1704.6	109.4	122.7
	S2(f)		795.6	731.7	93.4	85.9		3280.5	2931.9	97.7	87.3		1519.3	1704.6	109.4	122.7
3. Regions with a declining projected population (under both scenarios)																
3.1. Regions where the populations below and above working age will be declining while the working-age population grows (up to 2035)																
Murmansk Region	S1(in)	123.2	90.4	95.0	73.4	77.1	398.1	407.3	377.1	102.3	94.7	135.2	126.5	126.5	93.6	93.6
	S2(f)		107.1	121.7	86.9	98.8		407.3	384.0	102.3	96.5		126.5	126.5	93.6	93.5
3.2. Regions where the size of the working-age population will remain at the base-year level (up to 2035) but where the populations below and above working age will be declining																
Vologda Region	S1(in)	211.8	136.7	132.2	64.5	62.4	630.7	627.6	538.9	99.5	85.4	278.8	258.4	250.7	92.7	89.9
	S2(f)		161.3	169.4	76.2	80.0		627.6	549.8	99.5	87.2		258.4	250.7	92.7	89.9
Novgorod Region	S1(in)	99.4	63.9	61.3	64.3	61.7	318.9	316.4	271.8	99.2	85.2	153.2	137.3	129.3	89.6	84.4
	S2(f)		75.3	78.6	75.8	79.0		316.4	277.2	99.2	86.9		137.3	129.3	89.6	84.4
3.3. Regions with a declining population across all age groups																
Republic of Karelia	S1(in)	89.3	65.8	67.0	73.7	75.0	293.0	279.1	236.3	95.3	80.6	141.6	127.7	119.6	90.2	84.5
	S2(f)		78.0	85.9	87.3	96.2		279.1	242.1	95.3	82.6		127.7	119.6	90.2	84.5
Komi Republic	S1(in)	133.5	93.1	88.5	69.7	66.3	421.4	391.5	322.9	92.9	76.6	165.7	156.6	152.9	94.5	92.3
	S2(f)		110.3	113.5	82.6	85.0		391.5	330.3	92.9	78.4		156.6	152.9	94.5	92.3
Arkhangelsk Region	S1(in)	168.3	111.0	106.2	66.0	63.1	538.0	510.8	419.5	94.9	78.0	253.4	228.0	219.2	90.0	86.5
	S2(f)		131.1	136.1	77.9	80.9		510.8	428.4	94.9	79.6		228.0	219.2	90.0	86.5
Pskov Region	S1(in)	94.4	63.6	57.9	67.4	61.3	325.6	299.7	247.0	92.0	75.9	161.1	140.1	125.5	87.0	77.9
	S2(f)		74.9	74.2	79.3	78.6		299.7	252.1	92.0	77.4		140.1	125.5	87.0	77.9
Calculated from: Rosstat data.																

Table 6. Comparison of the retrospective and prospective population dynamics of the NWFD regions

Region	Type of retrospective dynamics in 2000–2024	Type of projected dynamics up to 2035 and 2045	Character of the dynamics
Will maintain an upward population dynamic			
Nenets AA	↑ of the population thanks to an ↑ in the AWA population	↑ of the population thanks to an ↑ in the BWA, WA, and AWA populations	Will improve
Leningrad Region	↑ of the population thanks to an ↑ in the WA and AWA populations	↑ of the population thanks to an ↑ in the WA and AWA populations	Will not change
Will maintain a downward population dynamic			
Novgorod Region	↓ of the population on account of a ↓ in the BWA, WA, and AWA populations	↓ of the population on account of a ↓ in the BWA and AWA populations by 2035; ↓ of the population on account of a ↓ in the BWA, WA, and AWA populations by 2045	Will improve by 2035 Will not change by 2045
Pskov Region	↓ of the population on account of a ↓ in the BWA, WA, and AWA populations	↓ of the population on account of a ↓ in the BWA, WA, and AWA populations	Will not change
Vologda Region	↓ of the population on account of a ↓ in the BWA and WA populations	↓ of the population on account of a ↓ in the BWA and AWA populations by 2035; ↓ of the population on account of a ↓ in the BWA, WA, and AWA populations by 2045	Will change by 2035 (WA population maintained) Will worsen by 2045
Murmansk Region	↓ of the population on account of a ↓ in the BWA and WA populations	↓ of the population on account of a ↓ in the BWA and AWA populations by 2035; ↓ of the population on account of a ↓ in the BWA, WA, and AWA populations	Will change by 2035 (growth in the WA population) Will worsen by 2045
Republic of Karelia	↓ of the population on account of a ↓ in the BWA and WA populations	↓ of the population on account of a ↓ in the BWA, WA, and AWA populations	Will worsen
Komi Republic	↓ of the population on account of a ↓ in the BWA and WA populations	↓ of the population on account of a ↓ in the BWA, WA, and AWA populations	Will worsen
Arkhangelsk Region	↓ of the population on account of a ↓ in the BWA and WA populations	↓ of the population on account of a ↓ in the BWA, WA, and AWA populations	Will worsen
Will maintain the population at the base-year level or will see an upward population dynamic replaced by a downward one			
Kaliningrad Region	↑ of the population thanks to an ↑ in the WA and AWA populations	↑ of the population thanks to an ↑ in the WA and AWA populations by 2035; ↓ (under S1(in)) or ↔ (under S2(f)) of the population	Will not change by 2035 Will worsen by 2045
City of St Petersburg	↑ of the population thanks to an ↑ in the BWA, WA, and AWA populations	↓ of the population (under S1(in)) on account of a ↓ in the BWA and WA populations, or ↔ of the population (under S2(f)) thanks to an ↑ in the AWA population by 2035; ↓ of the population on account of a ↓ in the BWA and WA populations by 2045	Will worsen

Note: ↑ – increase in the population; ↓ – decline in the population; ↔ – maintenance of the population at the same level; BWA – below working age; WA – working age; AWA – above working age.
Source: Own compilation.

and prospective – makes it possible to assess the character of the changes that are taking place (Tab. 6). An upward population dynamic over the entire projection period is expected to persist only in the Nenets Autonomous Area and in the Leningrad Region. In the Nenets Autonomous Area, moreover, the situation will improve noticeably: whereas from 2000 to 2024 its population grew mainly on account of the population above working age, over the projection period the

growth will be driven by all age categories. The Leningrad Region will display a stable tendency for its population to grow thanks to the populations of working age and of above working age.

The majority of the subjects of the NWFD – seven out of eleven – will retain a downward population dynamic. Among these, a relative improvement in the demographic dynamic by 2035 will occur in the Novgorod Region: the population decline will not turn into growth,

but it will be driven not by all age groups but rather by the populations of the younger and older ages, a fact that is to a large extent attributable to the effects of the pension reform, which expanded the working-age cohorts. By 2045, the demographic dynamic in the region will return to the situation that was observed in 2024.

The Pskov Region will preserve the character of its population dynamic throughout the entire projection period. Its population loss, just as in the 2000–2024 period, will be driven by a contraction in all of the main age cohorts. In the Vologda Region and the Murmansk Region, the character of the population dynamic will change somewhat: whereas up to 2024 the decline was driven by the loss of working-age and below-working-age populations, by 2035 it will be driven by the younger and older age groups (while the working-age cohorts remain stable or increase). In both regions, the demographic dynamic is expected to worsen by 2045, a development that will find expression in the decline of the populations of all ages. In the republics of Karelia and Komi, and in the Arkhangelsk Region, the demographic dynamic will deteriorate over the foreseeable future: the population loss will be driven by all age groups, whereas previously it had been driven by the children and the working-age population.

Two regions of the NWFD will either maintain their population at the base-year level or see an upward dynamic give way to a downward one, depending on the projection period and the scenario adopted. In the Kaliningrad Region, the character of the prospective demographic dynamic up to 2035 will not change: the population will continue to grow thanks to the working-age and the above-working-age cohorts. By 2045, if the inertial scenario materializes, the region's population is expected to decline on account of the losses in the younger and working-age cohorts, whereas the implementation of the fertility-increase scenario would allow the population to be kept at the base-year level.

The City of St Petersburg will experience the most radical shift in its demographic dynamic. The growth in the population of all age groups that was observed between 2000 and 2024 will, under the inertial scenario, give way to a population decline driven by the child and working-age populations. Should the fertility-increase scenario be implemented, the population of St Petersburg could be kept at the base-year level by 2035, largely thanks to the rising number of older cohorts; by 2045, however, a decline driven by the below-working-age and working-age populations is expected.

Conclusion

Thus, the typologies of the NWFD regions according to the character of their retrospective and prospective population dynamics, which were developed in the course of the study, have made it possible to simultaneously assess past and forthcoming trends. The projections, moreover, made it possible to take into account the changes in population size both under the assumption that the existing parameters of natural population change and migration are preserved, and under the condition that the policy to raise the birth rate in the country is implemented. It has been established that the population of the majority of the federal district's regions will be declining over the coming decades. The policy to raise the birth rate will not be able to reverse the negative trends, but it will noticeably smooth them out. Other researchers arrive at similar conclusions at the nationwide level, explaining this by the existing age structure of the population¹¹ (Potapenko, 2025; Antonov, Karpova, 2025) and by the influence of demographic waves (Yumaguzin, Vinnik, 2022).

It is obvious that, in the coming years, the pension reform will help to preserve or even to increase the size of the working-age cohorts and to reduce the size of the population above working age; its effect, however, will begin to weaken as early as 2030 and will have fully

¹¹ Shcherbakova E.M. (2024). Russia's population in the outlook up to 2045. Demoscope Weekly, no. 1015–1016. Available at: <https://demoscope.ru/weekly/2024/01013/barom01.php>

petered out by 2035, a finding that is consistent with the estimates of Russian scholars¹² (Gurtov et al., 2025). Nevertheless, the NWFD regions differ markedly both in the character of their population dynamics and in the contribution made to these dynamics by the main age groups, a fact that is important to take into account when designing not only current demographic and socio-economic policy measures but also when engaging in the strategic planning of such measures.

A comparison of the demographic dynamics in different time intervals has made it possible to determine the character of their change across the NWFD regions. Over the short and medium term, an improvement in the population trends is projected only in the Nenets Autonomous Area. The growing population of all ages in this autonomous area, however, in addition to its positive consequences, will bring new challenges in the form of an increased supply on the labor market and a mounting burden on infrastructure and social institutions. In Leningrad Region, the positive dynamic of the population is expected to be maintained, thanks to the increase in the working-age and older age groups. At the same time, the size of the population above working age will be growing at a higher rate, especially after 2035 (by 22% by 2045), which will increase the burden on the healthcare system, on social services, and on the pension system, will raise the overall mortality indicators (Sigareva et al., 2023), and will require the search for additional instruments for adapting the economy and society.

A continued downward dynamic in the population – driven by all age groups – is projected for the Pskov Region and the Novgorod Region. The causes of this unfavorable demographic dynamic are the persistently high level of depopulation and the old age structure of the population. These regions were not only heavily affected during the Great Patriotic War but also actively contributed their population in the post-war period to the opening up of the Far North and

of the eastern territories of the USSR; in the post-Soviet period, they served as a source for replenishing the populations of Moscow and St Petersburg (Rybakovskii, 2024b). This will inevitably have consequences for their demographic prospects as well.

In the Vologda Region and the Murmansk Region, the character of the demographic dynamic will, on the whole, not change by 2035 (the population will continue to decline). By 2035, however, some improvement will be observed with respect to the change in the size of the working-age cohorts: in the Vologda Region they will remain at the base-year level; in the Murmansk Region they will increase, a development that is to a substantial degree attributable to the effect of the pension reform. In the republics of Karelia and Komi, and in the Arkhangelsk Region, the population will continue to decline over the projection period, but this time on account of all the age groups. The foregoing indicates that the policy measures that are currently being implemented and those that are planned for implementation are not sufficient to overcome the negative demographic trends in these regions.

A shift from an upward population dynamic to a downward one will occur in the Kaliningrad Region and the City of St Petersburg. The policy to raise the birth rate will make it possible to maintain the favorable trends only in the Kaliningrad Region, but its effect will be limited in time – lasting only until 2035. In the City of St Petersburg, both projection scenarios point to a population loss driven by the younger and the working-age groups. This testifies to the exhaustion of the resource that has been replenishing the region's labor potential – a development which, against the backdrop of the projected aging of the population, will place an unprecedented burden on the working-age population. Researchers note that, by 2045, the growth of the demographic burden in Russia will be accompanied by a change in its age composition, as the burden

¹² Shcherbakova E.M. (2024). Russia's population in the outlook up to 2045. Demoscope Weekly, no. 1015–1016. Available at: <https://demoscope.ru/weekly/2024/01013/barom01.php>

is redistributed away from children and young people and toward pensioners. This will call for the state pension system to be modified, for example by introducing a basic pension income into it (Potapenko, 2025).

The problem of depopulation will make itself felt most acutely in the short term (by 2035) in the republics of Karelia and Komi, as well as in the Arkhangelsk, Pskov, Vologda, and Murmansk regions; in the medium term (by 2045), it will do so in the Novgorod Region, the Kaliningrad Region, and the City of St Petersburg. In these NWFD regions, what is already needed now is the adoption of a set of additional measures to create the conditions for bearing and raising children, to support families with children, to develop self-preservation behavior, to reduce mortality and increase life expectancy, to curb emigration, and to attract migrants in the necessary categories (Ryazantsev, Rybakovskii, 2021). In addition, researchers assign a special role in overcoming the problem of depopulation

to the resolution of the housing problem, in particular to the widespread use of forms of support and encouragement for low-rise construction and for providing support to the citizens of Russia who wish to return to their homeland (Soboleva et al., 2022). Nor has the task of raising the incomes and the standard of living of the population of the above-mentioned regions lost any of its relevance; this would make it possible to raise the indicators of the birth rate and of natural increase and to reduce the outflow of young people and of people of working age to the metropolitan regions (Ledeneva, 2023).

The findings obtained in the course of the study possess scientific novelty and practical significance and can be used by the authorities at the federal and regional levels for the purpose of adjusting, designing, and planning socio-economic and demographic policy measures, as well as for forecasting the labor force and the demand for educational, medical, and social services, including pension provision.

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ДИНАМИКА ЧИСЛЕННОСТИ НАСЕЛЕНИЯ РЕГИОНОВ СЕВЕРО-ЗАПАДНОГО ФЕДЕРАЛЬНОГО ОКРУГА: РЕТРОСПЕКТИВА И ПЕРСПЕКТИВЫ (2000–2045 ГГ.)

Разнообразие регионов Северо-Западного федерального округа, связанное с историко-географическими, природно-климатическими, социально-экономическими и социокультурными факторами, обуславливает их заметную дифференциацию не только по демографической ситуации, но и по характеру ее изменения. Для управления территориальным развитием субъектов округа важно понимание как ретроспективных, так и прогнозных тенденций демографической

динамики. Кроме того, необходимо учитывать влияние реализуемых мер государственной социально-экономической и демографической политики, в частности пенсионной реформы и мер повышения рождаемости, на изменение численности разных возрастных групп населения. Цель исследования заключалась в оценке динамики численности населения регионов Северо-Западного федерального округа в ретроспективе и ее перспектив на кратко- и среднесрочный период с акцентом на динамике возрастной структуры. Информационную базу составили официальные данные Росстата. Основные методы исследования – ретроспективный анализ изменения численности постоянного населения, демографический прогноз численности населения методом передвижки по возрастам, типология регионов по динамике численности населения. В ходе исследования определены типы регионов по характеру динамики численности населения – ретроспективной (за период с 2000 по 2024 год) и перспективной (на период до 2035 и 2045 гг.), в том числе с учетом вклада основных возрастных групп (младше, старше и трудоспособного возраста). Сопоставление типов регионов Северо-Западного федерального округа для разных временных периодов позволило оценить характер изменения численности населения в ближайшие десятилетия. Сохранение восходящей динамики численности населения ожидается в Ненецком автономном округе и Ленинградской области, сохранение нисходящей динамики численности – в Архангельской, Вологодской, Мурманской, Новгородской, Псковской областях, республиках Карелия и Коми, а удержание численности на уровне базового года или смена ее восходящей динамики на нисходящую – в Калининградской области и Санкт-Петербурге.

Динамика численности населения, ретроспективный анализ, демографический прогноз, типология регионов, субъекты СЗФО.

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