SOCIAL AND ECONOMIC DEVELOPMENT

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Issues of the Methodology for Assessing Social Well-Being in Contemporary Russia

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Abstract. The article provides a critical analysis and synthesis of modern concepts of social well-being, as well as decomposition and operationalization of this sociological concept, which allows solving the problem of measuring and assessing the quality of life of individuals and social groups in a more comprehensive way. We have shown differences in the understanding of social well-being as a socio-psychological construct based on an individual's subjective evaluation of the conditions and results of their life activities, and as an objective assessment of the social and economic status of the individual, their involvement in social networks, access to public goods. We also noted that when choosing a methodology for measuring social well-being, it is necessary to consider the economy of the society under consideration (developed or developing) and the existence conditions of the local community as a whole, not just individuals (the concept of community well-being). Based on a synthesis of existing approaches, methodologies, and sets of variables for the empirical study of social well-being, we propose our own version of the methodology for the comprehensive measurement of social well-being, which takes into account the specifics of social processes and relations in contemporary Russia. Within the framework of this methodology, we identify 11 basic factors affecting the level of social well-being, operationalized through more than 50 indicators. The sources of data for their measurement, along with state and corporate statistics, are mass sample and expert surveys. In the article we also raise the problem of calculating weighting coefficients for various factors contributing to social well-being, and proposed its solution on the basis of the ranking method as a special case of the expert evaluation method. The considered set of factors allows covering economic, social, political and legal, medical, socio-cultural and everyday components of life of individuals and local communities.

Key words: social well-being, quality of life, subjective well-being, factors contributing to social well-being, expert evaluation methods, ranking method.

Introduction

Socio-economic development of any relatively autonomous geographically organized social system (region, federal district, etc.) can be represented in two planes — the plane of material and economic and the plane of social well-being. In the first case, the researcher is interested in the current state and dynamics of macroeconomic, demographic and logistical parameters reflecting the objective state of the production factors. In the second case, we are talking about indicators that assess the capabilities of a social system to meet the individuals' needs, integrated into it in accordance with generally

accepted (within the framework of this system) standards. At the same time, when quantifying various elements of people's life activity that determine their well-being, a researcher should refer not only to objectified indicators (for example, infant mortality, real per capita income or housing security), but also to indicators reflecting the assessment by people themselves of how satisfied they are with their own living conditions. How do these two approaches to understanding social well-being relate to each other? What are the conceptual grounds for including an intersubjective component in a comprehensive assessment of the quality of life? What important methodological problems of measuring social well-being need to be solved and what can these solutions be? The answers to these questions are the content of this article.

Before turning directly to the methodology of assessing social well-being in Russia, we will briefly consider the theoretical innovations and directions of scientific discussions in this area over the previous decade.

The concept of "social well-being" does not have a generally accepted strict definition; its content may vary depending on the disciplinary field and theoretical approach preferred by specific researchers. Nevertheless, we can argue that there is a consensus among scientists regarding the conceptual core of this term. For instance, at present, according to the results of the work of the Stiglitz–Sen–Fitoussi Commission, the point of view has become generally accepted that it is insufficient to use only econometric indicators for measuring social well-being, such as per capita GDP, national income or public health spending. The necessary parameters of social well-being are life expectancy, proportion of time allocated to leisure, security (physical and economic), environmental conditions, inequality and people's subjective assessments of their well-being (Stiglitz et al., 2009). The role of non-economic factors of social well-being becomes especially noticeable when comparing countries that differ greatly in per capita GDP and income. In the work, D. Altindag and J. Xu show that there is a difference in the influence of economic factors and factors related to the quality of political and legal institutions on social well-being for residents of developing countries and residents of countries with developed economies − for the former, the growth of social well-being correlates with the growth of per capita income, while the degree of corruption of the government, the democratic regime and guarantees of civil rights practically do not affect it; in developed countries, the opposite situation is observed (Altindag et al., 2017). F. Bacchini and his colleagues from the National Institute of Statistics (Italy) point out that the social well-being concept as a multidimensional phenomenon synthesizing socio-psychological (subjective well-being) and socio-economic (benefits and opportunities) approaches is widely recognized among specialists, discussions are mainly about the greater or lesser validity and analytical advantages of various aggregated indices of social well-being (Bacchini et al., 2020).

Among researchers, in particular those specializing in the study of social problems in the developing countries of Latin America, there is a point of view according to which social well-being should be considered in close relationship with the concepts of happiness and life satisfaction. At the same time, it is emphasized that the semantic content of the three concepts intersects, and all together they can be designated by the umbrella term "quality of life", and these three concepts measure the quality of life (Toscano, Molgaray, 2019, p. 574). Within the framework of this approach, the emphasis in measuring social well-being shifts from external objectified indicators toward variables that are subjective interpretation of their position by the subjects themselves (subjective well-being) (Toscano, Molgaray, 2019, pp. 580– 583). Developing the subjective well-being concept, a number of foreign authors include life satisfaction and happiness in its structure as components

(Gulyás, 2016); some justify the need to introduce the category of "affective well-being" which involves identifying the relationship between the frequencies of negative and positive emotions experienced by individuals in everyday life (Fors, Kulin, 2016, pp. 326–328). These ideas are inherited by the concept of happiness as a cognitive-emotional phenomenon, proposed in the works of E. Diener and D. Myers (Myers, Diener, 1995; Diener, Suh, 1997; Myers, 2000). E. Diener and D. Myers, without completely denying the influence of material and financial factors on social well-being, emphasize the role of the cultural environment, the nature of universally valid values, religiosity degree, as well as social (kinship, friendship) ties, emotional the experiences of the individual and their ideas about the degree of achievement of personal life goals.

Generalizing works of Russian researchers express another view of the correlation of these concepts. For instance, according to D.A. Leont'ev, subjective well-being is the sum of positive and negative emotions and cognitive assessments of life in general at the current time, and the quality of life is "a predictor of subjective well-being that characterizes the measure of favorability of objective external conditions of an individual's life" (Leont'ev, 2020, p. 26). In other words, the mutual relation of two D.A. Leont'ev's concepts turns out to be "inverted" in comparison with the interpretation of Latin American researchers. At the same time, he emphasizes that the quality of life in his interpretation is still a weak factor in subjective well-being – the works of such foreign authors as D. Kahneman and A. Tversky, S. Lubomirski, U. Staudinger et al., show that the objective conditions of life affect him slightly and are mediated by personal parameters, partly innate, partly formed in the process of socialization under the influence of the immediate environment and cultural context (Leont'ev, 2020, p. 21). Thus, two conclusions follow from this: firstly, it is advisable to consider subjective well-being as a parameter related to "objective" indicators of social well-

being non-linearly, therefore, when measuring social well-being, this parameter should not be used as a correlate of quality of life indicators (in the above meaning), but as an additional indicator necessary for constructing a generalized index of well-being; secondly, since subjective well-being is an expression of personal dispositions, its level is largely determined by the values and meanings generated by a particular culture. This means that the same values of quality of life indicators will be accompanied by completely different assessments of their own well-being by a representative of the middle class of a Western European state and, for example, by a Pashtun nomad from the southern regions of Afghanistan.

A.V. Kuchenkova is attracted by the concept of social well-being which is interpreted in two ways: either as a synonym for subjective well-being, or as an aggregation of indicators of subjective well-being and indicators reflecting the individuals' financial situation and the availability of public goods for them, i.e. what D.A. Leont'ev means by the concept of "quality of life" (Kuchenkova, 2016, pp. 120–122). In both cases, A.V. Kuchenkova rather records the practice of using another ambiguous category in the studies of Russian authors. In fact, social well-being (where it is not identified with subjective well-being) can only be considered as a terminological replacement for social well-being, and not its conceptual alternative.

A.S. Lysukho points out that in Russian research practice there is a tradition according to which "social well-being becomes a broad complex aggregating the conditions of human life. This complex includes both social and material conditions of life, expressed in the standard of living, and such components of the quality of life as the environmental situation, political climate, psychological background ..." (Lysukho, 2020, p. 9). At the same time, the results of empirical studies show that, firstly, all other things being equal, the assessment of well-being changes due to the change of life stages: marriage, childbirth, aging

(dependence is confirmed by the materials of the 6th wave (2012) of the European Social Research and primary data on workers of the 26th wave (2017) of the Russian Longitudinal Monitoring of the HSE); secondly, there is a gap between subjective and objectified assessments of well-being — respondents with similar income levels assess their life chances significantly differently under the influence of individual and personal differences and subjective ideas about desired goals and available opportunities (Lysukho, 2020, pp. 9–13).

M.F. Chernysh notes the key role of health status in the structure of factors determining subjective well-being, and not only medical assessments of individuals' health are significant, but also their self-assessment of their own health, as well as their assessment of the quality of health infrastructure (Chernysh, 2020).

A.V. Andreenkova, considering the post-Soviet period, convincingly proves that for different countries the complex of factors determining the self-assessment of the level of happiness is significantly different. Thus, she identifies two clusters: in the first (Baltic States, Moldova, Belarus, Georgia), differences in the level of happiness correlate with macro-social (socio-economic and political-institutional) indicators; in the second (Central Asian countries, Armenia and Azerbaijan), the cultural and normative system of society plays a much more significant role (Andreenkova, 2020, pp. 322–326). Thus, the results of the research confirm the idea that for different types of societies, the weighting coefficients of economic and institutional (objectified) and cultural-normative (intersubjective) indicators of social well-being will be different.

Within the framework of the popular concept of community well-being in the previous decade, the conceptual difference between the social well-being of individuals and the social well-being of entire local communities is substantiated[1]. At the same time, the authors of this concept emphasize the advantages of their approach, since it is through the category "community well-being" that social conditions of individuals' life are best revealed, which is especially important when solving problems of managing socio-economic development[2]. In addition, due to the individuals' involvement in complex networks of social interactions and the fact that each of them has a set of identities which form a stable sense of belonging to certain communities, the conditions of existence of the latter cannot but affect the well-being of specific people.

It is also important to emphasize the following: if one of the significant components of social well-being at the individual level is a subjective assessment of one's own well-being, then the inter-subjective component plays a more significant role for the needs of the study of the "social well-being of communities". Its meaning is that an individual can subjectively be satisfied, for example, with their living conditions, but at the same time their assesses the living conditions of most other people in the area of their residence as unsatisfactory, which is closer to objectively measurable parameters of quality of life[3].

Along with the classification of social well-being factors, dividing them into objective, intersubjective and subjective, its structure highlights components related to material well-being, social factors (interpersonal, intra-family, socio-professional relations), physical and mental health, environmental factors (the state of the environment, communal infrastructure, political and legal regime), subjective well-being (general life satisfaction)[4] (Morozova et al., 2013).

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[1] Social Factors and Community Well-Being, 2016, pp. 14–15; Quality of Life in Communities of Latin Countries, 2017, pp. 6–8.

[2] Social Factors and Community Well-Being, 2016, pp. 16, 32; Quality of Life in Communities of Latin Countries, 2017, pp. 12.

[3] Social Factors and Community Well-Being, 2016, pp. 20–21, 32–33.

[4] Social Factors and Community Well-Being 2016, pp. 9–10.

S. White from the University of Bath (UK) reveals the multidimensional nature of social well-being in the context of various approaches to social policy. It builds a kind of coordinate system, where along one axis there are approaches that differ in the degree of "objectivity" of the parameters used to measure well-being (ranging from the econometric approach to the concept of subjective well-being), and along the other there are approaches that differ in the extent to which social well-being can be measured through people's self-assessment of their position (evaluative), and in which — through the diagnosis of the severity of social problems, which many of the respondents may not be perceived as such, but regardless of their opinion affect their health, habitat quality, safety, equality of opportunity, etc. (substantive). At the intersection of the axes, S. White has the concept of "comprehensive" well-being which seems to be the most relevant for the study of social well-being in its entirety and complexity. At the same time, the researcher focuses on the importance of approaches that 1) illuminate the problem through the prism of subjective life satisfaction and happiness, 2) prioritize the quality of social ties within various kinds of communities, 3) focus on policies aimed at improving citizens' living environment and expanding opportunities to achieve living standards[5]. In the context of the above mentioned, we can conclude that the position of S. White is close at the same time to the views of those authors who talk about the need to shift research attention from the analysis of the dynamics of macroeconomic indicators to the analysis of subjective well-being, and to the views of those who advocate the priority of studying community well-being, rather than the social well-being of isolated individuals.

Argentine researchers G. Tonon and L.R. de la Vega, in their model adapted for developing countries, offer a wide set of indicators for measuring the level of social well-being according to 17 components: education, health, employment, personal security, housing conditions, discrimination, environmental component, components related to cultural rights and gender equality, economic well-being, the quality of political institutions, life satisfaction and components related to relations within the community (community well-being)[6]. When describing the latter, G. Tonon focuses on the important role of such parameters as trust and mutual assistance between community members, their participation in the activities of local civic associations[7]. These parameters are standard indicators for measuring the so-called social capital (Putnam, 1995, pp. 66–67) which makes it possible to include it among the key factors in social well-being.

In the course of further searches for the optimal set of variables for constructing complex indices of social well-being, A. Michalos and P. Maureen Hatch (University of Northern British Columbia) have revealed that the results of measurements on a number of aggregated indicators, such as the Human Development Index (HDI), Sustainable Society Index (SSI), the World Happiness Index (WHI) and some others are well correlated with each other, and their combination allows building reliable ratings within the framework of cross-country studies of social well-being (Michalos, Hatch, 2020). Hence, we can conclude that the decomposition of these indices will allow identifying a common set of valid indicators of social well-being and calculate an aggregated indicator based on them.

The construction of universal indices of social well-being is useful for cross-country research, but a deeper understanding of the processes of social

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[5] Cultures of Wellbeing: Method, Place, Policy, 2015, pp. 1–44.

[6] Indicators of Quality of Life in Latin America, 2016, pp. 7–15.

[7] *Ibidem*, p. 8.

development in a certain territory requires taking into account the local context, its specific problems and socio-cultural characteristics – collective ideas about well-being, dominant values and target attitudes of local residents[8]. In this regard, it is necessary to supplement and adjust the set of analyzed factors and indicators used for each specific case.

Methodology for measuring social well-being: factors and indicators

As we have already said, many specific methods of measuring social well-being are described in the scientific literature. At the heart of any such methodology is the definition of a set of factors that determine the overall well-being level (latent variables), and directly measurable indicators corresponding to them. Referring to the methods tested in international studies, in particular to the methodology of the UN (Human Development Index), WHO, OECD, determination of the sustainable development index and the comprehensive methodology of comparative research of Russian regions (Institute of Philosophy of RAS; N.I. Lapin, L.A. Belyaeva), we compared the sets of latent variables (well-being factors) used in them. The correspondences in these sets are shown in *Table 1*.

Table 1. Comparison of methods for measuring social well-being (social well-being factors)

Methodology / Factor	Human Development Index (HDI, UN)[1]	WHOQOL (WHO)[2]	The better life index (OECD)[3]	Sustainable Development Goals (SDG Index)[4]	Economist Intelligence Unit quality-of-life index[5]	Institute of Philosophy of RAS[6]
Health	+	+	+	+	+	+
Social relationships		+	+		+	
Material well-being	+	+	+		+	+
Employment			+	+	+	+
Access to education	+	+	+	+		+
Access to medical services		+		+		+
Safety of life		+	+	+	+	+
Civil rights and political freedoms			+	+	+	+
Cultural consumption and leisure		+	+			+
Environmental conditions		+	+	+		+
Climate conditions					+	
Subjective well-being			+			+

[1] Human Development Report – 2019. UNDP. Available at: http://hdr.undp.org/sites/default/files/hdr2019.pdf (accessed: February 1, 2022).
[2] The World Health Organization Quality of Life (WHOQOL). World Health Organization. Available at: http://www.who.int/mental_health/publications/whoqol/en/ (accessed: February 1, 2022).
[3] OECD Better Life Index. URL: http://www.oecdbetterlifeindex.org
[4] Sustainable Development Report – 2019. Available at: https://s3.amazonaws.com/sustainabledevelopment.report/2019/2019_sustainable_development_report.pdf (accessed: February 1, 2022).
[5] The Economist Intelligence Unit's quality-of-life index. The World in 2005. Available at: http://www.economist.com/media/pdf/QUALITY_OF_LIFE.pdf (accessed: February 1, 2022).
[6] Lapin N.I., Belyaeva L.A. (2010). *Program and Standard Tools "Socio-Cultural Portrait of the Russian Region" (Modification-2010)*. Moscow: MFRAN. Pp. 13–26. Available at: https://iphras.ru/uplfile/scult/titul.pdf (accessed: February 1, 2022).
Source: own compilation.

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[8] Cultures of Wellbeing: Method, Place, Policy, 2015, pp. 29, 38.

Focusing on these correspondences, we have identified 11 key factors that determine the social well-being dynamics. Each factor was decomposed into a number of indicators to which empirically measurable indicators were selected. *Table 2* summarizes the final results of the operationalization of the factors that we have identified.

Table 2. Operationalization of social well-being factors

Factor	Indicator	Type of indicator*
Health	Self-assessment of physical condition	S
	Life expectancy	O
	Self-assessment of emotional state	S
Material well-being	Real disposable income (average)	O
	Self-assessment of purchasing power	S
	Employment rate	O
	Household income structure	O
	Housing area (sq. m.) per capita	O
	Assessment of housing conditions	S; I
Subjective well-being	Assessment of overall life satisfaction	S; I
	Assessment of changes in the quality of life compared to the previous year	S; I
	Forecast of changes in the quality of life for the coming year	S; I
	Level of confidence in the future	S
Social capital	Index of trust in the immediate social environment	S
	Index of trust in voluntary associations	I
	Index of trust in local self-government and territorial self-government	I
	Attitude to receiving a bribe using employment status**	S; I
	Attitude to tax evasion**	S; I
	Attitude to receiving state benefits by a person who does not have the right to them**	S; I
	Attitude to free passage on public transport**	S; I
	Share of participants of public associations from the total population	O
Environment	Environmental assessment	O***
Social security	Share of population with incomes below minimum wage	O
	Assessment of the availability of medical services	O
	Assessment of the quality of medical services	S; I
	Assessment of accessibility of preschool education institutions	O
	Assessment of quality of preschool education institutions	S; I
	Ratio of average pension to average salary	O
Legal security	Victimization level	O
	Corruption perception index	I
	Share of population that has experienced abuse by police	O
	Share of population that has experienced abuse by officials	O
	Protection from discrimination based on nationality or race	S; I
	Protection from discrimination based on religious beliefs	S; I
	Protection from discrimination based on political beliefs	S; I
	Protection from discrimination based on gender and/or age	S; I

End of Table 2

Factor	Indicator	Type of indicator*
Culture and leisure sphere	Territorial accessibility of sports facilities	O
	Financial accessibility of sports facilities	O
	Assessment of sufficiency of recreational facilities	S
	Assessment of sufficiency of leisure facilities for youth and adults	S
	Visit frequency of cultural institutions and related events	O
	Number of cultural institutions per 1,000 people	O
Education	Share of population with higher education	O
	Average and expected duration of training	O
	Assessment of quality of secondary (full) education	S; I
	Assessment of quality of vocational education	S; I
Landscaping of the residence area	Assessment of quality of work of urban/rural utilities	S
	Assessment of landscaping of house and yard territories	S
	Assessment of quality of work of management companies/housing cooperative	S
	Assessment of the state of regional road network	O
	Satisfaction with the work of public urban transport	S; I
	Satisfaction with the work of public intercity transport	S; I
	Assessment of sufficiency of service and retail establishments in the residence area	S
Association with the residence area	Share of people identifying themselves with local/regional community	S
	Degree of desirability of personal emigration	S
	Degree of desirability of emigration for minor children/grandchildren	S

* Each indicator is classified according to the principle of dividing them into objectified (O), subjective (S) and intersubjective (I). The latter are those whose values are determined based on the dominant system of norms and values in society, political culture, ideas about standards of quality of life and consumption. In some cases, it is impossible to distinguish analytically between the subjective and intersubjective nature of the indicator, therefore both codes (S; I) are indicated.
** These indicators show the adherence to the norms of civil cooperation which is considered as one of the key components of social capital within the framework of the Eurobarometer in Russia project.
*** Based on expert assessment.
Source: own compilation.

The proposed operationalization and empirical indicators require some comment. It will be presented below.

Health. In the most detailed form, this factor is presented in the methodology of the study of the quality of life of the World Health Organization, where the state of physical and mental health is separately assessed. This methodology assumes a sufficiently large number of indicators which is important for WHO tasks, but redundant for the sociological study of population well-being. Therefore, we have limited ourselves to two main indicators – self-assessment of physical condition and self-assessment of emotional state supplementing them with the indicator "life expectancy". The choice of the latter is due to the fact that it is used in the calculation of the UN Human Development Index.

Material well-being acts as the main component for measuring social well-being in the works of many domestic economists[9]. M.Y. Malkina directly interprets social well-being as "the availability of necessary resources for productive life", as well as the degree of "provision of people with vital goods, means of existence" (Malkina, 2017, p. 49).

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[9] Comprehensive methodology for diagnosing individual's well-being and residence area, 2017, p. 162.

The following formula is proposed to measure population's income:

$$\mathrm{RDI}_{\mathrm{rel}}^{i} = \frac{\mathrm{RDI}_i}{\mathrm{MW}_i}, \qquad (1)$$

where RDI_i (in rubles) − real disposable (per capita) income of population living in the i-th territory, $\mathrm{RDI}_{\mathrm{rel}}^{i}$ (in rubles) − minimum wage (in average) for population in the i-th territory, − relative values showing how many minimum wages on average can be covered by the average per capita income. Real disposable income as an indicator based on government statistics is supplemented by an indicator for assessing the purchasing power of citizens' incomes, measured on the basis of sample survey data. It assumes a verbal-numerical gradation based on the Harrington scale.

The employment rate is an indicator that is well provided statistically, but in reality does not always adequately reflect the state of the labor market because it does not take into account informal employment. It is not uncommon for a person's main (official) type of activity to generate income comparable to his additional earnings. In this regard, we propose to supplement the employment coefficient with data from sample surveys of households on the structure of their income and the share of labor income in it.

We propose to carry out the assessment of housing conditions, an alternative to the statistical indicator of the number of square meters per person by means of selective surveys with ranking of responses on a verbal-numerical scale.

Subjective well-being reflects an integral assessment by individuals of their objective economic, legal and cultural situation in the context of their own hierarchy of basic (terminal) values and life goals. Two indicators are proposed to measure subjective well-being. The first, "life satisfaction", reflects an individual's assessment of the completeness of achieving their priority life goals. The second, "social optimism", is designed to reflect an individual's medium-term assessment of the favorable living conditions in a particular territory in terms of achieving their priority life goals. N.I. Lapin and L.A. Belyaeva propose and justify the method of calculating this indicator (Lapin, Belyaeva, 2010).

Social capital. The concept of social capital is operationalized through a set of empirical indicators which include the level of trust, norms of civil cooperation and participation in voluntary associations[10]. Taking this approach as a basis, we have specified the indicators by which the components of social capital should be measured. The level of trust is measured through the indices of social trust − trust in the immediate social environment (relatives, friends, work colleagues, housemates) and trust in people in general. Along with social trust, institutional trust should also be taken into account. We propose a measurement based on two indices (the index of trust in voluntary associations and the index of trust in local self-government), since they reflect individuals' willingness to build horizontal ties, self-organization and consolidation in the face of common problems of local significance. The methodology for measuring adherence to the norms of civil cooperation is based on the developments of the RANEPA Center for Sociological Research within the framework of the project "Eurobarometer in Russia". To measure participation level in voluntary associations, we propose to estimate the number of active members of various types of non-governmental associations relative to the total population of the surveyed territory. Since the available statistical data on this issue are scattered

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[10] Socio-cultural factors of innovative development and successful implementation of reforms, 2017.

and incomplete, representative surveys of the population and expert surveys are becoming a more reliable source of data.

Social security in the narrow sense of the word depends, first of all, on the degree of functionality of health and social security institutions. Along with indicators reflecting the state of these institutions, we propose to consider the level of poverty as an indicator of social security, since poverty is a phenomenon caused not only by the situation in the economy as such, but also by the state of the support system for poor citizens. Measuring the level of absolute poverty based on comparing average per capita or median income with the poverty threshold (minimum wage) has at least two disadvantages: 1) the poverty indicator strongly depends on the method of calculating incomes of citizens and households; 2) the border separating the poor from all other members of society is rigidly tied to such income level that allows only the satisfaction of "primary" needs. At the same time, today the idea of a minimum acceptable standard of living is not limited only to protection from malnutrition and homelessness. Consequently, the incomes that individuals have may be perceived by many of them as insufficient to maintain generally accepted standards of consumption, which means that they will define their position as poverty, even if its measurement on the scale of absolute poverty does not allow them to be officially recognized as poor. In this regard, we propose as an alternative to measure the level of poverty based on the assessment of individuals' purchasing power and economic deprivation degree.

The choice of pensions from the entire list of state and corporate compensatory payments, insurance payments and payments within the framework of direct financial assistance is due to their universality (from the moment of occurrence of an insured event) and payment regularity. The indicator reflecting the effect of replacing lost labor income with a pension is calculated using the formula:

$$\frac{P_{av}}{S_{av}} \times 100\% , \qquad (2)$$

where P_{av} — average monthly labor pension at the end of the *i*-th year, S_{av} — average monthly salary at the end of the *i*-th year.

We propose to measure indicators of the availability of medical services and their quality by means of rank scales in the course of mass and expert surveys. Indicators of accessibility and quality of work of preschool education institutions are included in indicators of social security due to the fact that shifting the function of children's socialization from parents to specialized organizations allows parents to free up time for economic activity without which it would be difficult for households to maintain the usual standards of quality of life.

Legal protection. As indicators for assessing the crime rate, along with the number of registered crimes, we use victimization coefficient recorded in sample surveys of the population. Victimization surveys, despite some of their flaws related to the sensitive nature of the questions, are a more valid tool for determining crime level, especially in terms of the most latent crimes, than criminal statistics data (Verkeev et al., 2019). Corruption is proposed to be assessed primarily through the corruption perception index, the calculation method of which has been tested in cross-country comparative studies, and discrimination risks — through indicators tested in the practice of Russian scientific research (Romashkina et al., 2015, pp. 58—59).

Cultural and leisure infrastructure as a social well-being factor is distinguished in a number of methods of its measurement (see Tab.1). A specific set of indicators may vary depending on the methodology. We limited ourselves to three indicators. We have chosen the indicator "leisure conditions" due to its being frequently mentioned in methodological developments on measuring the quality of life. We have chosen the indicator of accessibility of sports facilities and institutions as it reflects the external conditions for maintaining physical health through physical activity. Finally, we have chosen the indicator "cultural consumption" for two reasons: 1) as a marker of the real education level, not related to the presence of an educational certificate, but expressing the presence of knowledge, skills and motivation formed by education for the consumption of cultural works; 2) as a marker of the development of cultural infrastructure in a particular region / locality which, as a rule, correlates with high economic indicators of the region.

Education level and its accessibility figure in most generally accepted methods of measuring social well-being including the UN methodology for calculating the human development index. At the same time, the quality of the education system has a direct impact on economic dynamics that generates through the human capital. As a result, education both directly and indirectly affects social well-being level which makes it one of the key factors in the framework of the methodology proposed by the authors.

To assess *landscaping of residence area*, indicators that register individuals' assessment of satisfaction with their needs for relevant public goods (transport, utility networks, etc.) and service infrastructure are more valid than objectified indicators of departmental statistics that do not fully take into account requests from the population and qualitative characteristics of the comfort of the urban environment.

Association with residence area. Involvement in the life of a regional or local community, shared identity with it is one of the significant socio-psychological factors of social well-being of both individuals and communities as a whole. In addition, this factor is important from the point of view of population conservation and further development of territories. Along with the degree of formation of territorial identities recorded in mass surveys, the severity of emigration attitudes is the most important indirect indicator of individuals' alienation from local communities and/or dissatis-faction with the birth place.

Methodological problems of calculating weight coefficients of social well-being factors

The factors discussed above obviously have different significance in terms of their impact on the social well-being of a certain territory. Its evaluation involves assigning numerical values to factors. When factors are reduced to quantitative indicators, this is not a problem. However, in other cases, there is a need to turn to expert methods — an extensive set of branched procedures, the use of which is an independent task.

The degree of influence of factors can be assessed in various ways — from direct statistical calculation of weight coefficients, econometric or simulation modeling to methods of system analysis. Among the latter, the most well-known are the methods of direct placement, ranking and analysis of hierarchies. The first two have become widespread due to their simplicity, the latter due to the technological nature of the procedures used in it. Empirical evidence has shown that all three of these approaches are highly correlated (Korobov, 2005).

The possibility of conducting a simulation procedure is not excluded which in many cases gives quite acceptable results. In one of the similar studies, the deviations obtained by simulations gave a spread from 3 to 32% with an average error statistically insignificantly different from zero. However, the correlation coefficients obtained by experimental and model methods differed from each other by almost two times. This suggests the need to consider also the limiting situation when factors form a strict hierarchy — ranks are not combined, and in the matrix of paired comparisons of the hierarchy analysis method, each factor is strictly greater (or strictly less) than the previous one in its value. This often happens, for example, when all experts think about the same, the task is clearly formalized; the criteria for assessing the situation are clear, experts of approximately equal qualifications and hold similar positions on this issue. Then the totality of experts can, in principle, be replaced by a "collective" expert as the results of all will be close.

In connection with the above, the question of which method to use in a specific practical situation depends on the characteristics and quality of the empirical material obtained. We should note that in our works we often turned to the method of hierarchy analysis proposed by the American mathematician T. Saaty (Saaty, 2009) and its various modifications. A number of studies have been devoted to discussing the advantages and disadvantages of this group of methods (Tatarova, 2002; Litvak, 2004; Tutygin, Korobov, 2010; Tomashevskii, 2014).

Returning to the question of choosing one of the methods, we note that their proximity can be even higher if the ranking of the studied factors is made more accurate. Weight coefficients w_i of the factors ($i = 1, ... , n$) are calculated by the formula:

$$w_i = \frac{2 \cdot (n + 1 - \overline{r_{ik}})}{n \cdot (n + 1)}, \qquad (3)$$

where $\overline{r_{ik}}$ — average value of the ratings of the ranks of the i-th factor set by experts, k — ordinal numbers of experts. This means that the weight coefficients obtained by ranking will be evenly distributed within the interval, while those obtained by hierarchy analysis and especially by direct placement can take a larger number of values within the same interval. This is especially true for a small number of factors, when estimates become rougher due to an increase in the degree of discreteness. It is possible to reduce the effect of discreteness by dividing gradations into additional categories. The easiest way is to introduce three more gradations, which greatly facilitates the work of the expert, since it allows making decisions and giving estimates on the principle of "middle", "more", "less". This is what they do when the state of the object allows them to do it (Kochurov et al., 2018).

Also, this approach helps to achieve more adequate estimates if the researcher wants to get close, but not equal values of weight coefficients. Direct placement allows doing this without problems (however, if the number of factors n does not exceed 6−7), the method of analyzing hierarchies, in general, too, and when ranking, difficulties arise due to discreteness resulting from the need to assign estimates to different ranks. This problem is of a general methodological nature and applies to all types of verbal-numerical scales (Tutygin et al., 2020).

In the course of the conducted research, we have found that the ranking method for calculating weight coefficients is not inferior in accuracy to the hierarchy analysis method, but at the same time it is free from inherent disadvantages. It is also much easier to use and allows for the formation of a sequence of factors. This makes it possible to widely apply ranking to solve an extensive set of problems, especially at the preliminary research stages, where greater accuracy is not required, and qualitative assess-

ments are decisive. It follows from the above that the ranking method is in a certain sense a compromise, combining simplicity of implementation and logical validity of the results.

Let us apply this methodology for assessing the significance of factors (see Tab. 2) in relation to a specific entity of the Russian Federation.

The ranking was conducted by a group of eight qualified experts — representatives of academic and university communities specializing in the study of socio-political, socio-economic and economic-ecological processes in the Arkhangelsk Oblast[11]. The ranking results are presented in *Table 3*.

We should note that in Table 3, for factors 7–10, the ranks are not divided among themselves, so the ranking should be adjusted by calculating and then clarifying weight coefficients. The initial values of weight coefficients averaged by a group of experts are given in *Table 4*.

Table 3. Ranking of social well-being factors

Factor	Expert's no.								Σ	r_{ik}	Rank
	1	2	3	4	5	6	7	8			
Health	1	1	1	1	1	1	3	1	10	1.25	1
Material well-being	4	2	6	2	2	3	1	2	22	2.75	2
Subjective well-being	2	9	9	4	11	2	2	8	47	5.88	7
Social capital	3	8	10	10	9	7	9	9	65	8.13	10
Environment	8	5	7	5	5	8	4	3	45	5.63	6
Social security	9	4	4	3	4	6	5	6	41	5.13	3
Legal security	7	3	3	6	3	5	11	5	43	5.38	4-5
Cultural and leisure sphere	6	10	5	7	10	10	6	10	64	8.00	8-9
Education	5	6	2	9	6	4	7	4	43	5.38	4-5
Landscaping of residence area	10	7	8	8	7	9	8	7	64	8.00	8-9
Association with residence area	11	11	11	11	8	11	10	11	84	10.5	11
Source: own compilation.											

Table 4. Weight coefficients of social well-being factors

Factor	Weight coefficients
Health	0.163
Material well-being	0.140
Subjective well-being	0.093
Social capital	0.059
Environment	0.096
Social security	0.104
Legal security	0.100
Cultural and leisure sphere	0.061
Education	0.100
Landscaping of residence area	0.061
Association with residence area	0.023
Source: own compilation.	

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[11] The results of ranking and calculation of weight coefficients presented below are applicable only to the Arkhangelsk Oblast — the values of "weights" for other regions should be determined based on the estimates of local experts.

Table 5. Weight factors and ranks of socio-economic factors

Factor	Initial weight coefficients	Rank	Refined weight coefficients	Rank
Health	0.163	1	0.161	1
Material well-being	0.140	2	0.129	2
Subjective well-being	0.093	7	0.102	3
Social capital	0.059	10	0.064	9
Environment	0.096	6	0.095	7
Social security	0.104	3	0.101	4
Legal security	0.100	4-5	0.099	6
Cultural and leisure sphere	0.061	8-9	0.065	8
Education	0.100	45	0.100	5
Landscaping of residence area	0.061	8-9	0.061	10
Association with residence area	0.023	11	0.023	11
Source: own compilation.				

To improve the accuracy of weight coefficients, a second round of an expert survey can be conducted. The following procedure is proposed. Experts are given the right to change the value of weight coefficients, but not by more than the value of $\Delta_{k_i} = \pm\frac{1}{n}$ for one factor. In this case, the absolute value of the limit value is 0.045. At the same time, the following condition should be met: if an expert increases (decreases) the value of weight coefficient of a certain factor, then they should reduce (increase) the values of other factors together by the same amount. In the case when Δ_{k_i} is distributed between two or more factors, the sum of the corrections should be equal to Δ_{k_i}. *Table 5* shows the adjusted and averaged weight coefficients of the factors, together with the updated ranks obtained. We should note that half of the experts made partial clarifications; the rest considered the final results quite acceptable.

In the situation under consideration, "Health" factor was recognized as the most significant including such important components for the population as physical condition, life expectancy and emotional state which naturally directly affect the social well-being. Also, quite predictably, the factor of material well-being (work, income, and housing) came in second place. In the 3−7 positions in the ranking there is a group of factors related to social, legal and environmental safety, as well as subjective well-being (their weights range 0.095−0.102). Factors of cultural and leisure sphere, social capital and landscaping of residence area formed a group in the range of 0.061−0.065 (ranks 8 to 10). The factor of association with residence area turned out to be special in the resulting ranking and with a fairly low weight coefficient of 0.023 which has a quite logical explanation associated with the high emigration attitudes of residents of the region selected as an example.

Conclusion

The methodology that we have proposed for comprehensive assessment of social well-being reflects modern ideas about the multidimensionality of this phenomenon, the presence of objectified, subjective and intersubjective components in its structure. The sets of factors and variables described in the article are generally consistent with those identified within the framework of empirically tested international and Russian methods, and represent their systematization and adjustment in terms of valid indicators and relevant measurement methods and data sources.

Taking into account the disequilibrium of the influence of the factors on the social well-being level, the article also solves the problem of justifying the choice of a reliable method for calculating weight coefficients. We have proposed and tested a ranking method − a special case of the expert evaluation method. The procedure for assessing the "weights" of factors is quite clearly formalized, verified and can be recommended for practical use.

The methodology proposed in the article is adapted to Russian realities and takes into account the features of the economy and infrastructure, institutional environment and socio-cultural processes in the country. Within the framework of the Russian social system, it is universal for all regions and municipalities − adjusted for the fact that the calculation of weight coefficients of social well-being factors for specific regions / territories should be based on the assessments of local experts.

References

Altindag D.T., Xu J. (2017). Life satisfaction and preferences over economic growth and institutional quality. *Journal of Labor Research*, 38, 100−121. DOI: 10.1007/s12122-016-9235-2

Bacchini F., Baldazzi B., Di Biagio L. (2020). The evolution of composite indices of well-being: An application to Italy. *Ecological Indicators*, 117. Available at: https://www.sciencedirect.com/science/article/abs/pii/S1470160X20305409 (accessed: February 1, 2022). DOI: 10.1016/j.ecolind.2020.106603

Chernysh M.F. (2020). Social well-being and health. *INAB. Sub''ektivnoe i ob''ektivnoe blagopoluchie v sovremennom rossiiskom obshchestve: rezul'taty empiricheskogo issledovaniya=Information and Analytical Bulletin (INAB). Subjective and Objective Well-Being in Contemporary Russian Society: Results of Empirical Study*, 1, 54−74. DOI: 10.19181/INAB.2020.1.4 (in Russian).

Diener E., Suh E. (1997). Measuring quality of life: Economic, social, and subjective indicators. *Social Indicators Research*, 40(1−2), 189−216. DOI: 10.1023/a:1006859511756

Fors F., Kulin J. (2016). Bringing affect back in: Measuring and comparing subjective well-being across countries. *Social Indicators Research*, 127, 323−339. DOI: 10.1007/s11205-015-0947-0

Gulyás A. (2016). Subjective well-being and work − a brief review on international surveys and results. *Intersections East European Journal of Society and Politics*, 2(1), 74−97. DOI: 10.17356/ieejsp.v2i1.187

Kochurov B.I., Lobkovskii V.A., Smirnov A.Ya. (2018). *Effektivnost' i kul'tura prirodopol'zovaniya* [Efficiency and Culture of Environmental Management]. Moscow: RUSAINS.

Korobov V.B. (2005). Comparative analysis of methods for determining the weighting coefficients of "influencing factors". *Sotsiologiya: metodologiya, metody, matematicheskie modeli=Sociology: Methodology, Methods, Mathematical Modeling*, 20, 54−73 (in Russian).

Kuchenkova A.V. (2016). Social well-being and subjective well-being: Correlation of concepts and measurement methods. *Vestnik RGGU. Seriya: Filosofiya. Sotsiologiya. Iskusstvovedenie=Bulletin of the Russian State University for the Humanities. Series: Philosophy. Sociology. Art History*, 2(4), 118−127 (in Russian).

Lapin N.I., Belyaeva L.A. (2010). *Programma i tipovoi instrumentarii "Sotsiokul'turnyi portret regiona Rossii" (Modifikatsiya-2010)* [Program and Standard Tools "Socio-Cultural Portrait of the Russian Region" (Modification-2010)]. Moscow: MFRAN. Available at: https://iphras.ru/uplfile/scult/titul.pdf (accessed: February 1, 2022).

Leont'ev D.A. (2020). Happiness and well-being: Toward the construction of the conceptual field. *Monitoring obshchestvennogo mneniya: ekonomicheskie i sotsial'nye peremeny=Monitoring of Public Opinion: Economic and Social Changes*, 1, 14−37. DOI: 10.14515/monitoring.2020.1.02 (in Russian).

Litvak B.G. (2004). *Ekspertnye tekhnologii v upravlenii* [Expert Technologies in Management]. Moscow: Delo.

Lysukho A.S. (2020). Review of Russian studies on the topic of "social well-being": Main studies and results. *Sub''ektivnoe i ob''ektivnoe blagopoluchie v sovremennom rossiiskom obshchestve: rezul'taty empiricheskogo*

issledovaniya=Information and Analytical Bulletin (INAB). Subjective and Objective Well-Being in Contemporary Russian Society: Results of Empirical Study, 1, 7–17. DOI: 10.19181/INAB.2020.1.1 (in Russian).

Malkina M.Yu. (2017). Social well-being of the Russian Federation regions. *Ekonomika regiona=Economy of Region*, 13(1), 49–62. DOI: 10.17059/2017-1-5 (in Russian).

Michalos A.C., Hatch P.M. (2020). Good societies, financial inequality and secrecy, and a good life: From Aristotle to Piketty. *Applied Research Quality Life*, 15, 1005–1054. DOI: 10.1007/s11482-019-09717-0

Morozova T.V., Belaya R.V., Murina S.G. (2013). Quality of life assessment based on indicators of socio-economic well-being of people. *Trudy Karel'skogo nauchnogo tsentra RAN=Transactions of KarRC RAS*, 5, 140–145 (in Russian).

Myers D.G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, 55(1), 56–67. DOI: 10.1037/0003-066X.55.1.56

Myers D.G., Diener E. (1995). Who is happy? *Psychological Science*, 6(1), 10–19. DOI: 10.1111/j.1467-9280.1995.tb00298.x

Putnam R.D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, 6(1), 65–78. DOI: 10.1353/jod.1995.0002

Romashkina G.F., Kryzhanovskii O.A., Romashkin G.S. (2015). Evaluation of the components of social well-being of the population in the Arctic region. *MIR (Modernizatsiya. Innovatsii. Razvitie)=M.I.R. (Modernization. Innovation. Research)*, 6(4), 58–59. DOI: 10.18184/2079-4665.2015.6.4.58.63 (in Russian).

Saaty T.L. (2009). *Prinyatie reshenii pri zavisimostyakh i obratnykh svyazyakh: analiticheskie seti* [Decision-Making with Dependencies and Feedbacks: Analytical Networks]. Moscow: Librokom.

Stiglitz J., Sen A.K., Fitoussi J.-P. (2009). *The Measurement of Economic Performance and Social Progress Revisited: Reflections and Overview*. Available at: https://hal-sciencespo.archives-ouvertes.fr/hal-01069384/document (accessed: February 1, 2022).

Tatarova G.G. (2002). Qualitative methods in the structure of data analysis methodology. *Sotsiologiya: metodologiya, metody, matematicheskie modeli=Sociology: Methodology, Methods, Mathematical Modeling*, 14, 33–52 (in Russian).

Tomashevskii I.L. (2014). Estimation of the error of the hierarchy analysis method. *Ekonomika i matematicheskie metody=Economics and Mathematical Methods*, 1, 55–60 (in Russian).

Toscano W.N., Molgaray D. (2019). The research studies on quality of life in South America. *Applied Research Quality Life*, 14, 573–588. DOI: 10.1007/s11482-018-9605-4

Tutygin A.G., Korobov V.B. (2010). Advantages and disadvantages of the analytic hierarchy process. *Izvestiya RGPU im. A.I. Gertsena. Seriya "Estestvennye i tochnye nauki"=Izvestia: Herzen University Journal of Humanities & Sciences*, 122, 108–115 (in Russian).

Tutygin A.G., Korobov V.B., Men'shikova T.V. (2020). Combined method for calculating weighing coefficients in multi-factor economic models. *Vestnik grazhdanskikh inzhenerov=Bulletin of Civil Engineers*, 3(80), 221–228. DOI: 10.23968/1999-5571-2020-17-3-221-228 (in Russian).

Verkeev A.M., Volkov V.V., Dmitrieva A.V. et al. (2019). How to study victim of a crime? *Monitoring obshchestvennogo mneniya: ekonomicheskie i sotsial'nye peremeny=Monitoring of Public Opinion: Economic and Social Changes*, 2, 4–31. DOI: 10.14515/monitoring.2019.2.01 (in Russian).

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