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AmurCon 2021: International Scientific Conference**THE EFFECTIVENESS OF RUSSIA'S DEMOGRAPHIC POLICY**

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Abstract

The population is the principal resource for normal functioning and development for any country. Thus, population maintenance is a priority for States. In the Russian Federation, it is a national goal at the present stage. The evaluation of the effectiveness of demographic policy is carried out based on a comparison of target and actual indicators that characterize the fertility and mortality processes. The efficiency of demographic policy to stimulate the birth rate is average. Thanks to demographic policy measures, the birth rate grew from 2008 to 2015. However, there was no stable growth trend. Since 2016, there has been a steady decline in the birth rate due to changes in gender and age structure, and reproductive behaviour. The effectiveness of demographic policy to reduce the mortality rate is low since the target indicators lag behind the actual values for the mortality of the working-age population and circulatory system diseases. The final effectiveness indicator of demographic policy is life expectancy. The life expectancy of the Russian population has also not reached the target indicators, which indicates the low effectiveness of demographic policy for population maintenance.

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Keywords: Causes of mortality, demographic policy, effectiveness, fertility, mortality

1. Introduction

In the Russian Federation, population maintenance and population growth are priority goals at the present stage, since Russia is the largest country in terms of area and occupies 17.1 million square kilometres, but ranking 9th in terms of population. In the east, Russia borders on a country ten times more its population according to the last census results, held in 2021; China's population was 1.41 billion people. The population growth amounted to 72 million people. The population of Russia has been decreasing over the past 20 years, the trend is not stable, and the decline alternates with population growth. There was a population decline from 2000 to 2010, and the decline rates were constant in the range of 650-550 thousand people. Since 2007 the population decline has been decreasing, and in 2010, for the first time in ten years, the vector has changed, and the annual population growth was 96.3 thousand people. It continued until 2019 and reached the highest value in 2015. The trends were influenced by two main demographic processes: fertility and mortality. The demographic policy pursued by the state can influence these processes to stimulate fertility and reduce mortality (Sinelnikov, 2020). Therefore, the evaluation of the effectiveness of the demographic policy is carried out based on a comparison of target and actual values, which makes it possible to adjust the main policy directions to change negative trends in the future.

2. Problem Statement

In the Russian Federation, population maintenance is a priority national goal. Russia has been in a protracted demographic crisis for thirty years, characterized by high mortality and low birth rates, resulting in population decline. A high mortality rate was influenced by three reasons such as circulatory system diseases, neoplasms, and external causes. In Russia, there is also a high mortality rate of the working-age population. The consequence of this is a low life expectancy, especially a healthy life. In terms of life expectancy, Russia ranks 100th out of 190 countries in the world (Aganbegyan, 2021). The low birth rate is due to the gender and age structure of the population and the transition to the Western European model of fertility with the postponement of parenthood to later ages and a reduction in the number of children (Zhuravleva & Gavrilova, 2017). Since 2010, there has been a tendency for population growth. This trend has not been sustainable. The vast increase was in 2014 and amounted to 2.6 million people as a result of the annexation of Crimea and the overall tendency. Since 2019, the population has been decreasing, and an accelerating decline has been from 99.7 thousand people to 320.9 thousand people in 2020. The COVID-19 pandemic influenced the acceleration of the population decline in 2020.

3. Research Questions

The demographic policy of the state is a purposeful activity (state bodies and other social institutions) focused on regulating the population reproduction, that is, the processes of fertility and mortality. Depending on the demographic situation of the country, a demographic policy can be pronatalistic and restrictive. The evaluation of the effectiveness of demographic policy is defined as the

degree of implementation of planned measures and achievement of intended results. The expected outcomes of Russia's demographic policy are defined in Presidential Decrees No. 204 of 07.05.2018 "On National Goals and Strategic Objectives of the Russian Federation for the period up to 2024", No. 474 of 20.07.2020 "On National Development Goals of the Russian Federation for the period up to 2030." They are presented in Table 1 (Aganbegyan, 2021).

Table 1. Target values of fertility and mortality rates for Russia for the period up to 2024

Indicator	Target values
The total fertility	1,7 children
and mortality rate of the working-age population	up to 350 cases per 100 thousand of the population
mortality from circulatory system diseases	up to 450 cases per 100 thousand of the population
mortality from neoplasms, including malignant	up to 185 cases per 100 thousand of the population

4. Purpose of the Study

The purpose of this article is to assess the effectiveness of Russia's demographic policy by correlating targets with actual values and determining the possibility of achieving targets.

5. Research Methods

While studying the effectiveness of Russia's demographic policy, the method of system analysis was used, with the help of which the authors analyzed the target and actual values of fertility and mortality indicators. Data from the information and analytical bulletin "Natural Population Movement" of the Federal State Statistics Service of the Russian Federation (Natural..., 2020) were used for the analysis.

6. Findings

6.1. The effectiveness of demographic policy to stimulate fertility

During the study period, an active pronatalist demographic policy was implemented in the Russian Federation (Maleva et al., 2017). To stimulate the birth rate in Russia, Federal Law No. 256 of December 26, 2006, "On additional state support measures for families with children" was adopted in 2007, which defined payments to families at the birth of the second child (subsequent children, on condition they haven't used this right before) (Arkhangelsky et al., 2017). These payments are called "maternity capital" (Arkhangelsky et al., 2017). The initial amount of the "Maternity capital" was 250 thousand rubles.

The analysis of the birth rate across Russia showed that its growth continued until 2015. And it amounted to a maximum of 1942683 people since 2000. In 2019 the birth rate decreased to the 2006 figure and amounted to 1481074 people. In 2020 the birth rate reduced by 44560 people and amounted to 1436514 people (Table 2). Thus, we can state that during the observed period, fertility rates have been at a low level for 20 years, the current trend towards their decline continues.

Table 2. Fertility dynamics in the Russian Federation from 2007 to 2020

Years	Born	The growth (decline) of the birth rate
2007	1610122	130485
2008	1713947	103825
2009	1761687	47740
2010	1788948	27261
2011	1796629	7681
2012	1902084	105455
2013	1895822	-6262
2014	1942683	46861
2015	1940579	-2104
2016	1888729	-51850
2017	1690307	-198422
2018	1604344	-85963
2019	1481074	-123270
2020	1436514	-44560

(*Yestestvennoye ...*, 2020)

The analysis of the birth rate after the start of payments of the "maternity capital" did not show stable positive growth dynamics. In 2007 and 2008 birth rate increased by 130485 and 103825 children, respectively. Since 2009 and the next three years, the birth rate grew slightly, and a sharp increase occurred in 2012 when the birth rate increased by 105,455 children. In subsequent years, the birth rate continued to grow, and the highest birth rate was in 2014, amounting to 1942683 children. In later years, the birth rate began to decline and in 2020 amounted to 1436514 children, reaching the birth rate of 2003. The catalytic role of the "maternity capital" has had its results, but it is crucial to remember that the population age factor influences this process, too (Maleva et al., 2017). In the analyzed period, numerous generations of the 80s entered the childbearing period affecting the birth rate growth. In the 80s, 2.4-2.5 million children were born annually, and a large generation gave a surge of fertility, stimulated by the "maternal capital" (Bulanova, 2017). By 2020, this reserve has exhausted itself, and changes have been made to Federal Law No. 256 to maintain the birth rate. The authorities began to pay the maternity capital at the birth of the first child at the rate of 483.881 rubles and 83 kopecks according to the amendments made to Federal law No. 256. And at the birth of the second child, they paid an additional 155550 thousand rubles. Thus, the total quantity of maternity capital amounted to 639,431 rubles and 83 kopecks. The government compensates mortgage payments equivalent to 450 thousand rubles at the third childbirth. According to the author, the given measures will not lead to an increase in the birth rate but will prevent a sharp decrease in subsequent years.

The impact of the "maternity capital" on fertility since 2008 is difficult to analyze since data on births order have been presented only since 2016. Despite this, we will try to trace the change in the dynamics of the births sequence in subsequent years. Table 3 presents an analysis of the birth rate by births order, which did not reveal a sharp increase in second and third childbirths. The share of first births from 2016 to 2020 varies between 39-36%, second - 40-36%, third - 16-18%, fourth - 4-8%, fifth - 1.8-3%. With a total decrease in births since 2016 by 452 thousand people, the share of third, fourth, and fifth births is growing. These show that the share of large families is growing. Therefore, we can state that the

birth rate is influenced by demographic attitudes more that determine the number of children in a family (Makar et al., 2020).

Table 3. Dynamics of children births by births order in the Russian Federation for 2016-2020

Years	Total births (100%)	First	Second	Third	Fourth	Fifth	Unknown
2016	1888729	735732(39%)	762701 (40)	255628 (16) %	66333 (4)	33999 (1,8)	34336 (1,8)
2017	1690307	651448 (39%)	652339 (39)	250299 (15%)	67269 (4)	34927 (2)	34025 (2)
2018	1604344	602902 (38%)	621668 (39)	258949 (16%)	75328 (5)	40870 (2,5)	4627 (0,2)
2019	1481074	557207 (38%)	549993 (37)	253093 (17%)	77324 (5)	42948 (3)	509 (0,03)
2020	1436514	524238 (36%)	519571 (36)	259793 (18%)	82260 (8)	45972 (3)	4680 (0,3)

(Yestestvennoye ..., 2020)

The evaluation of the effectiveness of demographic policy to stimulate fertility was also carried out based on the analysis of the total coefficient. The total fertility rate shows the average number of children a woman will give birth to throughout her life (Table 1). Since an informative indicator can be used to analyze the rate of population maintenance, an indicator above 2.12 shows an expanded type (Sinelnikov, 2019).

Table 4. The total fertility rate in Russia, 2010-2020, people.

Years	2015	2016	2017	2018	2019	2020
Total Fertility Rate	1,777	1,762	1,621	1,579	1,504	1,505

(Regiony ..., 2020, p.78)

Until 2016, the total fertility rate in Russia has been growing. Since 2016 it has been decreasing, and in the future, it will only decrease, since in the conditions of the second demographic transition (Klupt, 2020), demographic priorities of a person change, both concerning the marriage age and questions about the number of children (Zhuravleva & Gavrilova, 2017). The target of this indicator by 2024 should be 1.7 children per woman of reproductive age; the dynamics of the decline in the total coefficient cast doubt on the possibility of achieving (Table 4).

6.2. The effectiveness of the demographic policy of the Russian Federation to reduce the mortality

Mortality is the significant demographic process affecting the size and structure of the population (Shchepin & Shishkin, 2018).

To achieve the targets, national projects "Demography" and "Health Care" have been developed, whose activities are aimed at lowering mortality. Within the framework of the national projects "Demography," the federal projects "Sport is the Norm of Life," "Strengthening Public Health," "The Older Generation," the attention is focused on preserving health and reducing mortality. All federal

projects within the project “National Health Care” are aimed at lowering mortality and increasing life expectancy. It is planned to develop a network of the primary health care systems within the federal project "Development of System of Rendering Primary Health Care." It implies the construction of paramedic-obstetric, paramedic stations, and outpatient clinics, the development of sanitary aviation, the acquisition of mobile medical complexes, and the development of the medical organization of a new model. Regional vascular centers, provision of medical personnel, and preventive measures are being created during the federal project implementation "Fight against Cardiovascular Diseases." The federal project "Fight against Oncological Diseases" involves the creation of outpatient oncological care centers, the re-equipment of regional medical organizations, information and communication companies to conduct preventive medical examinations for early diseases detection. Its objective during the implementation of the federal project "Development of Children's Health Care, including Creation of Modern Infrastructure of Delivery of Health Care to Children," is to create simulation centers for training specialists in the field of perinatology, neonatology, and pediatrics, conducting preventive medical examinations, and construction of children's hospitals. The federal project "Providing medical organizations of the healthcare system with qualified staff" provides for the implementation of accreditation procedures, continuous professional development through the creation of simulation centers, the development of interactive educational models for the portal. The federal project "Development of a Network of National Medical Research Centers and the Introduction of Innovative Medical Technologies" provides for the use of telemedicine technologies by these centers for consultation. The federal project "Development of the export of medical services" involves communication measures to attract foreign specialists to the healthcare system of the Russian Federation. The federal project "Creation of Single Digital Contour in Health Care on the basis of the Single State Information System of Health Care (SSISHC)" involves the creation of a single state information system in healthcare, the interaction of this system with similar systems of the subjects of the Russian Federation and the of Public Services Portal of the Russian Federation. The implementation of national projects began in 2018. We will try to assess the effectiveness of the measures to reduce mortality by comparing the planned indicators of the national project passport in Russia as a whole.

According to the Decree of the President of the Russian Federation No. 204, the mortality rate reduction in the working-age population to 350 cases per 100 thousand people should be achieved by 2024. Is it possible to achieve this indicator in Russia as a whole?

This indicator showed a downward trend in Russia for ten years from 2010 to 2019. From 2015 to 2020, the mortality rate of the working-age population decreased by 14%, but in 2020, mortality increased by 10% (Table 5). One of the crucial causes of the mortality increase is the COVID-19 coronavirus infection. In 2020, 144,691 people died from the COVID-19 coronavirus infection.

Table 5. The value of mortality rates in working-age from those planned by the national project "Healthcare," per 100 thousand people

Years	2015	2016	2017	2018	2019	2020
Russia	546,7	525,3	484,5	482,2	470,0	521,6

(Regiony..., 2020, p. 1242)

In 2020, the actual mortality rate of the working-age population was 49% higher than planned (350 cases per 100 thousand people). Within five years, the decrease was 14%; the achievement of the target value is questioned. The decline in mortality rate should be approximately 12% annually, which is practically unrealistic in the current conditions.

According to the National Health Care project, the mortality rate in working-age in 2018 should have been 455, in 2019 – 437, in 2020 – 419 deaths per 100 thousand people. The expected results were not achieved in Russia during the study period (Table 6).

Table 6. Excess of mortality rates in working-age from those planned by the national project "Healthcare," per 100 thousand people

Years	2018		2019		2020	
	Fact	Growth rate (decrease)%	Fact	Growth rate (decrease)%	Fact	Growth rate (decrease)%
Russia	482,2	6,00	470	7,60	521,6	24,5

(Regiony..., 2020, p. 69)

In 2018, the lag of the actual indicator from the planned one was 6%. In the future, it only increased, and in 2020 it reached 24.5%.

The first place in the structure of mortality reasons in the Russian Federation and the mortality of the working-age population is mortality from circulatory system diseases (Popova & Taranenko, 2017). The target values of this indicator by year in the national project "Healthcare": in 2018 - 565, in 2019 - 545, by 2020 - 525, in 2021 -505, by 2024 450 deaths per 100 thousand population (Table 7).

Table 7. The mortality rate of the Russian population from the circulatory system diseases, per 100 thousand people

Years	2015	2016	2017	2018	2019	2020
Russia	635,3	616,4	587,6	583,1	573,2	640,8

(Yestestvennoye ..., 2020)

Over the years of the national health care project implementation since 2018, the indicator has not reached the target values. In 2018 the gap was 3%, and in 2020 it was 22%.

The next significant cause of death in Russia is mortality from neoplasms. By 2024, the target is 185 deaths per 100 thousand people. Let's analyze the dynamics of deaths in Russia and predict the chances of achieving the intended result. It should be noted beforehand that the national health care project is being implemented in Russia, which includes the federal project "Fight against Oncological Diseases."

The federal project provides for the development of programs "Fight against Oncological Diseases," additional financial support for the provision of medical care to patients with oncological diseases, staffing of oncological medical centers, the construction of oncological dispensaries, the creation of reference centers for immunohistochemical, pathomorphological and radiation research methods, information and communication campaigns aimed at early detection of oncological diseases and increasing adherence to treatment, re-equipment and improvement of medical organizations, and creation of outpatient oncological care centers. The evaluation of the effectiveness of the measures taken showed

that mortality from neoplasms in Russia as a whole is higher than planned. In 2018, the target figure was 199.9 deaths per 100 thousand people. In 2019 it was 199.5 deaths per 100 thousand people, and in 2020 it was 197.0 deaths per 100 thousand people (Table 8).

Table 8. The mortality rate of the population of the subjects of the Far Eastern Federal District from neoplasms, per 100 thousand people

Years	2015	2016	2017	2018	2019	2020
Mortality from neoplasms, including malignant	205,1	204,3	200,6	203,0	203,5	202,0

(*Yestestvennoye ...*, 2020)

Mortality from neoplasms in Russia is 2.5% higher than planned in 2020, which indicates the possibility of achieving the target (Table 8). Thus, the measures provided for by the federal project "Fight against Oncological Diseases" have a positive effect.

In Russia, there is an increase in the mortality of the working-age population. Mortality from circulatory system diseases and neoplasms is higher than the target values. Coronavirus infection increased the mortality rate. Thus authorities shifted their attention to the treatment of this disease and the reduction of medical care for other types of morbidity (Rusanova & Kamynina, 2021).

7. Conclusion

Thus, the effectiveness of Russia's demographic policy does not have a clearly defined assessment. Demographic policy to stimulate the birth rate had positive results until 2015. Further, there was a decrease in the birth rate caused by changes in the sex and age structure and the population's reproductive behaviour (Maleva et al., 2017). As part of the second demographic transition, there are changes in fertility patterns in Russia (Sinelnikov, 2021), that is, an increase in the average age of motherhood and a decrease in the number of children (Rudneva & Sokolova, 2020). The changes made to Federal Law No. 256; under which maternity capital began to be paid from 2020 at the birth of the first child, additionally at the birth of the second and third children, will not increase the birth rate but will prevent a sharp decline in subsequent years (Vishnevsky, 2019). Achieving the intended value of the total fertility rate of 1.7 children by 2024 is estimated as possible in several subjects, but it is not achievable in Russia as a whole. The effectiveness of the demographic policy to reduce mortality is low since only one target indicator has almost been reached. It is mortality from neoplasms. The mortality rate of the working-age population and the mortality from circulatory system diseases is growing; the achievement of targets is doubtful.

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