Quality of Life of the Murmansk Oblast Population: Subjective Assessments and Objective Characteristics [*]

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Abstract. The assessment of the population's quality of life is an important analytical tool of the state socio-economic policy, which allows analyzing the current level of regional development, the population's satisfaction with living conditions, making interregional comparisons, determining shortcomings and prospective directions of public administration. At the same time, objective statistical indicators, on which the state management is based, in many respects may not coincide with the subjectively perceived quality of life of the population. In this context, the presented research is particularly relevant and practically significant. The purpose of the research is to identify the problems of development of the Murmansk Oblast, the most industrially and territorially developed region of the Arctic zone of Russia, on the basis of the comparison of subjectively perceived assessments of the quality of life and objective socio-economic characteristics, and to outline ways to solve them. To achieve this goal, the following tasks were solved: the methodology for assessing the subjectively perceived and statistically determined quality of life of the population on the basis of indicators characterizing personal well-being and the quality of the living environment was developed; the subjectively perceived quality of life was assessed on the basis of the author's methodology including the results of surveys of the population of cities and towns in the Murmansk Oblast; the quality of life of the population of the Murmansk Oblast was assessed on the basis of statistical data of socio-economic development; the data of the obtained assessments were compared, similarities and differences in the satisfaction of the population with personal well-being (as well as with the living environment) and statistical characteristics were revealed; the most important problems of socio-economic development, the resolution of which will improve the quality of life of the population of the Arctic region, were identified.
Keywords: *population, Arctic region, Murmansk Oblast, quality of life, surveys, statistical information, socio-economic development, subjective assessments, objective assessments*

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Introduction

The issues of the quality of life are among the most discussed in world science in various contexts: the meaning of this concept, the methodology of definition and assessment, practical mechanisms for improvement. In our study, the quality of life of the population will be understood as a complex characteristic of the level and conditions of life of people permanently residing in a certain territory, characterizing the available potential and possibility of satisfying various material, spiritual and social needs, as well as subjective satisfaction with various aspects of life; in other words, it is the degree of compliance of the living conditions of the population of the region with their needs. This point of view is closest to the interpretation of the UNESCO Commission on Population and Quality of Life [1, Tomskiy G.V., p. 19].

For the Murmansk Oblast, the most industrially and territorially developed region of the Arctic zone of Russia, the problem of ensuring a high quality of life is especially important. This is explained by the special role of the region for the socio-economic development of the country, enhanced by the strategic tasks of responding to new challenges of geopolitical genesis. The regions of the Arctic zone of Russia differ from other Russian territories not only by harsh climatic conditions, but also by enhanced mechanisms of state administration generated by a special economic and geographical position, specific regulatory and legal support, constant migration processes, and the implementation of large logistics and production projects in the interests of the national economy [2, Zaikov K.S., Kondratov N.A., Kudryashova E.V.; 3, Socio-economic development ...; 4, Kudryashova E.V., Lipina S.A., Zaikov K.S.]. The socio-economic features that have developed in the Murmansk Oblast, on the one hand, are in many ways characteristic of other regions of the Arctic zone of Russia, and on the other hand, they are unique in comparison with non-Arctic territories. This allows us to study the quality of life of the population of the Murmansk Oblast in the special aspect of the influence of Arctic factors. It is important that the objective statistical indicators, on which public administration relies, in many respects may not coincide with the subjectively perceived quality of life of the population. In this regard, the presented study is particularly relevant and practically significant.

The purpose of the work is to identify the problems of development of the Murmansk Oblast and outline ways to resolve them on the basis of comparison of subjectively perceived assessments of the quality of life and objective socio-economic characteristics.

To achieve this goal, it is necessary to solve the following tasks:

- to develop a methodology for assessing the subjectively perceived and statistically determined quality of life of the population on the basis of indicators characterizing personal well-being and the quality of the living environment;
- to estimate the subjectively perceived quality of life on the basis of the author's methodology and the results of surveys of the population of cities and towns of the Murmansk Oblast;
- to assess the quality of life of the population of the Murmansk Oblast on the basis of

statistical data on socio-economic development;

- to compare the data from the obtained assessments, identifying similarities and differences in the population's satisfaction with personal well-being (as well as the living environment) and statistical characteristics;

- to identify the most important problems of socio-economic development, the resolution of which will improve the quality of life of the population of the Arctic region, and outline ways of their elimination.

Literature review

Assessment of the quality of life is an important analytical tool of the state socio-economic policy, which allows analyzing the current level of regional development, satisfaction of the population with living conditions, making inter-regional comparisons, identifying shortcomings and promising directions of public administration. Among the methodological approaches to assessing the quality of life of the population, the overwhelming majority refers to two categories: studies based on statistical data, and studies based on sociological methods, such as interviews, questionnaires, etc. Priority is given to statistics in the works of European researchers [5, Potluka O., pp. 4–6; 6, Tanguay G.A., Rajaonson J., Bilodeau P.-K., pp. 2–5;], considerable attention is paid to such directions in Russia [7, Kolesov R.V., Gromova M.V., Chistyakova E.M., pp. 120–122; 8, Serafimova A.S., p. 856], including in the authors' studies [9, Samarina V.P., Skufina T.P., pp. 48–52; 10, Samarina V.P., Skufina T.P., Samarin A.V., pp. 708–711; 11, Skufina T., Baranov S., Samarina V., pp. 202–207]. As a rule, these studies not only reveal certain quantitative dependencies and patterns, but also highlight promising areas of socio-economic development. Other Russian and foreign scientists prioritize sociological approaches and research methods [12, Kuo C.-T., Chen D.-R., pp. 132–134; 13, Sapozhnikova M.M., pp. 59–61; 14, Ermilina D.A., pp. 98–100]. At the same time, the general context of such studies is the priority of social factors of development over economic constraints.

The task of improving the quality of life of the population becomes the basis for ensuring the economic security of countries and their regions; it is natural that Russian and foreign researchers responded to this request [15, Vashurkina D.V., Garaeva O.A., pp. 5–10; 16, Oleinik O.S., Oleinik A.B., Borisova I.V., pp. 110–115; 17, Whitelegg J., pp. 23–56]. The quality of life is also one of the most popular subjects of socio-economic research among scientists specializing in northern studies due to the specificity of the Arctic territories, and the quality of life is assessed by statistical tools [18, Bie Q., Wang Sh., Qiang W., pp. 2–6; 19, Volkov A., pp. 3–8; 20, Socio-economic dynamics…, pp. 51–61] and empirical sociological methods [21, Markin V.V., Silin A.N., pp. 76–82; 22, Samarina V.P., Skufina T.P., Samarin A.V., pp. 29–32; 23, Volkov A.D., Tishkov S.V., Karginova-Gubinova V.V., pp. 204–212]; the quality of life of the indigenous peoples of the North is assessed separately on the basis of surveys [24, Trapitsyn S. Yu., Granichina O. A., Agapova E. N., pp. 113–120; 25, Taylor K., Ratcliffe J., Bessarab D., pp. 3–6].

The preliminary results of the study, representing the measurement of the subjectively perceived quality of life of the population of the Murmansk Oblast, were published in the works: [26, Skufina T. P., Yakovchuk A. A., pp. 44–45; 27, Samarina V. P., Skufina T. P., Yakovchuk A. A.]. However, the greatest interest, in the authors' opinion, can cause a comparison of subjective assessments of the quality of life obtained as a result of a survey of the region's residents and objective characteristics formed on the basis of the analysis of statistical information.

The results of the study can find practical application in assessing the success of the implementation of the regional program "Living in the North.2030", which defines the priority areas of socio-economic development of the Murmansk Oblast for the period up to 2030 and is aimed at ensuring decent living conditions for northerners [1]; when developing this strategic document, the opinion of the region's residents was taken into account — more than 27 thousand people took part in the discussion.

Methodology

According to the author's methodology, the indicators of subjectively perceived quality of life were divided into two groups: firstly, personal well-being was assessed on the basis of satisfaction with work, housing conditions, life safety and health; secondly, the state of the living environment was assessed on the basis of satisfaction with social and transport infrastructure, labor market, as well as leisure and culture. Respondents were asked to rate each of the indicators on a scale from 1 to 5, ascending from the lowest to the highest. In addition to evaluations of subjectively perceived quality of life, respondents were asked to assess the significance of each indicator in shaping the quality of life of the population, also on a five-point scale. The composition of the respondents took into account the age and gender structure of the population of the Murmansk Oblast [2]. 475 people were surveyed, including 232 men and 243 women; 442 respondents were employed. Obtaining the results included: processing of respondents' questionnaires; calculation of the score of each indicator in the indicator with division by gender and age criteria of respondents; determination of the indicator assessment.

For the assessment of the quality of life of the population of the Murmansk Oblast, a database on a set of indicators was formed on the basis of statistical assessments. The statistical base covers the values of the indicators for 2021. The initial information was obtained from open sources of the State Statistics Committee of the Russian Federation, which indicates its reliability. As in the case of assessing the subjectively perceived quality of life, the first group of indicators

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[1] Plan meropriyatiy po prioritetnym napravleniyam razvitiya Murmanskoy oblasti do 2024 g. i na period do 2030 g. «Na Severe — zhit'»: utverzhden rasporyazheniem Pravitel'stva Murmanskoy oblasti ot 25.03.2022 № 74-RP [Action plan for priority areas of development of the Murmansk Oblast until 2024 and for the period until 2030 "Living in the North": approved by the Order of the Government of the Murmansk Oblast dated March 25, 2022 No. 74-RP]. URL: https://www.citymurmansk.ru/img/all/2119_74_rp__1_.pdf.
[2] When calculating the gender ratio in the sample, the UISIS data on the gender and age structure and the size of the permanent population of the Murmansk Oblast, current as of 2021, were used (URL: https://www.fedstat.ru); the authors note that the study took into account different age groups of respondents, but this article presents generalised results.

characterizes the personal well-being of the population of the Arctic regions based on indicators of health, work activity, housing conditions, and safety. The second group of quality of life indicators characterizes the living environment of the population of the Arctic regions based on indicators characterizing the labor market, social infrastructure as part of information on healthcare, education, commercial sphere, transport infrastructure, leisure and culture. To convert index characteristics into point assessments, the corresponding indicators for the Russian Federation were taken as the starting point. The value of the indicator for Murmansk Oblast is more than 50% better than for Russia, which corresponds to a score of 5 points; 40%÷49.9% better — a score from 4.5 to 5; 30%÷39.9% better — a score from 4 to 4.5; 20%÷29.9% better — a score from 3.5 to 4; 10%÷19.9% better — a score from 3 to 3.5; 0%÷9.9% better — a score from 2.5 to 3; 0%÷9.9% worse — a score from 2.0 to 2.5; 10%÷19.9% worse — a score from 1.5 to 2.0; 20%÷29.9% worse — a score from 1.0 to 1.5; 30%÷39.9% worse — a score from 0.5 to 1.0; 40%÷49.9% worse — a score from 0.0 to 0.5; the value of the indicator, worse than in Russia by more than 50% is estimated at 0 points.

In order to clarify the connection between subjective assessments of the quality of life and objective characteristics of the socio-economic development of the Arctic regions, a comparison of the corresponding indicators for the Murmansk Oblast was carried out. Taking into account the significance of each indicator in shaping the quality of life of the population, the most important problems were identified, the resolution of which will improve the quality of life of the Arctic population.

Results and discussion
1. Assessment of subjectively perceived quality of life of the population of the Murmansk Oblast

The first group of indicators for assessing the subjectively perceived quality of life characterized the population's satisfaction with personal well-being (Fig. 1).
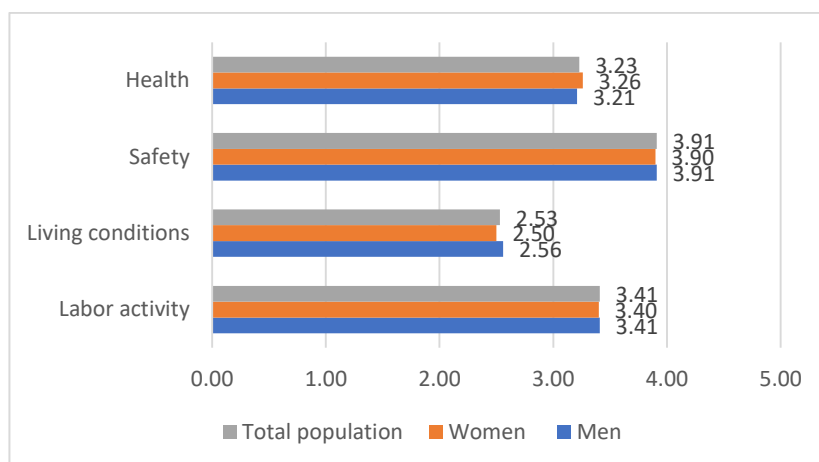

Fig. 1. Assessments of subjectively perceived quality of life based on the indicator of satisfaction with personal well-being [3].

The results of the empirical sociological study of the subjectively perceived quality of life

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[3] Source: authors' calculations based on data obtained from a survey of respondents.

using the questionnaire method showed the following:

- the respondents' work activity was assessed through satisfaction with their work, wages and working conditions; the average assessment of satisfaction with their work among both male and female respondents of the Murmansk Oblast was 3.69 points out of 5 possible, which is a fairly high indicator; the assessment of groups of respondents taking into account age showed that the working population aged 18 to 29 is the least satisfied with their work, which may be due to a number of reasons, including the lack of opportunities for employment in a highly paid or prestigious job due to the lack of specialized education;

- the housing conditions of the respondents were assessed through satisfaction with the cost of renting/buying housing, as well as the quality and cost of housing and communal services in the region of residence; according to a survey of the population of the Murmansk Oblast, the average assessment of the cost of renting/buying housing was 2.59 points out of 5 possible; a trend was revealed — the older the age group, the higher the level of assessment for this indicator (for example, respondents aged 18 to 29 are the least satisfied with their work — 2.03 points versus 3.16 points for the age category from 50 to 64 years); one of the lowest scores (2.69 points) is observed for the indicator "quality of work of housing and communal services"; respondents rated the cost of housing and communal services at 2.32 points out of 5 possible (respondents often pointed out excessively high rent, unreasonable fees for major repairs and poor work of management companies) [26, Skufina T.P., Yakovchuk A.A., p. 44];

- life safety in the region was assessed through a personal sense of safety in public places and on transport, the quality of work of emergency services and law enforcement services; high assessment is observed for all indicators; the average score for the indicator "life safety" was 3.91 points out of 5 possible; at the same time, respondents also highly rated the importance of this indicator in shaping the quality of life of the population — 3.94 points;

- the quality of life for the "health" indicator in the Murmansk Oblast was assessed according to the following indicators: health status (3.69 points), ability to receive quality medical care (2.87 points), and financial ability to receive paid medical services (3.14 points); it can be concluded that, despite the relatively high assessment of their health status and ability to receive paid medical services, the ability to receive quality medical care in the region was assessed as quite low; respondents rated the importance of the "health" indicator in shaping their quality of life at 3.41 points out of 5 possible;

- the average score for the group of personal well-being indicators was 3.27 points out of 5 possible; respondents expressed the least satisfaction with their housing conditions (rental/purchase price of housing, cost and quality of housing and communal services), as well as the ability to receive quality medical care; the remaining indicators were rated

above average, which indicates a satisfactory attitude of the surveyed population to-wards personal well-being as a component of quality of life.

The second group of indicators for assessing the quality of life, obtained as a result of the empirical sociological study, characterized satisfaction with the living environment (Fig. 2).
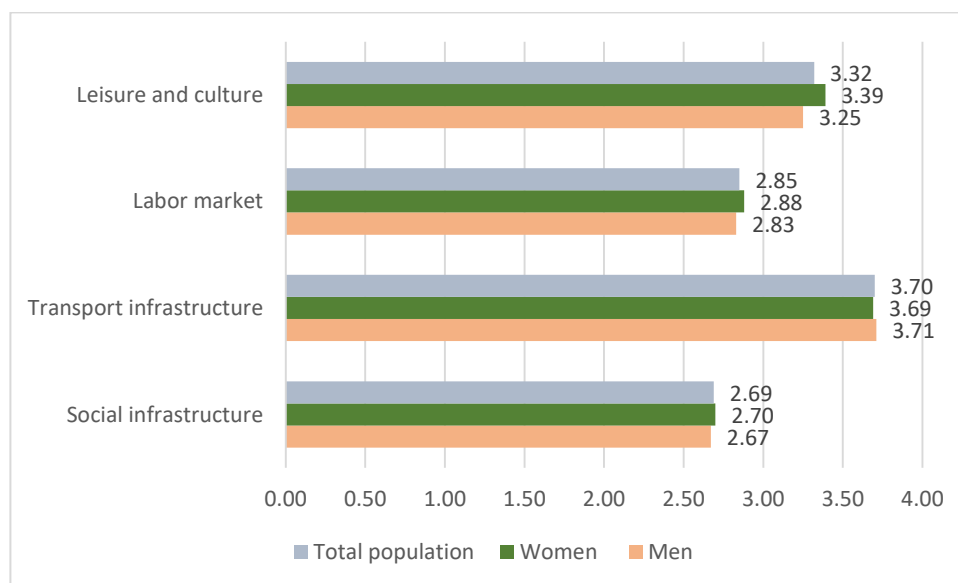

Fig. 2. Assessments of subjectively perceived quality of life based on the indicator of satisfaction with the living environment [4].

The following survey results were obtained:

- social infrastructure was assessed through the quality of healthcare (2.07 points, which confirms the previously obtained low score for the possibility of receiving quality medical care), quality of education (2.73 points, respondents noted the insufficient level of qualification of graduates and the lack of practical knowledge, which indicates problems in regional education) and the quality of the commercial sphere in the region (3.26 points, which is the highest score for this indicator and may indicate a satisfactory attitude of residents to the business sector and sufficient provision of the region with the necessary products and services). Thus, according to the totality of the presented indicators, it can be concluded that health protection and quality of education are important problems, their solution can most favorably affect the improvement of the quality of life of the population of the Murmansk Oblast;

- the quality of transport infrastructure was rated by respondents at 3.77 points out of 5 possible, namely — the operation of urban and external passenger transport facilities at 3.74 points, the possibility of using personal transport at 4.04 points and the quality of roads at 3.24 points; such assessments may indicate a fairly high level of satisfaction of the population of the Murmansk Oblast with the transport infrastructure; from a management standpoint, this aspect is not a priority area of development for improving the quality of life;

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[4] Source: authors' calculations based on data obtained from a survey of respondents.

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- satisfaction with the situation on the labor market in the region of residence was rated by respondents at 3.09 points; the number of vacancies on the labor market is recognized as sufficient, however, respondents note the low level of wages for the presented vacancies according to specialized education (for example, respondents rated the possibility of finding a highly paid job at only 2.52 points; respondents in the age group from 18 to 29 years rated the lowest opportunities for finding a job with a decent salary and according to specialized education). At the same time, respondents noted the importance of the presented indicators in shaping the quality of life of the population — 3.14 points; it is important that low satisfaction with the situation on the labor market negatively affects the migration sentiments of educated youth — the most economically active and promising part of the population;

- satisfaction with the situation with leisure and culture was rated by residents of the Murmansk Oblast at 3.41 points; from a management standpoint, it is important that such a high rating was largely achieved due to the successful implementation of the Federal Priority Project "Formation of a comfortable urban environment", which indicates the effectiveness of efforts aimed at improving the quality of life of the region's population;

- the average score for the group of indicators "living environment" was 3.33 points out of 5 possible; respondents note the low level of healthcare in the region and rated the opportunities for employment in highly paid/prestigious jobs and in jobs with specialized education quite low, which may be the reason for the high migration of the economically active population.

When comparing the assessments of the subjectively perceived quality of life and the significance in shaping the quality of life of the population, it was determined that in the "personal well-being" group, the highest scores were received by the "safety" indicator (score 3.91 points; significance in shaping the quality of life of the population — 3.94 points) (Table 2). The most problematic point is the "housing conditions" indicator (2.53 points). The survey showed that the population of the Murmansk Oblast is not satisfied with both the cost of renting/buying housing and the price-quality ratio of housing and communal services in the region. It is important that the respondents noted the "housing conditions" indicator as one of the determining factors for the quality of life of the population (significance in shaping the quality of life is estimated at 3.56 points out of 5 possible). Thus, improving housing conditions should become a priority for government agencies to improve the quality of life of the population of the Murmansk Oblast.

Table 2

Comparison of subjectively perceived quality of life assessments and the importance of the indicator in shaping the quality of life of the population of the Murmansk Oblast [5]

Quality of life indicator	Assessment of subjectively	Significance of the indicator

[5] Source: authors' calculations based on data obtained from a survey of respondents.

	perceived quality of life	in shaping the quality of life
Group of indicators "personal well-being"		
Labor activity	3.41	3.75
Housing conditions	2.56	3.56
Safety	3.91	3.94
Health	3.23	3.41
Group of indicators "living environment"		
Social infrastructure	2.69	3.77
Transport infrastructure	3.70	2.68
Labor market	2.85	3.16
Leisure and culture	3.32	3.71

In the "living environment" group, one of the most important indicators of the population's quality of life is the social infrastructure in the region (2.69 points; significance in shaping the population's quality of life — 3.77 points). Respondents rated the possibility of receiving quality medical care in the region and health care problems associated, among other things, with a shortage of specialized medical specialists as quite low. Based on the aggregate of indicator values, it was determined that health protection and quality of education are important problems; their solution can most favorably affect the improvement of the quality of life of the population of the Murmansk Oblast. In addition, respondents pointed out the existing problems in the labor market (2.85 points; significance in shaping the population's quality of life — 3.16 points). According to respondents, despite the region's provision with jobs, the opportunities for employment in highly paid jobs and/or with specialized education were rated quite low. The lowest employment opportunities with decent wages and/or relevant education were rated by respondents aged 18 to 29. Respondents often noted that such a situation on the labor market negatively affects the migration sentiments of educated youth, the most economically active population. At the same time, a fairly high degree of satisfaction with the transport infrastructure (3.70 points; significance in shaping the population's quality of life — 2.68 points), leisure and culture (3.32 points; significance in shaping the population's quality of life — 3.71 points) was revealed; from a management perspective, these aspects of life do not require significant improvements.

2. Assessment of the quality of life of the population of the Murmansk Oblast on the basis of statistical data on socio-economic development

The analysis of the statistical database for the Murmansk Oblast made it possible to assess the quality of life on the basis of a set of indicators and convert them into point estimates in comparison with the values for the Russian Federation (RF) (Table 2).

Table 2
Assessment of the indicator of the quality of life of the population of the Murmansk Oblast on the basis of a set of statistical indicators [6]

Indicator	Murmansk Oblast	Russian Federation	Deviation from RF, %	Score
Group of indicators "personal well-being"				
Average per capita income of the population, rub./person per month	51 183	40 272	27.1	3.8

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[6] Source: authors' calculations based on data from the State Statistics Committee.

Average per capita consumer expenditures, rub./person per month	36 255	32 321	12.2	3.2
Share of population with incomes below the subsistence minimum, %	9.3	11	-15.5	3.3
Labor activity				*3.4*
Average per capita area of residential premises, m^2/person.	28.9	28	3.2	2.6
Share of expenditures on payment for housing and communal services, %	10.5	9.8	7.1	2.1
Housing conditions				*2.4*
Number of crimes, per 1,000 population	5	4	25.0	1.3
Number of preliminarily investigated grave and especially grave crimes, per 1,000 population	2	2	0.0	2.5
Number of road traffic accidents, per 1,000 people.	1.1	0.9	22.2	1.1
Safety				*1.6*
Morbidity in patients diagnosed for the first time in life, un./1,000 population	920.2	857.1	7.4	2.3
Mortality of the working-age population, peop./ 1,000 population	6.7	5.6	19.6	1.6
Life expectancy, years	68.3	70.1	-2.6	2.4
Heath				*2.1*
Group of indicators "living environment"				
Number of doctors of all specialities, peop. / 1,000 population	5.1	5.1	0.0	2.5
Number of nursing staff, peop./ 1,000 population	12.9	10.1	27.7	3.9
Number of hospital beds, un./1,000 population	10.0	8.0	25.0	3.8
Graduation of skilled workers and clerks, peop./ 1,000 population	1.1	1.1	0.0	2.5
Graduation of middle-level specialists, peop./ 1,000 population	3.9	4	-2.5	2.4
Graduation of bachelors, specialists, masters, peop./ 1,000 population	1.8	5.6	-67.9	0
Average per capita turnover of retail trade, thous. rub./person	332.7	290.2	14.6	3.2
Average per capita turnover of public catering, thous. rub./person	42.5	16.0	165.6	5
Provision of the population with retail space, un./1,000 population	197.2	289.6	-31.9	1
Social infrastructure				*2.7*
Share of local motorways meeting regulatory requirements, %	69	53.7	28.5	3.8
Number of public buses, un./1,000 people	98	99	-1.0	2.5
Number of private cars, un./1,000 people	345	320	7.8	2.9
Transport infrastructure				*3.1*
Registered unemployment rate, %	1.9	3.9	-51.3	5
Need for employees declared by employers to the employment service, pers./1,000 people	46.0	13.1	251.1	5
Labor market				*5*
Number of cultural and leisure institutions, un./1,000 people	0.1	0.3	-66.7	0
Number of sports facilities, un./1,000 people	1.4	1.6	-12.5	1.9
Library stock, un./1,000 people	7232	5698	26.9	3.9
Leisure and culture				*1.9*

The first group of indicators was combined into the category "personal well-being"; the research showed the following:

- the quality of life indicator "labor activity", formed from the indicators of per capita monetary income of the population, consumer spending per capita and the share of the

population with monetary income below the subsistence level, showed that the average per capita income and expenses of the surveyed population of the Murmansk Oblast exceeded the average for Russia (by 27.1% and 12.2%, respectively); high wages, taking into account the regional coefficient, led to the fact that the share of the population with cash incomes below the subsistence level was 15.5% lower than the national average; the average score was 3.4 points;

- the quality of life indicator "health", the key indicators of which were determined by the relative (per 1,000 people) levels of morbidity, mortality in working age and life expectancy of the population of the Arctic regions, revealed that morbidity and mortality in the Murmansk Oblast in 2021 were higher (by 7.4% and 19.6%, respectively), and life expectancy was lower (by 2.6%) than the Russian average; the value of the indicator is largely explained by natural causes: harsh natural and climatic conditions that weaken the human body, lack of solar heat, vitamins, etc.; the average point score, obtained similarly to the assessment of the previous indicator, was 2.1 points (Table 2);

- the quality of life indicator "housing conditions" combined the indicators of the total area of residential premises per capita (in the Murmansk Oblast, it practically coincides with the average for Russia) and the share of household expenses on housing and communal services in consumer expenses (in the Murmansk Oblast, it exceeds the average Russian indicators by 7.1%, which is associated with the increased cost of servicing residential premises, primarily heating); the average point score of the indicator was 2.4 points;

- the quality of life indicator "safety" combined the relative (per 1,000 people) indicators of the number of crimes committed by repeat offenders (4 units/1,000 population in the Murmansk Oblast compared to 5 units/1,000 population in Russia); Preliminary investigation of grave and especially grave crimes (in the Murmansk Oblast, as on average in Russia, 2 units/1,000 people); road traffic accidents (in the Murmansk Oblast, 22.2% more than the average in Russia); the average point score of the indicator was 1.6 points.

The second group of indicators was combined into the category "living environment"; the research showed the following:

- the quality of life indicator "labor market" combined the indicators of registered unemployment and the need for workers declared by employers to the employment service; both indicators for the Murmansk Oblast are much better than the average in Russia, which is explained by the high attractiveness of the region for labor resources; the average point score of the indicator was the maximum value of 5 points;

- the quality of life indicator "social infrastructure", which assesses the state of healthcare based on relative (per 1,000 people) indicators of the provision of the population with doctors and mid-level medical personnel, as well as hospital beds (the provision of the

population of the Murmansk Oblast with mid-level medical personnel, as well as hospital beds, is generally higher than the Russian average, however, there is a shortage of doctors); education based on relative (per 1,000 people) indicators of the graduation of skilled workers and employees; mid-level specialists; graduates of higher education institutions (the graduation of skilled workers, employees and mid-level specialists in the region is slightly lower than the Russian average; the graduation of students with higher education is 67.9% lower); commercial sphere based on the indicators of retail trade turnover and public catering (the indicators of the Murmansk Oblast exceed the average for Russia), as well as the relative (per 1,000 people) provision of the population with modern format retail space (in the Murmansk Oblast, it is 31.9% worse than the average for Russia), received an average score of 2.7 points;

- the quality of life indicator "transport infrastructure", which combines statistical data on the quality of local roads (in the Murmansk Oblast, it is 28.5% better than the Russian average), as well as on the relative (per 1,000 people) number of public buses and private cars owned by the population (the Murmansk Oblast indicators are close to the Russian average), received an average score of 3.1 points;

- the quality of life indicator "leisure and culture", which combines relative (per 1,000 people) data on the number of cultural and leisure institutions and sports facilities (the indicator showed a low provision of the Murmansk Oblast with such institutions; the library stock per 1,000 people, on the contrary, significantly exceeded the Russian average, by 26.9%), received an average score of 1.9 points.

Conclusion

As a result of the conducted research and comparison of the results of the assessment of the objectively perceived and statistically determined quality of life of the population of the old industrial Arctic region — Murmansk Oblast — the following most important problems of socio-economic development were identified, the resolution of which will improve the quality of life of the population:

- the assessment of the population's satisfaction with the state of health care in the region exceeds the assessment obtained on the basis of statistical indicators by one third; the analysis revealed the insufficient level of medicine at present, which is confirmed by the high mortality rate among the working-age population and a fairly low life expectancy; the quality of life of the population in unfavorable natural and climatic conditions of the northern latitudes is largely ensured by the organization of health care, primarily the availability of highly qualified medical services, which should be the focus of the authorities' efforts;

- high consumer spending of residents of the region is insufficiently covered by per capita incomes, which in the Murmansk Oblast are among the lowest in the Russian Arctic; the

level of wages and working conditions are the most dissatisfying for residents aged 18 to 29; in order to stop the outflow of youth from the region, government authorities face the most important tasks of supporting the personal well-being of citizens and ensuring sustainable socio-economic development, which is especially difficult in the context of new challenges of geopolitical genesis;

- the fact that Murmansk Oblast is the leader among all Arctic regions in terms of the total area of residential premises per capita on average is positive; however, the cost of buying or renting housing is assessed by the population as overpriced; the quality of services remains low, despite the high cost of housing and communal services; the importance of the indicator for residents of the region indicates the need to pay more attention to housing conditions in the process of public administration;

- according to official statistics, the level of security in Murmansk Oblast is low; the surveyed population, on the contrary, rates their personal sense of security and the work of law enforcement and emergency services quite highly; in this case, the authorities are recommended to improve the actual safety of the population;

- enterprises in the region are experiencing an urgent need for workers: the number of vacancies is positively assessed both on the basis of population surveys and on the basis of statistical indicators; at the same time, insufficient wages and low diversification of the labor market leave vacancies open — the possibility of finding a highly paid job, as well as a job in the chosen specialty in the region, was rated quite low, especially by respondents in the age group from 18 to 29 years old; this situation has a strong impact on the migration sentiments of young people and contributes to the rapid outflow of population from the Murmansk Oblast;

- statistical analysis of social infrastructure indicators showed that the provision of doctors and medical personnel in the Murmansk Oblast is at the average Russian level; however, this is not enough for a positive perception of the healthcare infrastructure by the population; according to respondents, the lack of high-quality and affordable medical care is one of the main problems, its solution can most favorably affect the improvement of the quality of life of the population of the Murmansk Oblast; the problem of lag in graduation of skilled workers, employees and specialists with higher education compared to other regions of Russia, identified on the basis of statistical data, is superimposed on the problem of the noticeably low quality of education in the region; a high assessment of the significance of the indicator for the quality of life makes this problem a priority;

- the data of the sociological survey demonstrate that residents of the Murmansk Oblast rated the quality of transport infrastructure and the possibility of using personal cars quite highly; a satisfactory number and quality of roads, urban public and personal vehicles is confirmed by statistical indicators; it can be concluded that the transport infra-

structure is not a current priority area of development in terms of improving the quality of life of the population of the Murmansk Oblast;

- Murmansk Oblast is characterized by a fairly low number of cultural and leisure institutions and sports facilities; at the same time, the population of the Murmansk Oblast rates the number and diversity of leisure and cultural facilities quite highly; respondents indicated that in recent years many sports and playgrounds have been built, new museums have been opened, libraries, leisure centers, swimming pools, and sports facilities have been renovated and modernized.

Thus, the study showed that in order to improve the personal well-being of the population of the Murmansk Oblast, it is necessary to pay attention to the healthcare system, income level, housing conditions and continue working to maintain a high level of safety. To improve the living environment, it is necessary to pay attention to the level of wages, availability of high-quality medical and educational services, and continue working to create a comfortable urban environment and a variety of cultural and leisure activities. These findings emphasize the need for systemic efforts to improve the quality of life of the population, which will ultimately affect the corresponding subjective and objective indicator assessments.

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