




Demographic Issues as a Condition for the Regions Sustainable Development (on the Example of the Irkutsk Region)

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Abstract: The authors analyze the state, forms, demographic structure dynamics factors and their role in the regions sustainable development program. The article justifies the viewpoint on the demographic indicators and the region socio-economic situation interdependence. The data from statistical agencies on the natural and migration decline of the population are analyzed. As determinants of transformations of the Irkutsk region quantitative and qualitative population characteristics, the authors identify destructive changes in the quality of life of the population in the region, a decrease in the human development index, a steady decline in population real incomes and, in this regard, the persistence of trends in subsidizing the poor, an increase in the volume of this stratum in the social structure, the entrenchment of negative trends in short life expectancy and problems with providing medical services, as well as environmental threats. In the article, the authors substantiate the demand for serious long-term socially-oriented measures for the peripheral northern territories development, the population preservation and multiplication, improving the quality of life to ensure the effectiveness of sustainable development programs measures, as well as the integrity of the state borders and the elimination of socio-economic and stratification disunity of the Russian regions.


1 INTRODUCTION


The choice of the research topic is caused by the significant changes in the demographic structure in many regions of modern Russian society. The Irkutsk region is a prime example of the transformations that are typical for the entire Siberian Federal District. The dynamic state is characterized by a number of polyvariant forms and social expressions from mass migration to the central part of the country and the northern territories "emptying" to changes in the ethno-national structure in the studied region, changes in the gender and age pyramid and a decrease in the total birth rate. The situation with the population composition negative dynamics caused by both natural causes (the health level, the population life expectancy, an emergency situation for a number of diseases, including cancer and HIV) and unnatural


factors in a socio-economic nature (economic unattractiveness, a decrease in real incomes, an increase in labor migration to the central and southern regions of Russia) raises concerns. The destructive nature of stable trends in the region demographic indicators transformation significantly actualizes the designated topic, which determined the object, purpose and methods of this study.

The object of the study is the state, forms, factors of the demographic structure transformation and its role in the modern region development (based on the materials from the Irkutsk region).

The purpose of the study is to determine the Irkutsk region demographic structure current state, to identify its transformation factors, to analyze the demographic characteristics of 2000-2021, to identify the dynamics forms and social forecasts in relation to

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changes in the demographic indicators of the region typical for the Siberian Federal District.

2 RESEARCH METHODOLOGY

In the paper the authors conducted a secondary analysis of the results of surveys conducted by the All-Russian Center for Public Opinion Research, the Federal State Statistics Service statistical data, the Federal State Statistics Service for the Irkutsk Region territorial body, as well as the research materials of Irkutsk public organizations aimed at determining the population quality of life and at solving the Baikal Region demographic structure dynamics problems. The Russian regions demographic analysis are characterized components are characterized according to the data from the National Demographic Report - 2020 (Ryazancev, Arhangel'skij and Vorob'eva, 2020) and the census periods of 2002-2010 results.

The article summarizes the experience of foreign and domestic researchers to determine the conceptual positions, among them are: J. Olaguibe, D. López-Hernández, A.Yu. Chang, V.F. Skirbekk, S. Tirovoras, S. Kassebaum, Dzh. L. Dil'man, V.N. Barsukov, O.N. Kalachikova, N.A. Khvylya-Olinter, O.V. Arakcheeva, I.Yu. Krivdina, S.V. Ryazantsev, V.N. Arkhangel'sky, O.D. Vorob'eva, O.L. Rybakovsky, O.A. Tayunova, V.G. Dobrokhleb etc. (Olaguibe; and López-Hernández, 2021; Chang, Skirbekk, Tirovoras, Kassebaum and Dil'man Dzh, 2019 Arakcheeva and Krivdina, 2020; Ryazancev, Arhangel'skij and Vorob'eva, 2020; Dobrokhleb, 2020; Vinokurov and Suhodolov, 2009).

3 RESEARCH RESULTS

The natural and migration decrease of the population in Eastern Siberia is accompanied by a number of destructive socio-economic processes, including an increase in the demographic burden, an aging population, an increase in the decile coefficient and a decrease in the quality of life, an increase in amount of depressed people against the background of a decrease in the population real incomes and an increase in social disadvantage in the region, a decrease in the human development index. So, according to the regional Statistics Committee, in the third quarter of 2020, 92,478 people lived in families receiving subsidies, which is 7% of the total number of families. The share of the population with

monetary incomes below the subsistence minimum is still significant. Today, 17.6% of the total population receives subsidies to meet the vital order minimum needs.

These processes indicate the expected objectivity and the regularity of destructive changes in the demographic structure of Eastern Siberia in general and the Irkutsk Region in particular. The negative processes that have emerged since the late 1990s have taken root and are showing expansion tendencies. So, for example, the region population since 1995 has decreased by 373,052 people (from 2,748,073 people in 1995 to 2,375,021 people on 01/01/2021). The current population figures are comparable to those of the 1970. The natural population decrease in January-March 2021 was 2,819 people (9,259 deaths for 6,440 births were registered) (Demograficheskie pokazateli Irkutskoj oblasti, 2020). Due to the new infectious disease Covid-19, 2,280 deaths were recorded with 66,843 cases of infection as at 05/05/2021. The number of migrants arriving today does not compensate the population natural loss. Since the beginning of this year, the population decrease has amounted to 647 people (11,691 arrivals account for 12,338 departures) (Ryazancev, Arhangel'skij and Vorob'eva, 2020) It should be noted that the decrease in the population in the region is correlated with losses within the whole state.

The types of migration and its balance in the Irkutsk Region have been stable since the late 1990s. There is a negative balance of both interregional and international migration types (Table 1).

Table 1: The Irkutsk region population migration types.

	Migration growth (decrease)	
	2019	2020
Migration as a whole	-3,250	-7,069
Within Russia	-7,426	6,753
Intraregional	0	0
Interregional	-5,614	-6,753
International migration	4,151	-316
With the CIS countries	1,990	672
With other foreign countries	2,161	-988
Out of the total volume – the region external migration	-3,275	-7,069

These changes cause the greatest concern in the situation with accounting the population average age (Table 2). On his basis it is not possible to predict natural population growth in the coming decades in the region. The transition of the female stratum to the age group over 40 years causes low expectations for an increase in childbirth in the region.

Table 2: Average population age (at the beginning of 2020).

Territory	All population (both sexes)	Men	Women
Russian Federation	40.23	37.47	42.63
Siberian Federal District	39.12	36.38	41.49
Irkutsk region	37.88	34.96	40.4

Moreover, the average age indicators (only at the initial view) can generate optimistic estimates and forecasts, while a detailed analysis of the region population reveals negative trends in short life expectancy in the region, especially in the male stratum. Life expectancy in 2021, according to the Regional Statistics Committee information references, will be 70.58 years (64.86 years for men, 76.3 years for women). In terms of these indicators, the Irkutsk Region is significantly behind the average indicators not only for Russia, the Siberian Federal District, but also for some regions with traditionally high life expectancy. Thus, the average population life expectancy in the subjects of the Russian Federation was noted at the level of 66.8 years (60.5 years for men; 73.3 years for women), on the 80th position out of 83 subjects of the Russian Federation. The Irkutsk Region outpaces only the Republic of Tyva, the Chukotka Autonomous District, the Jewish Autonomous Region (the data are given on 01/01/2016). Unfortunately, these trends persist in the current environment. With the expected decline in the total birth rate, the destructive vector in the dynamics of the region demographic structure is objectively difficult to change (Table 3).

Table 3: Total birth rate (number of children per woman).

Year	Total population	Urban population	Rural population
2020	1.697	1.561	2.337
2025	1.581	1.454	2.177
2030	1.641	1.509	2.260
2035	1.693	1.557	2.331

It is important to understand that the demographic structure state is at the same time the population quality of life indicator, the region social well-being indicator and a factor of a region social stability and territories preservation. With the current population density of the region (3.07 people per km² with an area of 774.8 thousand km²), the Irkutsk region occupies the 6th place out of 20 regions of Siberia,

which is 150 times less than in the Moscow region. The settlement unevenness determines not only the sparsely populated area, but also the weak development of the northern regions, where population density differs significantly (more than 100 times from the national indicators) (Vinokurov and Suhodolov, 2009). This information is important not only from the state internal geopolitics viewpoint, from ensuring socio-economic balance and social justice in different regions of the country, but also in relation to foreign policy in the context of Western aggression increasing and the growth in the territorial interests of Eastern neighbors. Moreover, it is difficult to overestimate the importance of the number and territorial location of the population for preserving the integrity of the state borders.

In modern realities, it is obvious that the expected birth rate depends not only on the physiological characteristics of the population in birth age, but to a greater extent it depends on the region socio-economic indicators, the quality of life level, the social well-being indicator and the nature of the population social expectations.

Risk factors in the region are social indicators that determine the duration and quality of life, which prevent the establishment of health-saving behavior and the active longevity extension. Still some difficulties remain in providing timely, high-quality medical care and recreational activities. For several decades the region has maintained a high mortality rate from the cardiovascular system diseases, tuberculosis (it exceeds the all-Russian indicators twice), HIV (according to the Federal Register of Patients, as at 01/01/2019, 28,808 people with the immunodeficiency virus are registered in the Irkutsk region, 82.6% of the infected people are registered, 60.4% of the dispensary group receive the therapy), cancer (500 cases per 100,000 people, in the Baikal region cancer is diagnosed by a thousand more cases every year). There are still high statistics of primary drug use and the drug addiction formation (23.7 new cases of drug use are registered per 100,000 children and adolescents in the region). The situation is significantly complicated by the high level of alcoholization among the population (despite low incomes, the population spends significant amounts to meet the needs of alcohol addiction, for example, according to 2016 data, an adult resident spent 15,724 rubles on alcohol, without taking into account the alcohol self-production and the technical alcohol-containing liquids consumption) (Massovoe otravlenie v Irkutske) and the growth of mass non-communicable diseases (the morbidity threshold is 1.8 times higher than the all-Russian one due to the

environmental factors harmful effects) (Press-vypusk VCIOM). The accumulation of these destructive processes has been exacerbated by the ill-considered regional policy of the regional Ministry of Health since 2018, when a massive reduction in medical personnel (by 6,000 staff units) was carried out. According to the experts, today the shortage in the full-time number of medical staff is approximately equal to 30,000 employees. The regional medical institutions are staffed by less than 50%. Moreover, the data need to be clarified, since during the pandemic there were even greater losses in the number of medical staff because of natural losses due to infection, as well as due to migration from the profession due to the growth of already high labor intensity. It is obvious that these listed circumstances significantly complicate the planned demographic indicators implementation in the region, objectively jeopardize the achievement of the total life expectancy (by 2035, according to the plan in the region – 76.78 years, 72.13 years for men, 81.23 years for women). These processes generally have a negative impact on the social well-being and social reality perception, which, from an objective and subjective points of view, contributes to the growth of depressive moods among the region population.

4 DISCUSSION OF RESULTS

There is no doubt that the regional demographic structure dynamics is a social phenomenon with a complex nature, determined by the influence of a composite of objective economic and subjective socio-psychological factors.

The objective side of the issue traditionally includes the population nominal and real income, life expectancy, availability of high-quality medical care and recreational activities, stable working conditions, housing conditions that meet sanitary standards, the amount of vital and cultural goods consumed, and the safety of life and health.

The subjective, but also relevant side, are social affiliation, full participation in public life, social well-being, life satisfaction index, the level of population inclusion in social relations and cultural environments.

Despite the current socio-economic situation disappointing statistics of the region, its territories today are characterized by social processes of a dual nature, including not only destruction, but also some advantages over other Russian regions.

These advantages include the geolocation features, the natural resources presence and diversity,

the landscape and minerals richness. But at the same time, there are still real threats to the environmental situation in the region. There are still unresolved issues assessed by the modern scientific community as eco-disasters that pose threats not only to the region, but also to the territories of neighboring regions and the entire State, including (these are, first of all, man-made "traces" in Usolye-Sibirskoye, Baikal, etc.), "frightening" indicators of the air, water, and land pollution. The region has an extensive production, which simultaneously "feeds" the territory, finances an extensive structure of educational, cultural and leisure institutions, but also lays new environmental risks.

5 CONCLUSION

So, the dynamics of the Irkutsk region demographic structure are influenced by many trends of the current time. Among them, in our opinion, the most important are:

- progressing natural population decrease;
- low birth rate;
- the migration losses that increased during the pandemic and the maintaining traditional negative migration balance;
- the increase in the decline of the economically active population migrating to more prosperous regions, as a rule, to the central part and the southern territories of Russia;
- the increase in the demographic burden and the growth of the modern pension system financial needs due to the aging of the region's population and the older people stratum expansion;
- the preservation of low average life expectancy trends (80th place out of all subjects of the Russian Federation);
- the unemployment rate, narrowness of labor spheres in the single-industry cities of the region (Angarsk, Usolye-Sibirskoye, Baikalsk, Sayansk, Shelekhov, etc.);
- low real incomes, most of which is spent on the vital goods, especially in the region remote areas;
- the labor crisis and the growth of unemployment, which led to the shadow employment expansion in all age groups;
- low per capita income;
- the infrastructure development disadvantages;
- small amount of quotas for providing affordable recreation for children and adults;

- "personnel shortage" in the health care system and the resulting medical care problems.
- the insufficient recreational conditions to ensure active longevity programs, the older generation active social life development;
- some vital environmental issues that require government intervention and assistance.

The identified social processes have a negative impact on the social well-being of the population. There is no doubt that the region is in great demand for federal support to prevent a decline in demographic indicators and to develop the quality of life of the population in the peripheral territories. It seems, that long-term, logically verified (on the basis of social forecasts) additional measures are needed on the part of the state social protection services (Istomina; 2013). The corrective nature of these measures is explained by the importance of the northern territories development. It is obvious that the population preservation, the improvement of the residents well-being is an indispensable condition for the territories and State borders preservation. It also contributes to the elimination of regional disunity in the stratification system of modern Russian society and it is an indispensable condition for the regions sustainable development.

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