Demology

Strategic Challenges of Demographic and Migration Development in Modern Georgia

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The present paper defines strategic objectives for demographic and migration development in modern Georgia based on the analysis of the contemporary statistical data. It indicates the causes of chronic depopulation and intensive labor emigration in Georgia and ways to eliminate them. In about past three decades, Georgia experienced chronic depopulation. With such a state of demographic development, Georgia does not follow the main trend of global population demographics showing rapid growth of the world population. The main reason for depopulation in Georgia is the falling fertility rate and high levels of labor emigration. These processes affected the age structure of the population of Georgia what in turn further deteriorated the demographic situation and significantly increased the indexes of population ageing. The gender structure and marriage indices of the population are also important to analyze. The paper proposed to develop long-term programs to stabilize the number of population of Georgia, set up economic incentives to stimulate the fertility rate and control high level of labor emigration. © 2022 Bull. Georg. Natl. Acad. Sci.

population of Georgia, depopulation, age structure

The current demographic state in Georgia is largely the consequence of the political and socioeconomic upheavals brought on by the collapse of the Soviet Union. The collapse of the political union was followed by the severance of traditional economic ties, which, in turn, caused social phenomena unusual to the Soviet period, such as unemployment, extreme poverty and mass labor emigration. All this had a strong impact on the already unfavorable demographic development of Georgia, and the state experienced chronic depopulation decades for almost three (https:/www.geostat.ge/ka).

Taking demographic into account the development, Georgia does not follow the global trend of population demographics, characterized by the rapid growth of the world population. Despite recent decline in growth rate (1.0-1.6% per year on average), the absolute value of population increase is still high. For instance, the global population increased by 1% in 2020, that in absolute numbers means additional 82.3 million people in the world. Only 3 million (i.e. only 3.5%) of these neonates were born in the developed countries, while 79.3 million (or 96.5%) were born in the developing countries. It means that in 2020 alone, the world population increased by 82.4 million that equals the

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number of population of Germany. 96.5% of them live in the countries, which have scarce provision for their newborns and whole population. It means that those newborns and their parents will continue to be the concern of developed countries. The famous English economist T.R. Malthus (the 18th-19th centuries) noted that the world population growth exceeds the growth rate of the means of subsistence (food and drink) [1], i.e. in fact, he predicted the present-day picture of the world leading to wars, epidemics and other social cataclysms [2].

The issue of demographic development of Georgia, a small country in terms of population and marked by rather stable indices of depopulation for several decades, is presented in a somewhat different way against the background of the global population increase.

Such population dynamics point to a long-term crisis tendency of the nation's demographic development evidenced by the hollows in the age-sex pyramid (Fig.).

those who are currently in the 30-34 age group and are caused mainly by decreased fertility rate. Declineed fertility and unusually large scale of labour emigration, which led to the depopulation of Georgia, naturally reduced the population density: instead of 82 persons/km² in 1994, the population density became 65.2 persons persons/km² in 2021 (including in the temporarily lost territories of Abkhazia and so-called "South Ossetia"), making a 20.5% decline.

Negative demographic processes for the pat 27 years (1994-2021) also affected such general indicator of the population age structure as median age. If in 1994 the median age for both sexes was 32 years (29 years for men and 34 years for women), by January 1, 2021 it reached 38 years (35 years for men and 40 years for women), i.e. it increased by 17.6% (by 20.7% for men and by 17.6% for women).

Such rapid increase in the median age of population is clear indicator of demographic aging and demonstrates that the deterioration of age

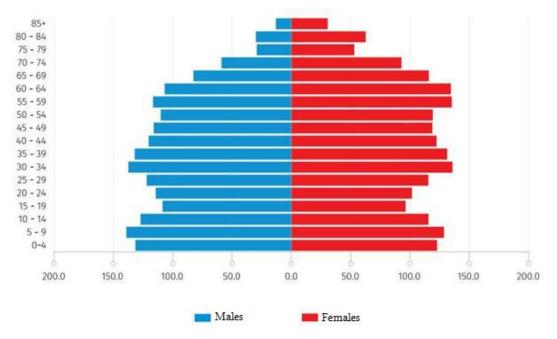


Fig. 1. Age-sex pyramid by January 21, 2021 (thousand people).

These hollows are particularly noticeable in the generation of young people born after 1989, i.e.

structure may further deteriorate the usual course of demographic processes. Fertility and number of marriages may be decreased, while demographic aging may result in increased mortality and reduced life expectancy. This will eventually result in rapid changes of generations.

According to three-level scale developed by the UN experts, the population of Georgia, like the populations of Western Europe, Japan, and the United States, is demographically "over-aged". [3]. It is noteworthy that demographic ageing in Georgia, as in any other country, is supported by both, dramatic fall in population growth in the study period and incredibly enormous scale of labor emigration, which is exceptionally active in Georgia and is primarily presented by young adults of working age. This gives us reason to believe that the process of demographic ageing will continue to intensify in the years to come, which in turn will have a number of economic, social-hygiene, and morale-ethical consequences within the society. These consequences are considered and resolved in various ways across the countries, but all developed countries share one common trend: improvement of the abilities and quality of life of the elderly.

(from 50.5% to 55.7%, i.e. by 10.3%) (https://www.geostat.ge/ka).

It also should be noted that young age loading coefficient is always higher than elderly age loading coefficient (this is not surprising as at young age, due to the secondary sex ratio, boys usually predominate, while at retirement age, women prevail due to low mortality rate and higher life expectancy). The proportion of boys is higher than that of girls in terms of young age loading coefficient, while the proportion of women is higher than that of men in terms of elderly age loading coefficient.

In the study period, fertility drastically declined in Georgia.

From 1994 to 2020, the number of live births fell from 57,311 to 45,946, while total fertility rose from 11.9% to 12.5%. Because of negative migration balance in the study period, average annual population of Georgia declined more than live births, which is why the absolute and relative fertility rates changed in opposite directions. In other words, the depopulation process had a

Table 1. Number of	of girls born	in Georgia in	different decade	es of 1960-2009 [4]
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Year	Number of female births			
1960-1969	466 622			
1970-1979	433 361			
1980-1989	454 960			
1990-1999	306 395			
2000-2009	236 681			

Unfortunately, Georgia is still unable to take proper care of its elderly population, as evidenced by pensions that are absolutely insufficient even for normal human existence.

Demographic load coefficients, which are general indices of age structure and illustrate the burden placed on the society by unproductive population, are quite similar to demographic ageing indicator. In 1994-2021, the values of these coefficients increased significantly for both sexes

detrimental effect by creating the illusion of an allegedly positive change in the fertility rate. At the same time, this kind of change once again points to unreliable analytical power of general coefficients, and therefore, one should be cautious when drawing conclusions only based on their analysis.

Secondary sex ratio change is one of the important indices of fertility. Its dynamics shows that this indicator is changed almost insignificantly and, naturally, in the future will not have a great impact on either sex-age structure of the total

population of the country, or mode of reproduction. However, the distribution of the number of live births by mother's age may influence the variation of overall fertility rate.

During the past 28 years in Georgia the number of children born to women under the age of 20 decreased significantly and the number of children born to women over 30 increased, i.e. the number of late births increased what may be the reason for declined fertility rate.

The main reason for declining fertility rate in Georgia is the structural factor. Presently and in the near future, a relatively small number of girls born in 1990-1999 and in 2000-2009 will reach reproductive age. This will deteriorate the already challenging demographic situation (Table 1).

For a thorough analysis of the fertility rate, the dynamics of live births by order of birth is crucial. The graph shows that in spite of the uneven dynamics of the total number of births since 2006 (decreasing and increasing at different times), the share of children of the first order steadily decreased from 60.6% in 2006 to 37.4% in 2021. Decrease in the share of first-order children means increase in the share of higher-order children and greater number of large families. One of the proofs is the almost constant rise of the share of children of the third, fourth, fifth and higher orders from 2007 to 2021. If in 2007, the shares of children of the third-, fourth- and fifth-order children in live births was 8.3%, 1.7% and 0,8%, respectively (i.e. 4,046, 817 and 410 children in absolute numbers), as soon as in 2021 their shares/absolute numbers were 19.6%/9009, 5.0%/2278 and 1.8%/273, respectively. In terms of current low fertility and

depopulation such a picture is undoubtedly encouraging and gives reason for hope.

It is generally known that the first-order or first-born children always predominate, but according to 2018 data this pattern was broken in Georgia and the number of the second-order children (19511) exceeded that of the first-born children (19362) by 149. This unusual case is very difficult to explain. In particular, if these numbers are not the result of statistical gap (what cannot be completely excluded), it may be the caused by fewer marriages (as it is the newlyweds mostly having first-borns during the first 5 years of marriage). One of the proofs is constant decrease of registered marriages in 2013-2021.

The financial incentives introduced on June 1, 2014 for having a third child in 6 regions of Georgia with particularly challenging demographic problems (depopulation) perhaps led to the greater number of second-born children compared to first-born children. In terms of hard economic situation, the incentives perhaps encouraged parents to have second and third children. Supposedly, mainly the financial-economic measures rather than less understood and unverified in practice demographic sentiment, so-called psychological concept of "demand to have children", help increase the fertility rate.

Unprecedented scales of labor emigration during the post-Soviet period (e.g., 194 634 people in 1994) deteriorated the demographic conditions in Georgia. Although the negative migration balance decreased significantly after 2012 compared to the past period, with only some very rare instances (in 2014, 2015, and 2017) its size remained above the

Table 2. Dynamics of migration balance and natural increase in Georgia in 2012-2020 (person)*

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Migration balance	-21 521	-2 606	-6 620	-3 408	-8 060	-2 212	-10 783	-8 243	15 732
Natural increase	622	1093	11548	10128	5798	5471	4637	1637	-4017

^{*(}https:/www.geostat.ge/ka).

rate of natural increase and resulted in population decrease (Table 2).

Emigration (including labor emigration) took quite a large scale and created obvious problems for the demographic development of Georgia. So, along with the fertility rate, the state must also pay attention to emigration processes, the scale of which is very impressive and in terms of little positive natural increase, which itself is not easy to achieve, threatens to reduce the population. It is crucial for the state to legally regulate immigration procedures and introduce suitable immigration regulations for emigrants in order to avoid demographic catastrophe.

Based on the above, it is recommended to develop and, realize the following strategic tasks to improve the demographic situation in Georgia:

 Based on the concept of demographic security of the country adopted by the Parliament of Georgia, a long-term program of population stabilization should be developed;

- Due to difficult economic situation in the country, it is recommended to further expand measures of material incentives for children;
- In order to ensure overall growth of population and natural increase, we consider it a strategic task to regulate an extremely high level of labor emigration and develop such legislation that like the Code of Hammurabi, the King of Babylon, will introduce appropriate rules to prevent demographic catastrophe. Since emigration is a threat to survival of the nation by considering the present-day chronic process of depopulation in Georgia, the state should implement appropriate demographic policy measures in a timely mode to solve the causes of emigration and hard economic state. Only the state has the power to develop and implement such a policy.

დემოლოგია

თანამედროვე საქართველოს დემოგრაფიული და მიგრაციული განვითარების სტრატეგიული ამოცანები

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სტატია წარმოადგენს თანამედროვე საქართველოში ჩამოყალიბებული დემოგრაფიული და მიგრაციული განვითარების სტრატეგიული ამოცანების განსაზღვრის მცდელობას, რომელიც დამყარებულია მიმდინარე სტატისტიკური მონაცემების ანალიზზე. მასში დახასიათებულია საქართველოს მოსახლეობის ქრონიკული დეპოპულაციისა და ინტენსიური შრომითი ემიგრაციის გამომწვევი მიზეზები და მათი გამოსწორების გზები. რიგი ფაქტორების გავლენით, საქართველოს მოსახლეობა უკვე თითქმის სამი ათწლეულია ქრონიკულ დეპოპულაციას განიცდის. ამგვარი დემოგრაფიული განვითარებით, საქართველო ამოვარდნილია მსოფლიოს მოსახლეობის დემოგრაფიული განვითარების მაგისტრალური ტენდენციიდან, რომელიც ხასიათდება იმით, რომ თანამედროვე მსოფლიოს მოსახლეობის რიცხოვნობა ძალიან სწრაფად იზრდება. საქართველოში დეპოპულაცია გამოიწვია ძირითადად შობადობის დონის დაცემამ და შრომითი ემიგრაციის უჩვეულოდ მაღალმა დონემ. ეს პროცესები აისახა საქართველოს მოსახლეობის ასაკობრივ სტრუქტურაზე, რაც თავის მხრივ დემოგრაფიული ვითარების კიდევ უფრო გაუარესებას იწვევს და მნიშვნელოვნად ზრდის მოსახლეობის დაბერების მაჩვენებლებს. მნიშვნელოვანია მოსახლეობის სქესობრივი სტრუქტურის ანალიზიც, ასევე ქორწინეზის მაჩვენებლებიც. ნაშრომში გამოთქმულია წინადადებები საქართველოს მოსახლეობის რაოდენობის სტაბილიზაციის გრძელვადიანი პროგრამების შემუშავების, შობადობის ეკონომიკური სტიმულირების და შრომითი ემიგრაციის მაღალი დონის რეგულაციის თაობაზე.

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