

## Socio-Economic and Demographic Motivators of the Life Quality of Rural Population in the Russian Federation

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### Abstract

The paper considers the problem of socio-economic development of rural areas from the perspective of the assessment of life quality, briefly describes the main approaches to existing methodologies and provides the substantiation of their nonapplicability for using in rural territories of the Russian Federation. The author proposed a generic and simplified methodology for the assessment of the life quality of rural population that takes into account the demographic, social, and economic conditions. Evaluation criteria in the context of a three-phase scale (from 0 to 2 points) are proposed. The paper assesses the indicators of natural and migration growth, birth and mortality rates, life expectancy, residential landscaping, the proportion of the population that lives in flimsy dwellings, the provision of quality healthcare, information, educational services, the share of poor citizens, the unemployment rate and the ratio of incomes to the subsistence minimum. The calculations are done for all regions of the Russian Federation as a general rate indicator and its individual elements, from which the conclusions on the necessity of the use of certain institutional motivators are drawn.

**Keywords:** The quality of life; Demographics of rural population, Socio-economic development of rural areas; Assessment methodology; The indicators of rural areas development; Institutional motivators.



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### 1. Introduction

The change of the socio-economic system of the 1990s in Russia has led to changes in the structure and factor ensuring of the agrarian sector of the country. Global reforms not only have reoriented the economy from the manufacturing sector to the nonproduction, but also caused social shock, manifested in the deterioration of the qualitative characteristics of the living standards of rural population. This has been accompanied by increased urbanization, the income gap and the disparity of the levels of goods consumption between rural and urban residents, reduced rural employment, and other problems. The exit from the crisis started in the beginning of the 21st century with the change of agricultural policy, including the adoption of government programs to support the development of agriculture and rural areas ([Federal Target Program "Sustainable Development of Rural Areas for 2014-2017 Years and for the Period till 2020", 2015](#)). The political and civilian positions on the issues of development of the Russian agrarian complex have changed. Now they are aimed at improving food security, the development of the export-orientated sector of food to penetrate world markets ([Food Security Doctrine of the Russian Federation 2011, 2011](#)); ([Sukhanova, 2013](#)), the formation of large-scale production of ecologically pure organic agricultural products, the creation of powerful innovation "pillows" for crop and livestock industries. Against this background, a series of issues of the relationship of agricultural development and quality of life of rural population are formed, including the impact of agricultural development on the income level of population, the quality of medical care, the level of education, the structure of food consumption, and the access to recreation resources. Not least is the assessment of the impact of the increasing innovation of production processes in agriculture on the living standards of rural population. The answers to these questions are associated with the use of the technique of the assessment of life quality of rural population to find institutional motivators of socio-economic development.

### 2. Materials and Methods

The study of existing techniques is based on the in-depth study of theoretical and methodological research sources contained in various bibliographic and abstract databases (Scopus, Web of Science, e-library.ru), scientific journals in open access on the Internet, systems of placing scientific works of the Higher Attestation Commission of the Russian Federation, national statistical offices, including the Federal State Statistics Service of Russia (hereinafter referred to as the Rosstat) on the basis of the integrated approach using the methods of theoretical analysis, generalization, and the abstract-logical method. The confirmations of the theoretical conclusions are accompanied by the digital material from the official sources using the methods of descriptive statistics (average, standard deviation, the coefficient of variation). On the basis of established hypotheses and the method of formalizing the elaborated relationship of the indicators, the calculations were made based on the digital material sources of official statistics of Rosstat and its regional offices in the constituent entities of the Russian Federation, the Ministry of Agriculture of the Russian Federation, allowing developing a mathematical model.

### 3. Results

The study of quality of life is multifaceted and affects studies in many countries around the world by governmental, public, and private entities. The variation of criteria can be seen in the example of the assessments "8 +1 dimensions of quality of life" of Eurostat, Better Life Index of OECD, the quality-of-life index of the Economist Intelligence Unit, the Canadian Index of Wellbeing (CIW) of the Faculty of Applied Health Sciences at the University of Waterloo, Legatum Prosperity Index of the private investment firm Legatum and shows attempts to find single ratio meters of well-being life of populations around the world. The category of life quality of rural population is much more complicated and may not always be inscribed in the general criteria on a par with assessments for the residents of urbanized environment. The reasons for the differences are the specificity of the rural lifestyle from territorial characteristics to the formation of economic sphere. There were many attempts to unify the criteria for urban and rural environment, including on the basis of sustainability issues in relation to the quality of life (Bălăşescu and Dovleac, 2016); (Gosetti, 2017), the assessment of the quality of life for individual countries and unions (Boncinelli et al., 2015); (Goran and Jelisavka, 2016); (Rimkuvienė, 2013) in comparison of village and town.

The author, based on the study of many parameters of the demographic, economic and social angles of life, highlighted the criteria giving characteristics of all socio-economic aspects of the lives of rural population in various regions of Russia. They include for regional level (for comparison of constituent entities of the Russian Federation) the following blocks:

demographic: migration criteria, natural growth, birthrate, mortality, life expectancy relative to the norm;

social: housing conditions (percentage of comfortable habitation), access to health care and sports facilities, access to self-development (the presence of libraries, crafts clubs, creative teams), the level of education, access to recreation resources, access to the modern level of information communications, the degree of development of social diseases (alcoholism, drug addiction);

economic: the unemployment rate, the share of poor people (Table 1).

The algorithm of calculation includes: processing actual data on the constituent entities of the Russian Federation, the identification of regulatory indicators (changing annually due to external conditions), is based on the calculation of critical or average indicators, assigning points for each criterion (individually for each) and the calculation of the total indicator by the formula:

$$Q_{olr} = \sum_{i=1}^k C_i, \text{ where (1)}$$

$Q_{olr}$  is the general indicator of the life quality of rural population of the region;  $C_i$  is the criterion of assessment.

**Table-1.** The Calculation of Points on Individual Criteria (C-Criterion)

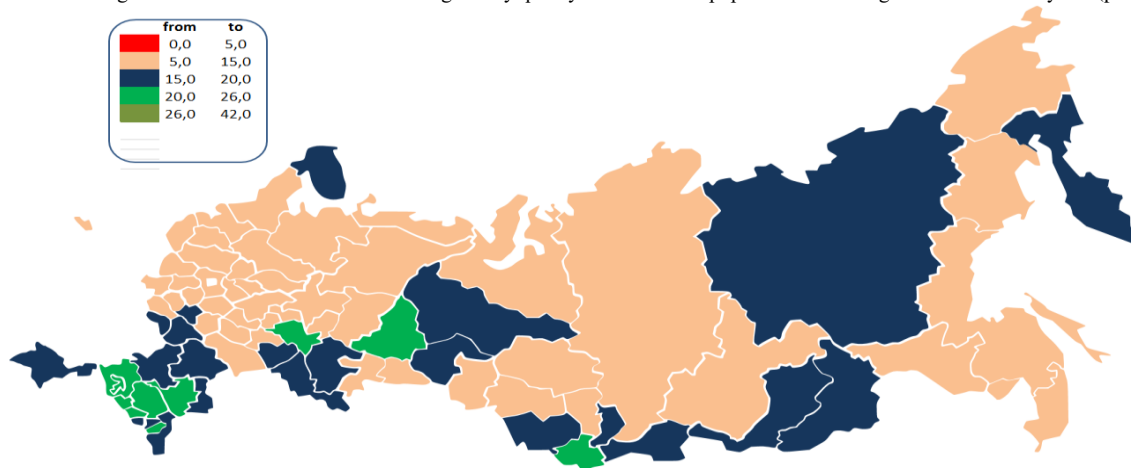
Indicator	The unit of measurement	Ranging of points		
		0	1	2
1. Demographics				
1.1. natural growth	thous. people	<0	=0	>0
1.2. net migration	thous. people	<0	=0	>0
1.3. bithrate	people per 1 thous. population	<12	13<C<30	31<C<Max
1.4. mortality	people per 1 thous. population	10<C<30	1.6<C<10	<1.5
1.5. life expectancy		<60	61<C<70	71<C<90
2. Social block				
		average ↓	average ↓	average ↓
2.1. the improvement of housing, availability of	percent	<40	41<C<60	61<C<100
2.2. the share of people living in flimsy dwellings	percent	>2	1<C<2	<1
2.2. the provision of medical institutions	number of villages per 1 village first-aid station	4<C<Max*	2<C<3	1>=
2.3 the provision of sports facilities	number of villages per 1 sports facility	>2	1<C<2	<1
2.4. the provision of libraries	number of villages per 1 library	100	1<C<2	<1
2.5 the provision of objects of cultural development	number of villages per 1 establishment of cultural activities	100	1<C<2	<1
2.6. access to modern education	number of villages per 1 school	100	1<C<2	<1
2.7. Internet access	percent	100	1<C<2	
2.8. the provision of postal communications	the ratio of the total number of villages to the number of villages with post offices	100	1<C<2	<1
2.9. the provision of communications	the ratio of the total number of villages to villages, secured with communications	100	1<C<2	<1
2.10. the share of patients with social diseases (alcoholism, drug addiction)	the share of reported patients with drug addiction and alcoholism per 10,000 population	100	1<C<5	0
2.11. the provision of shopping	the number of villages per 1 facility	100	1<C<2	<1

facilities				
2.12. the provision of lifestyle facilities	the number of villages per 1 facility	100	$1 < C < 2$	$< 1$
3. Economic block				
3.1 the share of rural poor population	percent	100	$1 < C < 20$	0
3.2. the unemployment rate	percent	100	$1 < C < 5$	0
3.3. the share of income to subsistence level	times	less than 1.50	$1.50 < C < 2.0$	more than 2.00

\*Max – the maximum value by year

As the result of the study, 5 groups for the assessment of quality of life were obtained (Figure 1).

Figure-1. The cartogram of the distribution of Russia’s regions by quality of life of rural population on average over 2012-2016 years (points)



When calculating, the two extreme groups with the minimum indicators (below 5 total points) and maximum indicators (over 26 points) are absent. But herewith dominates a significant group of regions with scores from 5 to 15.4. In general, the quality of life of rural population is below the standard indicators, including in the central regions of Russia. The average level of indicators of quality of life given demographic changes is evident in the southern regions.

Detailed analysis showed a number of trends typical for the characteristics of the life quality of rural population of Russia.

One of the important indicators of quality of life is demography, which is associated with the choice of people to live in better conditions: if the living conditions are the worst compared to the alternative (city), the population begins to move to a more favorable area of socio-economic development.

The problem of natural population growth is observed in general; most regions of the country recorded a continuing population decline. The population growth is recorded in the regions with a high degree of birthrate. The trend of the migration movement to cities remains, but in parts of the central regions positive migration balance is observed. The birth rate in rural areas of Russia due to the development of the state demographic policy contributed to increasing the birth rate in several regions, but these measures are not enough. It should be noted that in most cases the situation with birth rate in the regions is opposite to migration processes. The lack of attention to health in rural areas affects the high mortality and low life expectancy.

The conditions of housing facilities and the access to necessary comforts create the motivation for urbanization. The condition of housing is determined by the presence of land improvement facilities: water pipe, canalization, the presence of central heating, hot water supply, bath, gas of the premises. The issue of the provision of houses with drainage systems, hot water supply is particularly acute for a number of regions. The provision of central water supply in rural homes makes up 56% on the average across all regions. The intensive residential construction sector has not eliminated the phenomena of flimsy dwellings. In some regions, up to 19% of rural population live in flimsy dwellings. The assessment of quality of life is related to the access and quality of health services, information provision, communications, modern education, the acquisition of goods and services. Special problems arise in the quality and availability of medical services. Health care reform to optimize the structure changed the number of village first-aid stations, which negatively affected the access to quality services. Migration processes to central regions, higher population density contribute to the lack of modern village first-aid stations.

The results of the study included the analysis of the provision of access to communications, information, and education. If the access to the informational services is consistent with world trends for rural areas, then the issues of access to modern education for many rural areas of the regions are more acute. A major concern is the lack of quality of consumer services of rural population. Herewith the development of trade is a more favorable trend, while in central Russia and the Far Eastern region there is a tendency of shortage of shopping facilities and consumer services in rural areas.

The economic block is subjected to very low grade. A high level of rural poor and high unemployment level is observed compared to the reference values and the city. A variety of indicators is observed in the ratio of rural incomes to the subsistence minimum of the region.

## 4. Conclusion

The resulting assessment methodology and its approbation on the data of rural territories of the Russian Federation, as well as the analysis of the results, show the need for adjusting the state policy for the development of social and economic indicators of the Russian village. A special place should be given to approaches to improving the residential landscaping, including the provision of modern water supply and water discharge that meet both technical and environmental requirements. The lack of modern systems of seasonal heating provision, including the use of alternative energy, the extension of gas supply of remote villages, also require closer attention. The policy change to the formation of rural healthcare is important from the return of the medical care system directly in the villages, the construction of new village first-aid stations and the use of innovative equipment and technologies, including telemedicine. Demographic changes may result in the need to expand the range of educational services in the village with new innovative knowledge, the lack of which is observed today. A special block is rural economy, as the reduction of agricultural production in the 1990s led to the formation of a large share of poor people in rural areas, isolation from the city in the consumption of necessary goods. The gap in income in the context of a decline in own production of food led to the imbalance of food consumption (high consumption of bread, potatoes, low consumption of meat, fruits, vegetables). The situation can be changed by further encouragement of agricultural production and the formation of high-tech jobs (which is justified by the availability of land resources and high demand in domestic and foreign markets). For this purpose, it is necessary to form institutional motivators for the development of agriculture and rural areas. Their range includes, in particular, the development of social infrastructure of agriculture corresponding to the high social standards of the development of society, investments in new high tech areas in agribusiness and related to it sectors (the manufacturing of innovative machinery and equipment for crop and livestock production), employment in the development of breeding, genetics, seed production, plant protection, the introduction of new high-productive, environmentally friendly and biosecure technologies of agricultural production. No small part for the improvement of the situation can be played by a regulatory institute in the role of the introduction of high social standards in the quality of life of rural population.

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