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THE DEMOGRAPHIC DIP: CAUSES, SOCIO-ECONOMIC CONSEQUENCES, AND PROSPECTS FOR OVERCOMING IT

Dolgova Irina Evdokimovna
Associate Professor, Doctor of Economic Sciences,
Tashkent State University of Economics

ABSTRACT

The article examines the problem of the demographic dip as one of the most significant socio-economic challenges facing the modern world. Particular attention is paid to analyzing the demographic situation in the Russian Federation. The study explores the main causes of population decline, falling birth rates, changes in the age structure, and the increasing proportion of elderly people. It also examines the historical determinants of demographic processes and the impact of economic, social, political, and cultural factors on population reproduction.

Special attention is given to government demographic policy measures aimed at encouraging childbirth, supporting families with children, reducing mortality, and regulating migration processes.

Keywords: demographic dip, demographic crisis, birth rate, mortality rate, natural population decline, population ageing, demographic policy, migration, Russia.

INTRODUCTION

In the 21st century, the role of the demographic component of public security has been increasing, along with its influence on the socio-economic development of society. Under modern conditions, demographic security has become an important component of a state's socio-economic security.

The demographic situation is one of the most important indicators of a country's socio-economic development. Population size, age and sex structure, birth and death rates, life expectancy, and migration mobility directly affect a country's economic potential, the formation of its labour resources, the sustainability of its pension system, and the level of national security.

In the 21st century, many countries have faced large-scale demographic changes, among which declining birth rates and the gradual ageing of the population occupy a particularly important place. In a number of countries, these processes have become persistent, resulting in population decline. One of the most complex manifestations of this trend is the so-called demographic dip.

The term demographic dip refers to a period of a sharp decline in the size of certain generations, resulting from falling birth rates, increased mortality, wars, economic crises, epidemics, and other factors. Subsequently, these smaller generations enter reproductive and working age, giving rise to additional adverse consequences: the number of potential parents decreases, the labour supply contracts, and demographic ageing intensifies.

At present, the phenomenon of the demographic dip is no longer exclusively a problem of individual countries but has become one of the global challenges facing modern society. Russia,

China, and several European countries are particularly illustrative examples in this regard. Despite significant differences in their political systems, economic models, historical development, and population sizes, these countries have faced persistently declining birth rates and the challenge of population ageing.

MATERIALS AND METHODS

In modern academic literature, there are numerous different interpretations of the concept of "demographic security". In particular, Russian scholars I. N. Veselkova and N. A. Volgin define demographic security as "the protection of the process of human life and the continuous natural renewal of generations"[1].

According to the Russian scholar L. L. Rybakovsky, demographic security is "the functioning and development of a population as such in terms of its age and sex composition and ethnic characteristics, considered in relation to the national interests of the state, which consist in ensuring its territorial integrity, independence, sovereignty, and preservation of its existing geopolitical status" [2].

M. V. Karmanov argues that "demographic security is the protection of the socio-economic development of society against internal and external demographic threats, ensuring, at a minimum, the preservation of the geopolitical, economic, and ethnic status of the state" [3].

S. V. Soboleva defines demographic security as "a state of protection of human life, the continuous natural reproduction of the population, and the formation of demographic structures (age and sex, family, and ethnic structures) against demographic threats, maintained through an institutional environment"[4].

The fundamental principle underlying all the above definitions of a state's demographic security is the process of continuous natural population reproduction, which, however, does not occur at all times or in all countries. In a number of countries, particularly in the Russian Federation, the demographic situation is characterized by a phenomenon known as the **"demographic dip."** In demographic science, the concept of the **"demographic dip"** is used to describe a significant decline in the population size of specific age cohorts. This phenomenon is characterized by disruptions in the normal process of population reproduction and may have a long-term impact on the demographic structure of society. A narrow definition of the "demographic dip" is as follows:

Demographic dip – a decline in the size of individual generations, which subsequently leads to a reduction in the number of potential parents and the working-age population. An extended definition of this phenomenon is as follows:

Demographic dip – a period or state of demographic development in which the size of a particular age cohort (a generation of people born during a specific period) is significantly

[1]Veselkova, I. N., and Volgin, N. A. *Demography: A Textbook*. Moscow: Russian Academy of Public Administration (RAPA), 2003.
[2]Rybakovsky, L. L. *Demographic Security: Geopolitical Aspects*. March 29, 2004:
[3] Karmanov, M. V. "Demographic Security: Theory, Methodology, and Assessment." *Economics, Statistics and Informatics*, 2015, No. 4, pp. 123–127.
[4]Soboleva, S. V., Smirnova, N. E., and Chudaeva, O. V. "The Demographic Situation in Russia: Present and Future." *The World of New Economy*, 2016, No. 3, pp. 113–114.

smaller than that of adjacent generations due to declining birth rates, increased mortality, or other demographic shocks [5].

The demographic dip is not merely a quantitative problem but also a structural one. Its consequences may persist for several decades, even after birth rates have recovered.

A distinctive feature of this phenomenon is the presence of a mechanism known as **demographic inertia**. For example, if significantly fewer children are born during a particular period, a smaller generation will enter reproductive age 20–30 years later. Even if the average number of children per woman increases, the total number of births may remain low due to a decrease in the number of potential mothers.

The main **characteristics of the demographic dip** include:

- **Declining birth rates:** If the number of births during a particular period falls below the population replacement level (below the replacement fertility rate of 2.1 children per woman), one generation can no longer fully replace the preceding generation.
- **The "echo effect":** A further decline in birth rates occurs when a relatively small generation reaches reproductive age. Since this generation is numerically small, it is unable to ensure a high overall birth rate.
- **Imbalance in the age structure:** An increase in the proportion of elderly people as a result of low birth rates and rising life expectancy.
- **Declining natural population growth:** Birth rates fall sharply, while mortality remains at the same level or increases; consequently, natural population growth reaches zero or becomes negative.
- **Long-term effects:** The demographic dip generates long-term structural shifts and leads to significant demographic changes, including a reduction in the number of young and working-age people, Laboure shortages, and increased pressure on the pension system and healthcare sector.

The causes of the demographic dip vary from one country to another and are associated with the specific characteristics of each country's development. Nevertheless, at a general level, several common factors can be identified that are characteristic of many countries, including the following:

- **Historical factors**, such as wars, revolutions, mass repressions, and epidemics, which can lead to a sharp decline in population size. Armed conflicts result not only in direct human losses but also in a reduction in the number of births in subsequent years. The loss of a significant proportion of men and women of reproductive age, forced migration, and economic instability have a negative impact on family formation.
- **Economic factors**, such as low household incomes, unstable employment, unemployment, insufficient social protection for young families, and high costs of housing, education, and healthcare. These factors increase the financial burden of raising children, thereby contributing to declining birth rates.
- **Social factors**, such as changing priorities: women often postpone the birth of their first child in favors of career development, education, or personal growth. As a result, they tend to marry

[5] Kapoguzov, E. A., Karpov, V. V., and Chupin, R. I. "Socio-Economic Threats of Demographic Growth in Russian Regions: An Empirical Verification of the 'Demographic Dip' Based on Data from the Siberian Federal District." *State and Municipal Management: Scientific Notes*, No. 4, 2020, pp. 97–103.

later, which shortens their reproductive period. Attitudes towards family size are also changing: families with one or two children are becoming the norm, while large families are increasingly rare. Reduced access to and declining quality of medical care contribute to higher mortality and lower birth rates.

• **Political factors**, whereby military conflicts lead to loss of life, family separation, and declining birth rates. Urban expansion (urbanization) often contributes to lower fertility rates due to the higher cost of living in urban areas.

RESULTS

The demographic situation in Russia has been shaped by numerous historical events that have influenced both the size and age structure of the population.

One of the most significant factors was the demographic impact of the Great Patriotic War of 1941–1945. Military casualties, the mass death of civilians, family breakdowns, and declining birth rates resulted in substantial demographic gaps.

The dissolution of the Soviet Union in 1990 was accompanied by a large-scale transformation of the economic system, a decline in the living standards of a significant proportion of the population, growing social uncertainty, and changes in family behavior. During this period, birth rates declined sharply. Many people postponed starting families and having children due to financial instability and uncertainty about the future.

At the same time, mortality increased, particularly among men of working age. The combined effect of these processes resulted in a prolonged period of natural population decline. The demographic gap of the 1990s subsequently became one of the main factors contributing to the emergence of the contemporary demographic dip in Russia.

A distinctive feature of this situation is that the relatively small generations born in the 1990s began reaching reproductive age in the 2010s and 2020s. This means that even under relatively favorable conditions for childbearing, the total number of births is constrained by the comparatively small number of potential parents. To assess the current demographic situation in the Russian Federation, let us examine official statistical data.

According to the Federal State Statistics Service of Russia (Rosstat), the permanent population of Russia as of January 1, 2025, amounted to approximately 146.1 million people. In 2024, approximately 1.22 million children were born, while the number of deaths totaled around 1.82 million people.

An analysis of official statistical data published by the Federal State Statistics Service reveals persistent negative trends in the demographic development of the Russian Federation over the period 2020–2025.

One of the most significant problems is the decline in the number of births. In 2020, approximately 1.437 million children were born in Russia, compared with 1.398 million in 2021, 1.304 million in 2022, 1.264 million in 2023, and approximately 1.222 million in 2024. Thus, over the period under consideration, the number of births decreased by approximately 15%.

Table 1. Main Demographic Indicators of Russia in 2020–2025 [6]

Year	Live births, million people	Deaths, million people	Natural population decline, million people
2020	1.437	2.139	−0.702
2021	1.398	2.442	−1.043
2022	1.304	1.899	−0.595
2023	1.264	1.765	−0.500
2024	1.222	1.819	−0.596
2025	No data available	No data available	Not reported

Alongside the decline in birth rates, the number of deaths exceeded the number of live births. The most substantial natural population decline was recorded in 2021, which was largely associated with the consequences of the COVID-19 pandemic. In subsequent years, mortality decreased; however, the negative natural population trend persisted (Table 1 and Figure 1).

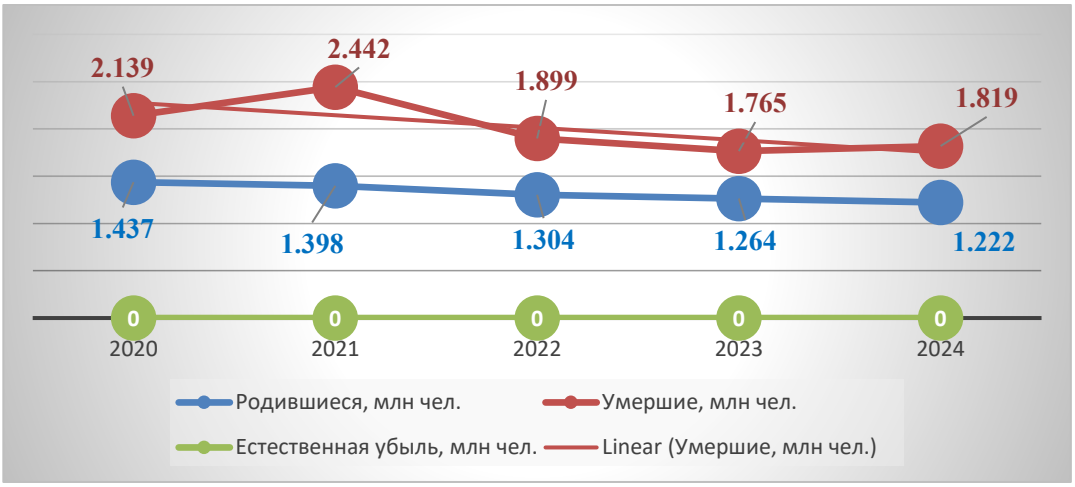


Figure 1. Trends in Birth and Death Rates in Russia, 2020–2024

In other words, in 2024, the natural population decline amounted to approximately 596,000 people. This figure indicates the persistence of a significant imbalance between birth and death rates.

The Total Fertility Rate (TFR) is of particular importance in the study of the demographic dip. The Total Fertility Rate (TFR) represents the average number of children that a woman would give birth to over her reproductive lifetime if current age-specific fertility rates remained unchanged.

Table 2. Total Fertility Rate (TFR) in the Russian Federation, 2020–2025 [7]

Year	TFR
2020	1.51
2021	1.50
2022	1.42
2023	1.41
2024	Approximately 1.40
2025	1.374

[6] Federal State Statistics Service of Russia (Rosstat) and official statistical publications of the Russian Federation.
[7] Federal State Statistics Service of Russia (Rosstat) and official statistical publications of the Russian Federation

For countries with relatively low mortality rates, a fertility rate of approximately 2.1 children per woman is generally used as a benchmark for the replacement level of population reproduction.

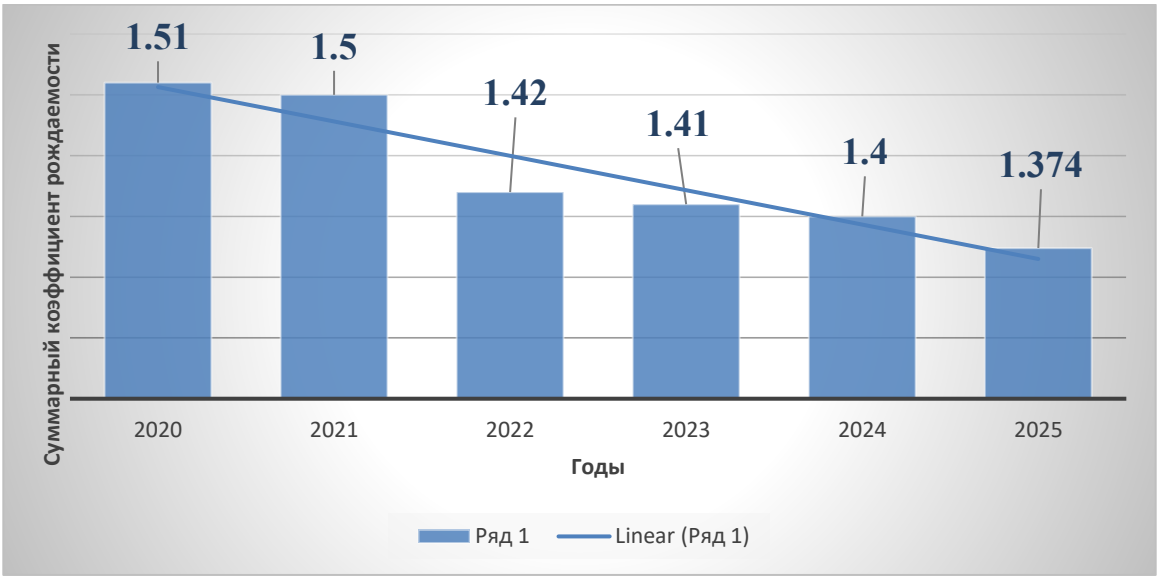


Figure 2. Trends in the Total Fertility Rate in the Russian Federation, 2020–2025

This means that, in order to maintain the population at its current level over the long term without migration, a fertility rate close to this benchmark is required. In December 2025, the total fertility rate in Russia amounted to 1.374 children per woman, which is significantly below the population replacement level (Table 2 and Figure 2).

Thus, the analysis of the demographic situation in the Russian Federation has shown that Russia is characterized by a combination of low birth rates, natural population decline, and a reduction in the size of certain generations entering reproductive age. These processes indicate the existence of long-term structural problems in population reproduction and confirm the need to implement a comprehensive state demographic policy.

The decline in birth rates over previous decades has led to a reduction in the size of certain generations entering reproductive age. Therefore, even with the implementation of government programmed designed to encourage childbirth, a rapid increase in the absolute number of births cannot be guaranteed.

To address demographic challenges in Russia, various government programmed are being implemented to support families, encourage childbirth, and reduce mortality.

One of the most well-known policy instruments is the Maternity Capital Programmed, introduced in 2007. It represents a mechanism of state financial support for families upon the birth or adoption of children. The main areas in which maternity capital funds may be used include improving housing conditions; paying for children's education; contributing to the mother's funded pension in cases предусмотренных by law; supporting the social adaptation and integration of children with disabilities; and receiving monthly payments subject to established eligibility requirements.

In 2024, Russia approved the Strategy of Actions for the Implementation of Family and Demographic Policy and Support for Large Families until 2036. Its implementation envisages a comprehensive approach to family well-being, fertility, and increasing life expectancy.

However, the effectiveness of demographic policy is determined not only by the amount of financial assistance provided. Equally important are housing affordability, the quality of healthcare services, employment stability, and opportunities to combine work with raising children.

Therefore, improving the demographic situation requires creating conditions in which having several children does not lead to a substantial decline in a family's standard of living. In particular, we believe that the following measures are necessary:

1. Creating favorable conditions for childbirth and child-rearing. Financial benefits and payments should form part of a comprehensive family support system.

2. Providing targeted support for young families during the initial stage of parenthood. This is particularly important because financial and organizational difficulties during this period may discourage families from having additional children.

3. Reducing mortality. Reducing mortality is no less important a direction of demographic policy than encouraging childbirth. This requires improving access to and the quality of healthcare services, developing preventive medicine, improving the maternal and child healthcare system, and enhancing the quality of medical care for elderly citizens. Particular importance should be attached to reducing premature mortality among the working-age population.

4. Creating conditions that enable people to balance professional and family life. In particular, this involves expanding the network of affordable childcare facilities; developing flexible forms of employment; ensuring equal opportunities for professional development for men and women; and encouraging fathers to participate actively in raising children.

5. Using migration policy as a temporary measure. Migration policy can partially compensate for Laboure shortages and natural population decline through the inflow of foreign nationals. However, effective migration policy should focus not only on attracting workers but also on their long-term integration into society.

This requires the implementation of vocational training programmed, language adaptation initiatives, housing provision, and social support measures.

CONCLUSION

The conducted study leads to the conclusion that the demographic dip represents one of the most serious long-term challenges to the socio-economic development of modern states. It affects not only population size but also the age structure of the population, labor potential, economic sustainability, and the prospects for further societal development.

The study has also established that the demographic dip has a multifaceted impact on the economy. Its main consequences include a reduction in the labor force, increased pressure on the pension system, changes in the structure of consumer demand, growing demand for healthcare and social services, and widening regional inequalities.

Of particular importance is the fact that demographic crises are characterized by long-term inertia. Even if a country succeeds in increasing its total fertility rate, the number of births may continue to decline due to a reduction in the number of women of reproductive age. Consequently, measures to encourage childbirth must be implemented over an extended period and accompanied by other demographic policy measures.

Overcoming the demographic dip requires a long-term state strategy, since the results of demographic policy become evident over several generations. The key condition for overcoming this phenomenon is the development of a model of societal development in which starting a family and having children do not conflict with citizens' economic independence, professional fulfilment, or the achievement of a decent standard of living.

Ultimately, demographic sustainability should be regarded as a strategic resource of the state, determining its economic potential, social stability, and long-term development prospects.

REFERENCES

1. Federal State Statistics Service of Russia (Rosstat). Demographic Yearbook of Russia. Official statistical publications. Available at: https://rosstat.gov.ru/
2. Vishnevsky, A. G. Demographic Modernization of Russia, 1900–2000. Moscow: Novoe Izdatelstvo, 2006.
3. Karmanov, M. V. "Demographic Security: Theory, Methodology, and Assessment." Economics, Statistics and Informatics, 2015, No. 4, pp. 123–127.
4. Kapoguzov, E. A., Karpov, V. V., and Chupin, R. I. "Socio-Economic Threats of Demographic Growth in Russian Regions: An Empirical Verification of the 'Demographic Dip' Based on Data from the Siberian Federal District." State and Municipal Management: Scientific Notes, 2020, No. 4, pp. 97–103.
5. Rybakovsky, L. L. Demographic Security: Geopolitical Aspects. March 29, 2004.
6. Soboleva, S. V., Smirnova, N. E., and Chudaeva, O. V. "The Demographic Situation in Russia: Present and Future." The World of New Economy, 2016, No. 3, pp. 113–114.
7. United Nations Population Fund (UNFPA). State of World Population. Available at: https://www.unfpa.org/