

The prospective estimations of demographic problem addressing in the Russian Federation as a key factor in increasing the country's international competitiveness

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ORIGINAL ARTICLE

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Abstract. The current complicated geopolitical and economic conditions of the development for the Russian Federation and the demographic problem determine both the national security and the international competitiveness of the country in the socio-economic sphere. It provides the relevance of the research. The purpose of the research is an attempt to forecast the prospects for addressing the demographic problem in the Russian Federation to increase the country's international competitiveness in the future. The demographic forecast of Rosstat using the PERT method considering the optimistic, realistic, and pessimistic scenario. Therefore, an assessment of the prospects for addressing the demographic problem in the Russian Federation in the next 20 years provides the novelty of the research. Moreover, according to the forecast period under consideration, the total population increase is at an average rate of 27,014 people per year due to the natural population increase (by 96%). However, it can not provide a positive dynamic. The practical significance the research consists in their implementation in the design of the effective geopolitical and economic conditions to address the demographic problem and ensure the international competitiveness of the Russian Federation.

Keywords: forecast estimates; demographic problem; Russian Federation; country's international competitiveness; demographic forecast

JEL codes: F01; L13; Q54

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Introduction

The modern complicated geopolitical and economic conditions of development for the Russian Federation ensure the urgency of addressing the demographic problem. It determines both the national security and the international competitiveness of the Russian Federation in socio-economics. Indeed, this problem is reflected in the national goal "Preservation of the population, strengthening health and well-being of people, family support"¹ (Fig. 1). It is part of the National Development Goals of the Russian Federation for the period up to 2030 and for the future up to 2036, defined by Decree of the President of the Russian Federation on May 7, 2024, No. 309 (Fig. 2). These determined the research topic.

The purpose of the research is an attempt to forecast the prospects for addressing the demographic problem in the Russian Federation to increase the country's international competitiveness in the future.

¹ Decree of the President of the Russian Federation No. 309 on May 7, 2024 "On the National Development Goals of the Russian Federation for the period up to 2030 and for the future up to 2036". Source: <http://www.kremlin.ru/acts/bank/50542> (accessed on 10.03.2025).

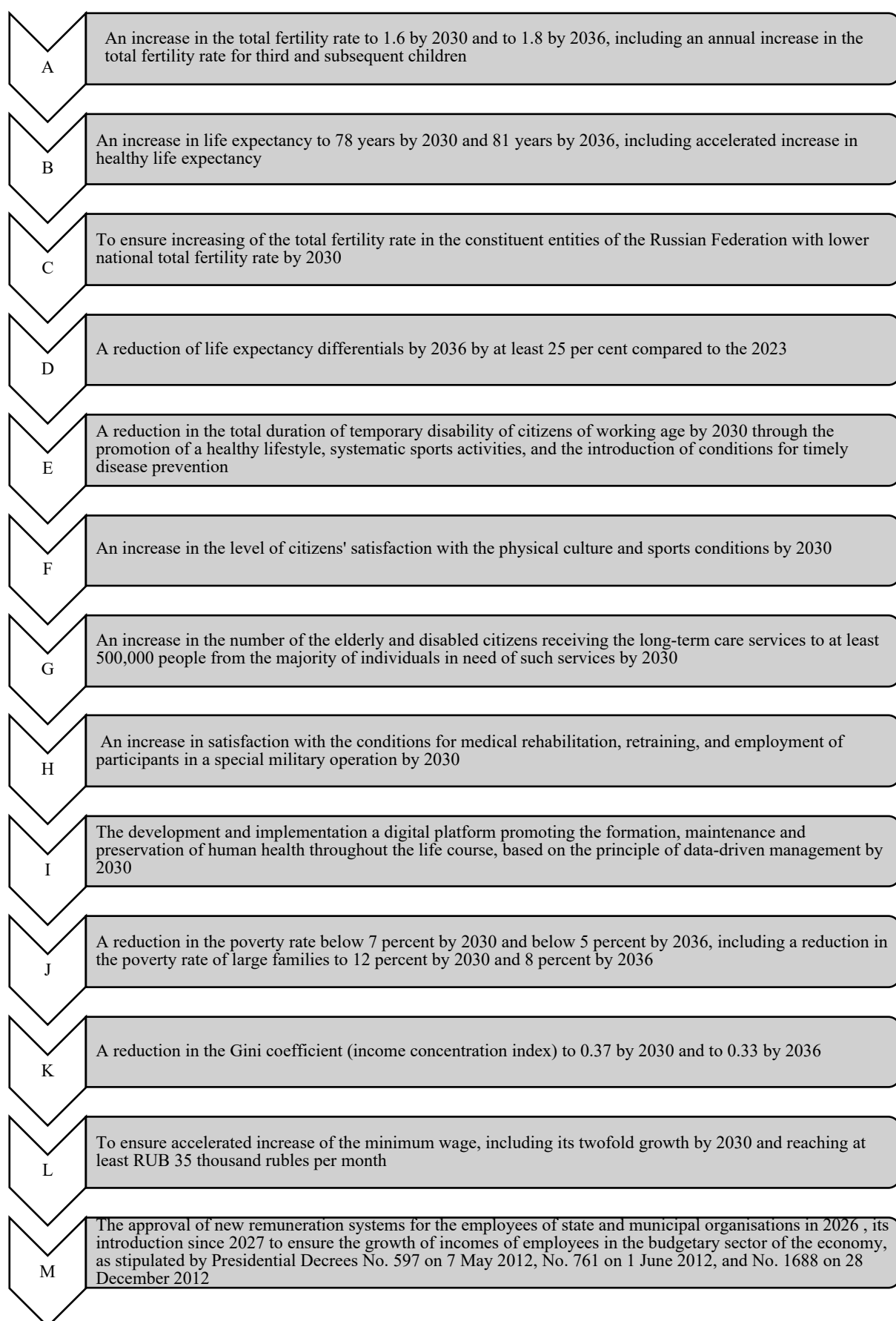


Figure 1. The goals and objectives relating to the achievement of the national goal "Population preservation, promotion of health and well-being of people, family support"

Source: Authors

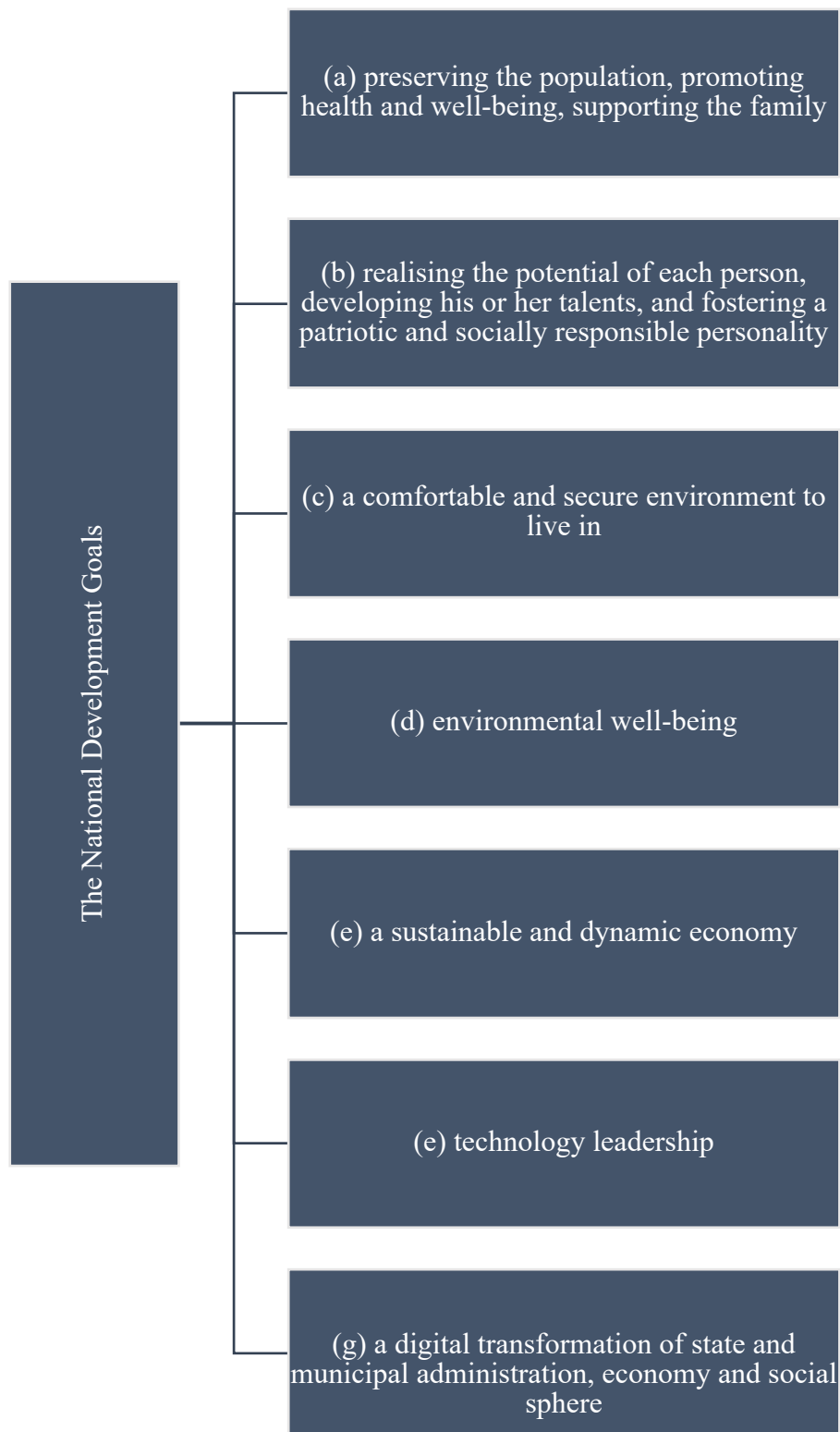


Figure 2. The National Development Goals of the Russian Federation, defined by Decree of the President of the Russian Federation No. 309 on May 7, 2024

Source: Authors

The methodological basis of the research consists in the well-known scientific works devoted to the study of the demographic problem in the Russian Federation [6], and analytical materials on [1-5], etc. They are as follows: Elin A.M., Pashin N.P. [1], Medvedkova A.I. [2], Nochevnova A.A., Potapova E.V. [3], Rodina T.Yu., Zabugina A.A., Usyakov R.A. [4], Saltykova Yu. A., Kurganskaya O.V. [5].

Main Part

The National Development Goals of the Russian Federation, defined by Decree of the President of the Russian Federation No. 309 on May 7-7, 2024 (Fig. 2) was the initial idea of this research.

We analyse the demographic forecasts of Rosstat² in terms of the objectives and tasks related to achieving the National Goal: a) "Population preservation, health promotion and well-being of people, family support" (Fig. 1). It allows us to analyse the prospects for addressing the problem of increasing the total fertility rate (Block A, Fig. 1).

According to the pessimistic forecast on changes in the country's population until 2046 (Fig. 3), a population decline is predicted for the next twenty years (on average minus 1,252 people per year). Moreover, the negative dynamics of natural increase (on average minus 805 people per year) will not be covered by positive migration balance. As it also has the negative dynamics (on average minus 446 people per year)³.

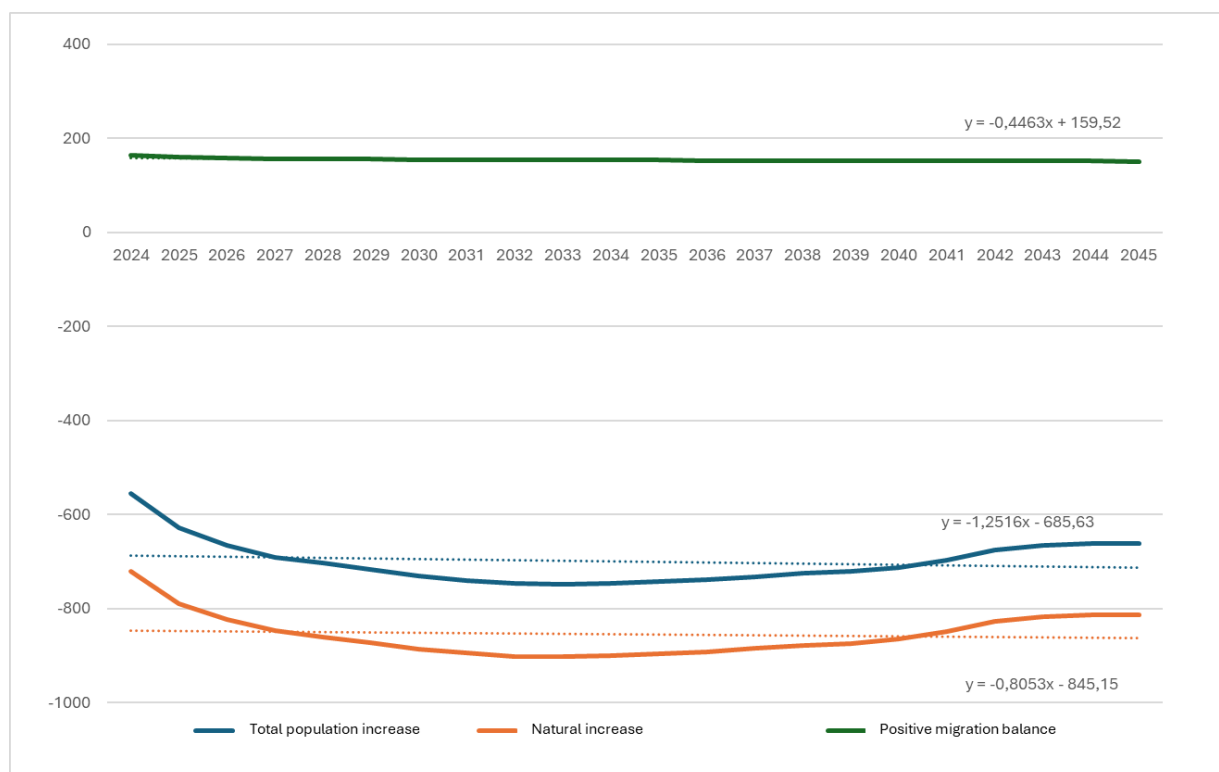


Figure 3. The pessimistic option of Rosstat's forecast for population increase in the Russian Federation until 2046

Source: Rosstat, 2025⁴

As a result, according to the pessimistic option of Rosstat's forecast, the population of the Russian Federation will decrease at an average rate of over 716,000 people per year until 2046 (Fig.4).

According to the realistic option of the forecast of population change until 2046 (Fig. 5), a reduction in population decrease is projected for the next twenty years (with an average rate of 17,394 people per year). At the same time, the reduction in population decrease due to the natural increase (an average of 17,209 people per year) prevails the positive migration balance (an average of 184 people per year).

According to the optimistic option of the forecast of population change until 2046 (Fig. 7), increasing of population is projected for the next twenty years (with an average rate of 40,474 people per year). At the same time, population increase due to the natural increase (an average of 36,036 people per year) prevails the positive migration balance (an average of 4,437 people per year).

As a result, according to the realistic option of Rosstat's forecast, the population of the Russian Federation

² The demographic forecast by Rosstat. Source: <https://rosstat.gov.ru/folder/12781> (accessed on 10.03.2025).

³ The demographic forecast by Rosstat. Source: <https://rosstat.gov.ru/folder/12781> (accessed on 10.03.2025).

⁴ The demographic forecast by Rosstat. Source: <https://rosstat.gov.ru/folder/12781> (accessed on 10.03.2025).

will decrease at an average rate of over 333,000 people per year until 2046 (Fig. 6).

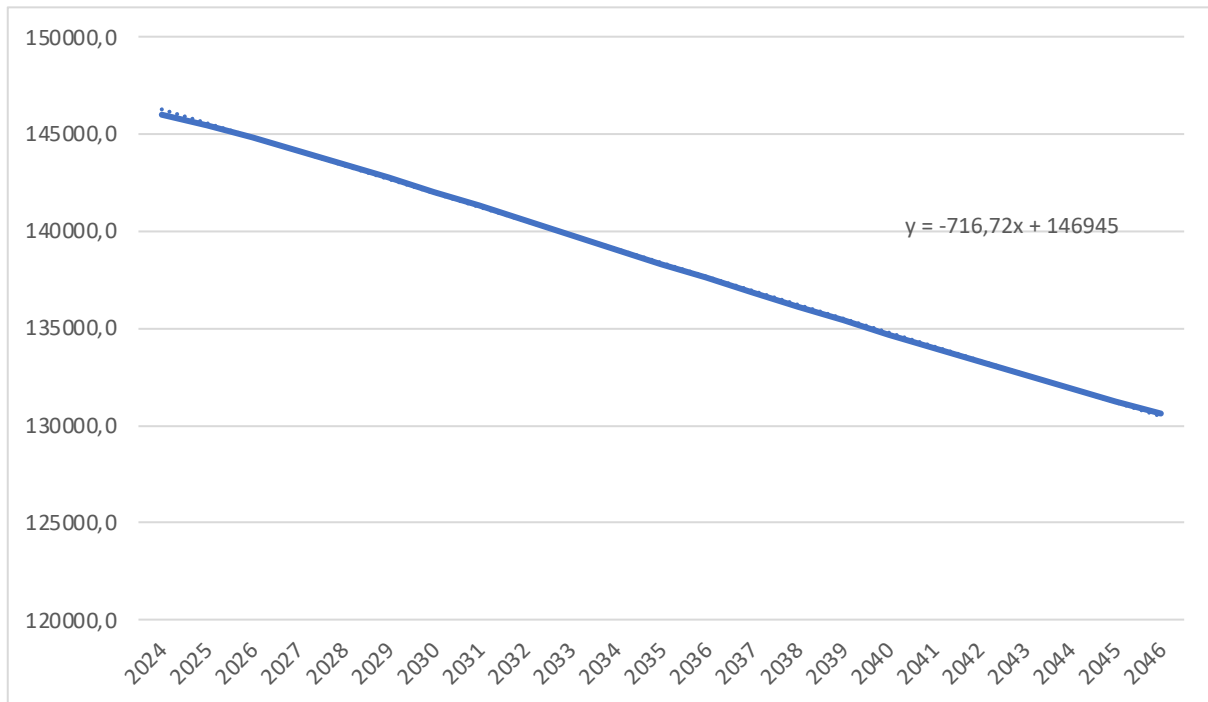


Figure 4. The pessimistic option of Rosstat's forecast for population change in the Russian Federation until 2046

Source: Rosstat, 2025⁵

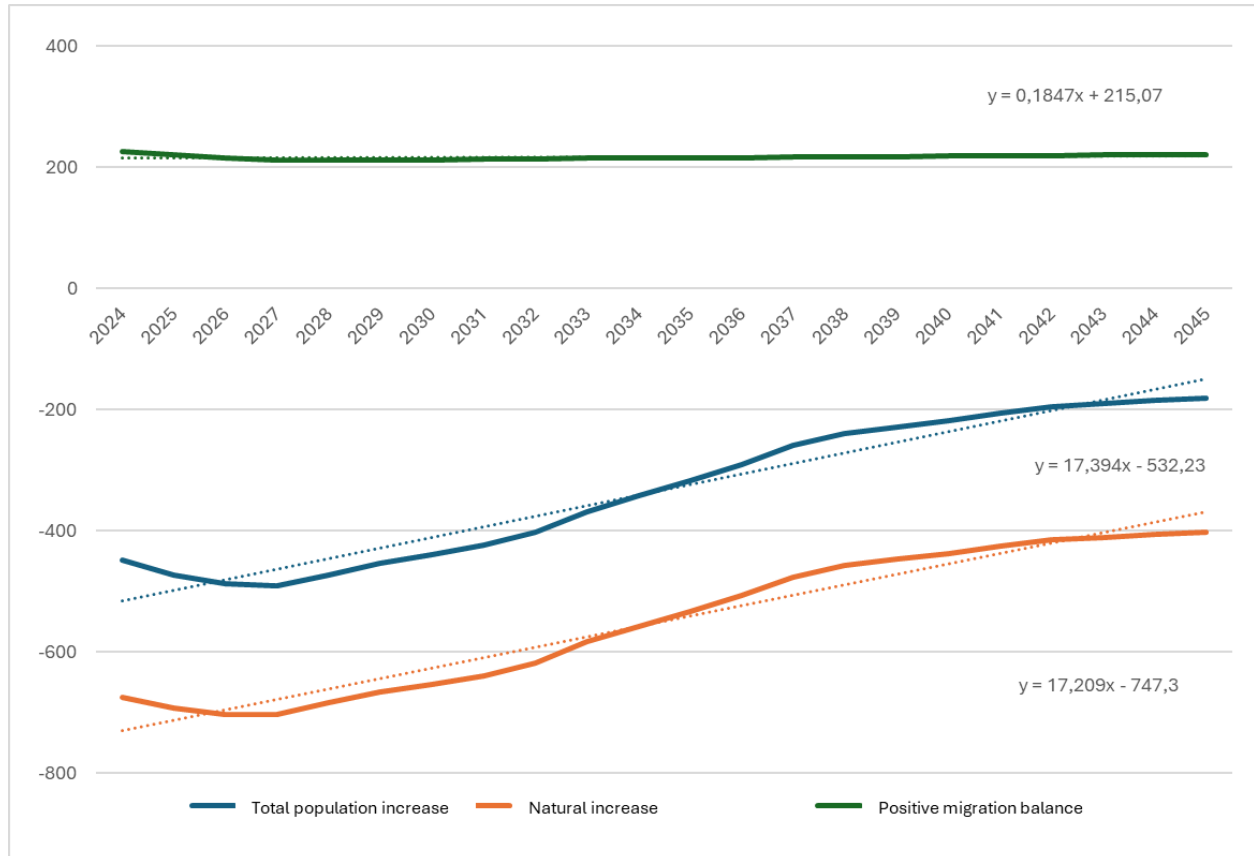


Figure 5. The realistic option of Rosstat's forecast for population increase in the Russian Federation until 2046

⁵ The demographic forecast by Rosstat. Source: <https://rosstat.gov.ru/folder/12781> (accessed on 10.03.2025).

Source: Rosstat, 2025⁶

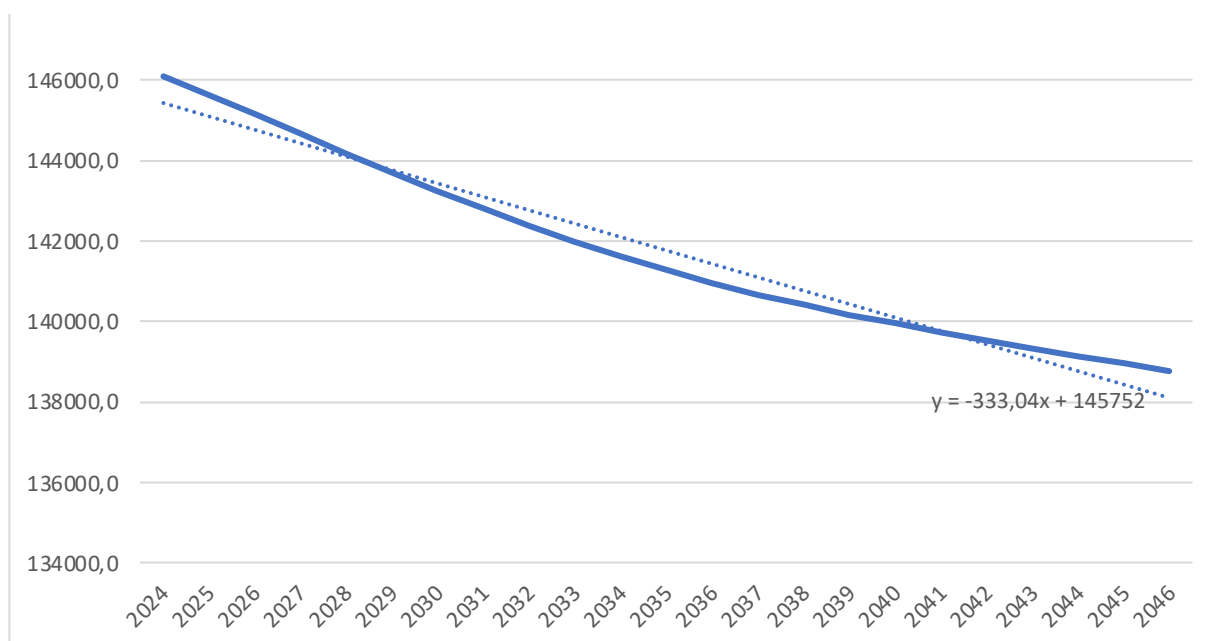


Figure 6. The realistic option of Rosstat's forecast for population change in the Russian Federation until 2046

Source: Rosstat, 2025⁷

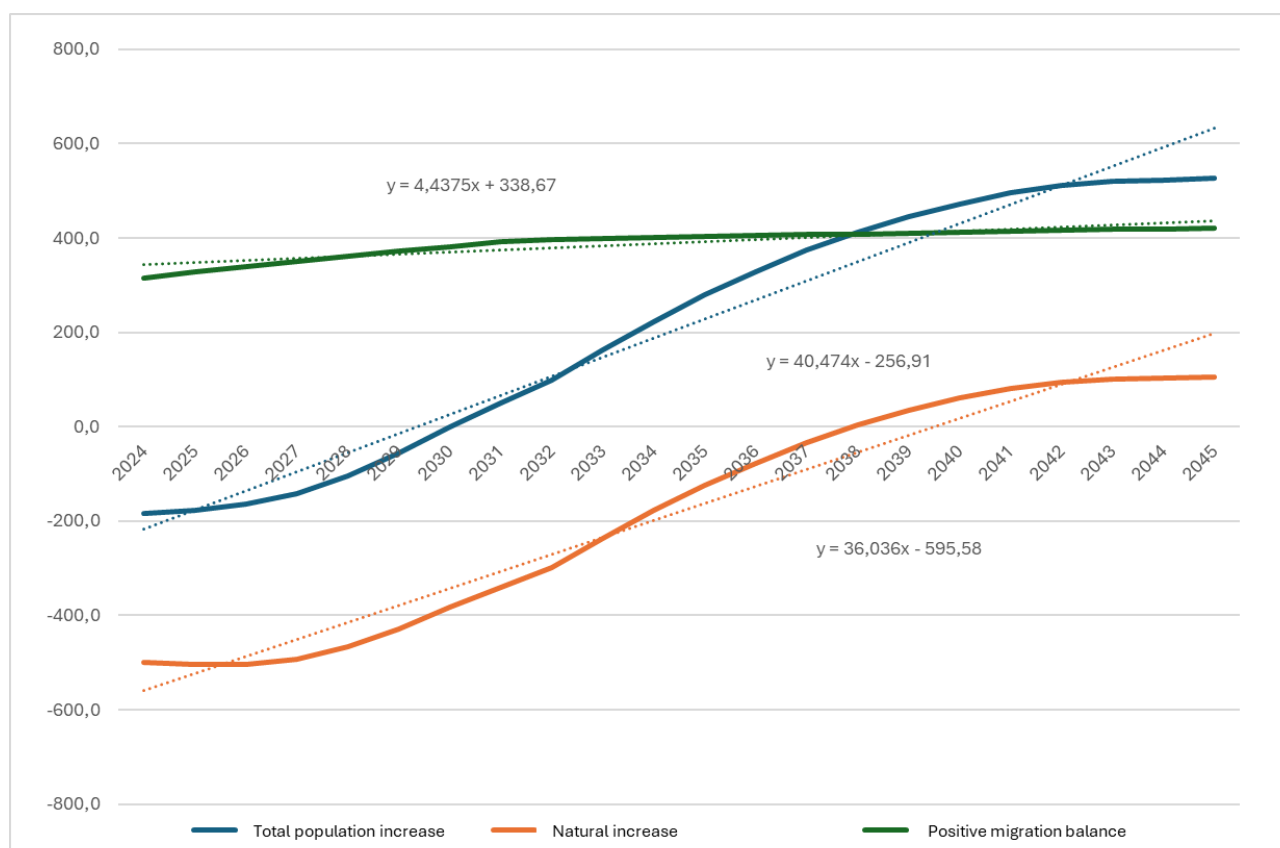


Figure 7. An optimistic option of Rosstat's forecast for population increase in the Russian Federation until 2046

Source: Rosstat, 2025⁸

⁶ The demographic forecast by Rosstat. Source: <https://rosstat.gov.ru/folder/12781> (accessed on 10.03.2025).

⁷ The demographic forecast by Rosstat. Source: <https://rosstat.gov.ru/folder/12781> (accessed on 10.03.2025).

⁸ The demographic forecast by Rosstat. Source: <https://rosstat.gov.ru/folder/12781> (accessed on 10.03.2025).

As a result, according to the optimistic option of Rosstat's forecast, the population of the Russian Federation will increase at an average rate of over 219,240 people per year until 2046 (Fig. 6).

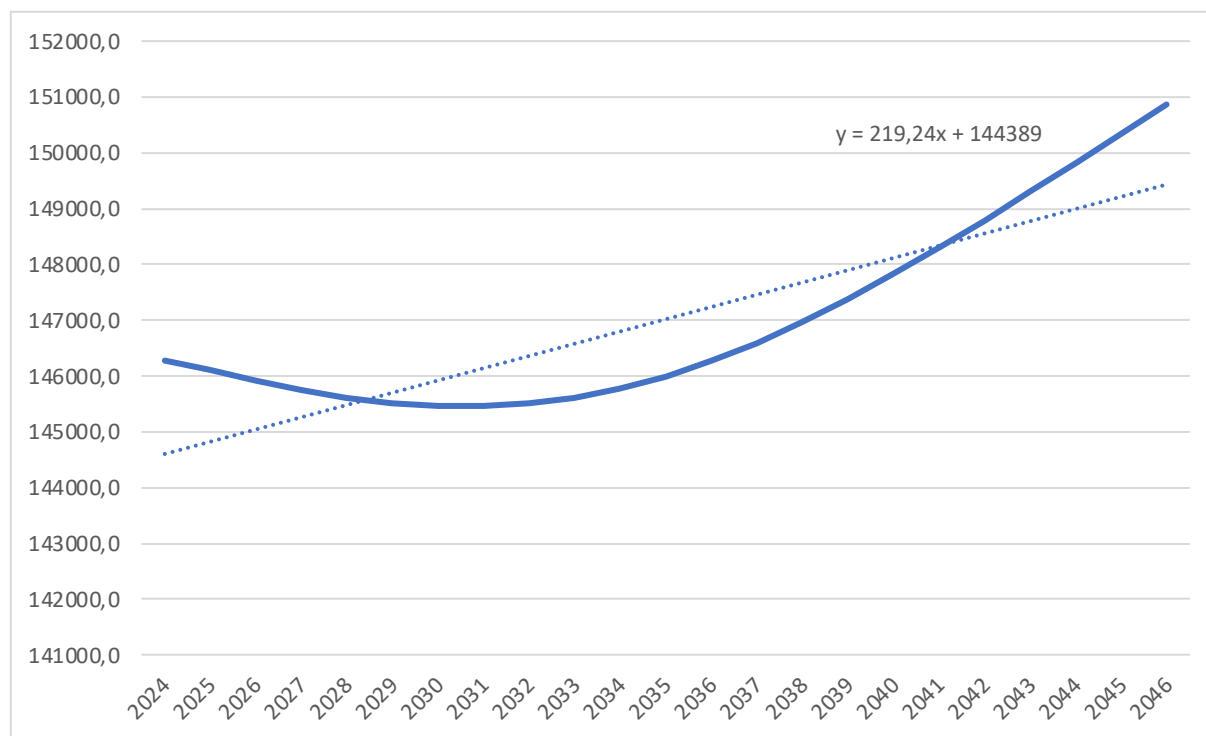


Figure 8. An optimistic option of Rosstat's forecast for population change in the Russian Federation until 2046

Source: Rosstat, 2025⁹

To estimate the change in the country's population, we used the forecast options from Rosstat until 2046, and developed the PERT (Project Evaluation and Review Technique) project assessment and analysis method as follows:

$$F_{exp} = [F_{opt} + 4 \times F_{real} + F_{pess}] : 6, \quad (1)$$

where F_{exp} is the expected value of the result of the estimated forecast indicator;

F_{opt} is the optimistic value of the result of the estimated forecast indicator;

F_{real} is the realistic value of the result of the estimated forecast indicator;

F_{pess} is the pessimistic value of the result of the estimated forecast indicator;

The use of the considered criterion for estimation the expected result allowed this study to assess the expected dynamics of the country's population and its increase for the period up to 2046, according to Rosstat forecasts (Table 1). Moreover, developed as the part of the PERT (1) project assessment and analysis method was widely used as a recommended tool for scenario analysis of the forecast values for a wide range of indicators.

Table 1 – Assessment of the expected dynamics of the country's population for the period up to 2046

The type of the forecast estimation	Indicators, people / year			
	The population dynamics	The dynamics of total population increase	The dynamics of the natural population increase	The dynamics of positive migration balance
Pessimistic	-716,720	-1,252	-805	-446
Realistic	-333,040	+17,394	+17,209	+184
Optimistic	+219,240	+40,474	+36,036	+4,376

⁹ The demographic forecast by Rosstat. Source: <https://rosstat.gov.ru/folder/12781> (accessed on 10.03.2025).

The type of the forecast estimation	Indicators, people / year			
	The population dynamics	The dynamics of total population increase	The dynamics of the natural population increase	The dynamics of positive migration balance
Expected result by the PERT method	-304,940	+27,014	+26,016	+1,166

Source: Authors

Conclusion

Therefore, the next 20 years the total population increase in the Russian Federation is expected at an average rate of 27,014 people per year. It will be achieved mainly due to natural population increase (+26,016 people per year, more than 96% of the total increase). However, it can not provide a positive dynamics. According to the estimates, during the 20-year forecast period under study, the country's population will continue to decline at an average rate of 304,940 people per year.

The positive dynamics of the country's population increase until 2046 is expected only with an optimistic option of the Rosstat forecast. According to this, the average population increase rate will be +219,240 people per year.

However, to implement this a scenario, a wide range of favourable geopolitical and economic conditions would have to be established.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHORS' CONTRIBUTION

Alexey V. Tebekin – conceptualization, project administration, writing – original draft.

Aleksandra A. Egorova – formal analysis; writing – review & editing.

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