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CHINA'S DEMOGRAPHIC DIP CAUSES OF ITS FORMATION, SOCIO-ECONOMIC CONSEQUENCES, AND PROSPECTS FOR DEMOGRAPHIC DEVELOPMENT

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ABSTRACT

This article is devoted to the analysis of the demographic situation in the People's Republic of China (PRC), which has become one of the most significant challenges to global socio-economic development in the twenty-first century. China, which for decades was characterized by a large population and substantial labor potential, has faced a fundamental transformation of its demographic model, marked by declining birth rates, population ageing, a shrinking working-age population, and natural population decrease.

This issue is significant not only from a demographic perspective but also from economic, social, institutional, and strategic standpoints. Changes in the age structure of the population affect labor supply, labor productivity, the pension system, domestic consumer demand, investment activity, and long-term economic growth rates.

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

INTRODUCTION

Demographic conditions are among the most important indicators of a country's socio-economic development. Population size, age and gender structure, birth and death rates, life expectancy, and migration mobility directly affect a country's economic potential, the formation of its labor force, the sustainability of its pension system, and the level of national security.

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 and China are particularly illustrative examples in this regard. Despite significant differences in their political systems, economic models, historical development, and population sizes, both countries have faced a sustained decline in birth rates and the problem of population ageing.

At the same time, the causes of demographic difficulties in these two countries differ considerably. In Russia, a significant role has been played by the consequences of the socio-economic upheavals of the 1990s, historical population losses, high mortality rates during certain periods, and the age structure of the population. In China, the most important factor has been the long-standing birth control policy, primarily the "one-child policy", as well as accelerated urbanization, changes in family values, and the rising cost of raising children.

MATERIALS AND METHODS

A demographic dip is a prolonged period of a significant decline in the size of particular population cohorts, resulting from a decrease in birth rates, an increase in mortality, migration processes, or a combination of these factors.

From an economic and demographic perspective, a demographic dip represents a disruption in population reproduction, whereby the size of subsequent generations becomes insufficient to fully replace previous generations.

To understand the essence of the demographic dip, it is necessary to examine several interrelated definitions:

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1. ***Demographic decline*** – a sustained decrease in population size over a certain period, resulting from deaths exceeding births and/or a negative net migration balance.

2. ***Natural population decrease*** – a reduction in population size in which the number of deaths exceeds the number of births.

3. ***Total Fertility Rate (TFR)*** – the average number of children that a woman would give birth to over her reproductive lifetime if current age-specific fertility rates remained unchanged.

In countries with low mortality rates, a fertility rate of approximately 2.1 children per woman is generally required for population replacement.

4. ***Population ageing*** – an increase in the proportion of elderly people in the total population, accompanied by a rise in the median age of the population.

5. ***Demographic dependency ratio*** – the ratio of the population of non-working age to the population of working age.

Thus, China's demographic dip is a complex phenomenon caused by a prolonged decline in fertility, changes in the age structure of the population, and the country's transition from population expansion to population contraction.

To properly understand the current demographic situation in the People's Republic of China, it is necessary to examine the main stages of China's demographic development in the twentieth and twenty-first centuries.

The first stage – the period of high fertility (1950s–1970s).

Following the establishment of the People's Republic of China in 1949, the country experienced substantial natural population growth. Improvements in sanitary and epidemiological conditions, the development of healthcare services, and declining mortality contributed to a rapid increase in population size. As a result, a large young population cohort emerged, which subsequently became the foundation of the country's labor force.

The second stage – the birth control policy (1970–2015).

In the 1970s, the Chinese leadership began implementing a birth control policy based on the principles of "later marriage, longer intervals between births, and fewer children". In 1979, the well-known "one-child policy" was introduced with the aim of limiting the rate of population growth.

This policy contributed to several demographic consequences: declining fertility rates; a reduction in the size of subsequent generations; a decrease in the proportion of children and young people; changes in the male-to-female ratio; accelerated population ageing; and the emergence of a one-child family model. These developments subsequently had adverse effects on the country's demographic situation.

At the same time, scientific studies indicate that the demographic decline cannot be attributed exclusively to the birth control policy. Urbanization, rising levels of education, changing family values, and the increasing cost of raising children also played a significant role.

For example, a study by H. Li and X. Shi[1], published in 2025, estimates that the one-child policy accounted for approximately 38% of the overall decline in fertility, while the remaining share was associated with broader socio-economic changes.

The third stage – transition to policies aimed at stimulating fertility (2016–2021).

[1] Li, H., Shi, X. The Effect of the One-Child Policy on Fertility in China: Identification Based on Difference-in-Differences. Journal of Population Economics, 2025.

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In 2016, China officially allowed families to have two children, and in 2021, the three-child policy was introduced. However, the lifting of restrictions did not lead to a sustained recovery in fertility rates.

The fourth stage – natural population decrease and accelerated ageing (from 2022 to the present).

In 2022, China's population declined for the first time in several decades. This negative trend continued in subsequent years. Thus, China shifted from a policy of restraining population growth to the need to develop a comprehensive system of fertility incentives and adapt its economy to a shrinking labor force.

In the mid-twentieth century, China was characterized by very high fertility rates. Rapid natural population growth was accompanied by increasing pressure on the food supply system, the labor market, housing infrastructure, and the social sector.

Following the establishment of the People's Republic of China in 1949, the population began to grow rapidly. Improvements in sanitation and hygiene, the development of the healthcare system, and declining mortality contributed to an increase in life expectancy.

However, rapid population growth came to be perceived by the country's leadership as a serious challenge to economic development. The government began to develop measures aimed at limiting fertility.

Family planning policy was of particular importance, reaching its most restrictive form in the late 1970s and early 1980s.

In the late 1970s, the Chinese leadership began implementing a birth control policy known as the ***"one-child policy"*.**

Its main objective was to slow population growth and create conditions for the accelerated modernization of the economy.

The policy-imposed restrictions on the number of children in most urban families. However, exceptions existed and varied depending on the historical period, region, ethnicity, and socio-economic status of the family.

In the short term, this policy contributed to a significant decline in fertility rates. China managed to slow its population growth, creating additional opportunities for economic development and improvements in living standards.

However, serious negative consequences became apparent in the long term.

RESULTS

According to official data from the National Bureau of Statistics of the People's Republic of China, China's population totaled 1.40828 billion in 2024, which was 1.39 million lowers than in the previous year.

In 2024, 9.54 million births and 10.93 million deaths were recorded in the country. Natural population growth was negative, amounting to approximately 1.39 million people. In 2025, the negative trend intensified, and the population declined to 1,404.89 million[2].

The population decline became even more pronounced in 2025. According to official statistics of the People's Republic of China, the population at the end of 2025 amounted to 1.40489 billion people. Over the year, the population decreased by 3.39 million. The number of births totaled 7.92 million, while the number of deaths reached 11.31 million. The natural population decrease amounted to 3.39 million people. The proportion of citizens aged 60 and over increased to 23% (Table 1).

[2] National Bureau of Statistics of China, Statistical Communiqué on National Economic and Social Development, 2024 и 2025.

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Table 1

Key Indicators of China's Demographic Development in 2024–2025[3].

Indicator	2024	2025
Total population, million people	**1 408,28**	**1 404,89**
Births, million people	**9,54**	**7,92**
Deaths, million people	**10,93**	**11,31**
Natural population increase/decrease, million people	**−1,39**	**−3,39**
Birth rate, ‰	**6,77**	**5,63**
Death rate, ‰	**7,76**	**8,04**
Natural population growth rate, ‰	**−0,99**	**−2,41**
Share of population aged 0–15, %	**16,6%**	**16,4%**
Share of population aged 16–59, %	**61,4%**	**60,6%**
Share of population aged 60 and over, %	**22,0%**	**23,0%**
Share of population aged 65 and over, %	**15,6%**	**15,9%**

The data presented in table 1 indicate a significant deterioration in the country's demographic situation.

Following the abolition of the one-child policy in 2016, the authorities expected a so-called "liberated" baby boom, with forecasts projecting 21–23 million newborns annually. However, reality proved different: 17.9 million children were born in 2016, after which the downward trend continued with virtually no interruptions.

Particular attention should be paid to the decline in the number of births, from 9.54 million in 2024 to 7.92 million in 2025. This represents a decrease of approximately 17%. At the same time, the number of deaths increased from 10.93 million to 11.31 million. As a result, the natural population decrease reached 3.39 million people over the year (Figure 1).

The age structure of the population deserves particular attention. At the end of 2024, people aged 60 and over accounted for 22% of the country's population, while those aged 65 and over represented 15.6%.

[3] National Bureau of Statistics of China, Statistical Communiqué on National Economic and Social Development, 2024 и 2025.

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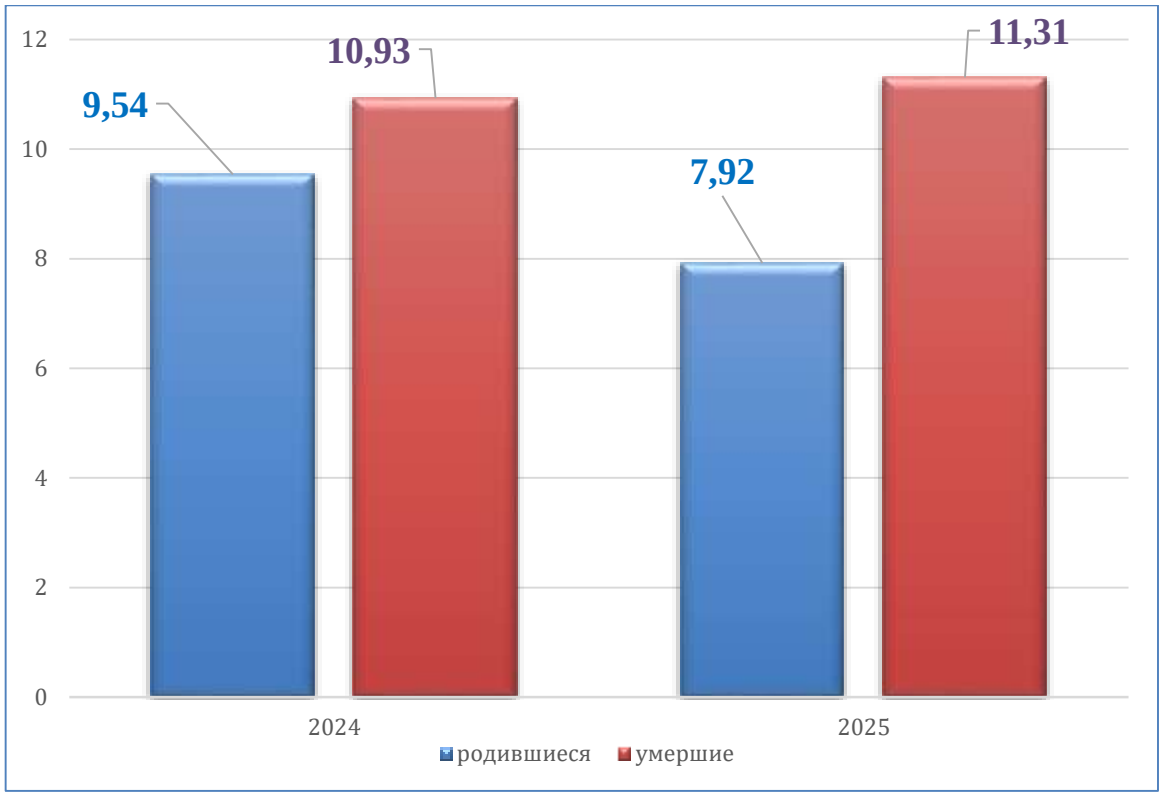


Figure 1. Dynamics of Births and Deaths in the People's Republic of China[4].

In China, marriage and parenthood are increasingly constrained not by a “change in values”, but by the basic arithmetic of financial survival. Between 2010 and 2021, urban housing prices rose by more than 70%, while the price-to-income ratio in Guangzhou and Shenzhen reached 30–40, compared with a generally accepted benchmark of 4–6.

The cost of raising a child has also become a major investment. According to 2022 data, raising one child to the age of 18 costs approximately 538,000 yuan (6.9 times the annual GDP per capita), while in Beijing the figure is around 950,000 yuan.

One of the most significant manifestations of the demographic dip is the transformation of the population's age structure (Table 1).

In absolute terms, the population aged 60 and over reached 323.38 million in 2025 (Figure 2).

This age structure indicates that China is gradually transitioning towards a society with a high proportion of older people.

One of the most pressing challenges is the declining size of younger generations, which are expected to ensure the reproduction of the labor force, finance the pension system and sustain economic activity.

[4] National Bureau of Statistics of China, Statistical Communiqué on National Economic and Social Development, 2024 и 2025.

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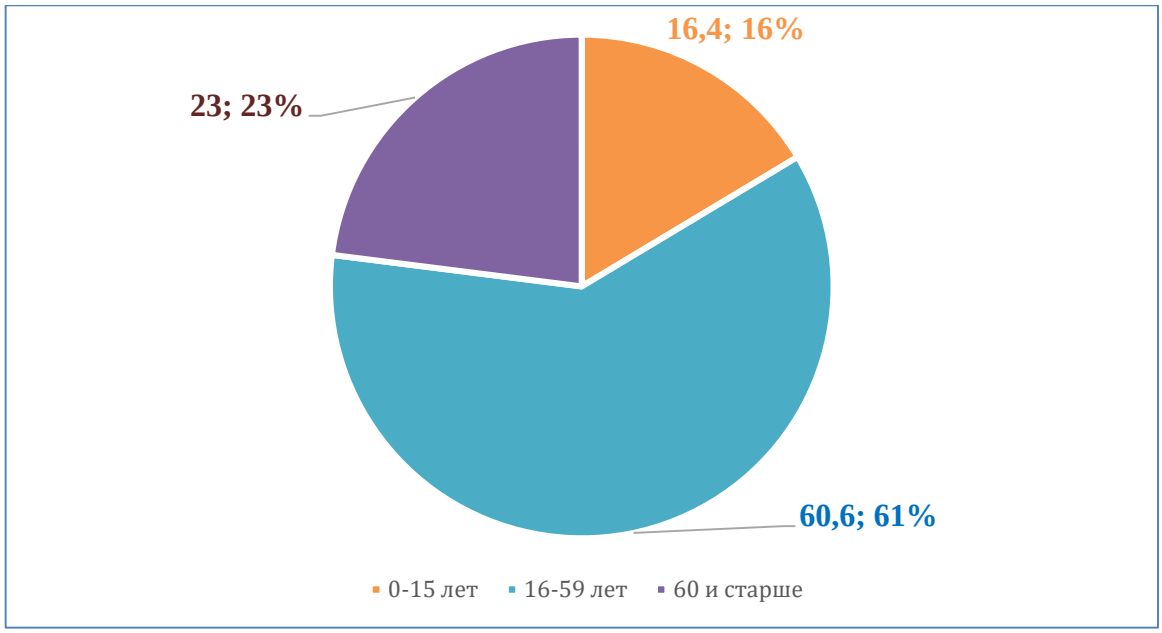


Figure 2. Population Structure of the People's Republic of China in 2025 [5].

According to estimates by the International Monetary Fund, China's old-age dependency ratio stood at approximately 21.2% in 2024. Under the scenario presented, this ratio could double by 2041. At the same time, the population aged 20–60 is projected by the authors of the study to decline from 840 million to 614 million by 2050[6].

CONCLUSION

Recognition of the long-term consequences of low fertility has led to a shift in the priorities of the state policy of the People's Republic of China. Whereas previously the main focus was on limiting population growth, the strategic objective today is to create conditions conducive to increasing fertility and maintaining demographic sustainability.

At present, the Chinese leadership is implementing a comprehensive range of measures to address the country's demographic challenges.

The main policy areas include:

- providing financial support to families with children;
- developing the early childhood education system;
- improving access to healthcare services for pregnant women and children;
- introducing tax incentives and social benefits;
- reducing the cost of educational services;
- creating conditions that enable parents to combine professional activities with childcare;
- encouraging the development of stable family relationships;
- improving the pension system.

One of the key areas is reducing the costs of raising children. The government is seeking to make parenthood less financially burdensome for young families[7].

At the same time, China is gradually shifting from a policy of restricting fertility to one aimed at encouraging it.

[5] National Bureau of Statistics of China, Statistical Communiqué on National Economic and Social Development, 2024 и 2025.

[6] International Monetary Fund. Population Aging and Pension Reforms in China. IMF Working Paper WP/26/27. 2026.

[7] The State Council of the People's Republic of China. China to Offer Nationwide Childcare Subsidies. 28 July 2025

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However, changing demographic trends requires a considerable amount of time. Demographic momentum, shaped by decades of low fertility, cannot be reversed solely through administrative or financial measures.

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