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Methodology for assessing the development of rural territories of the constituent entities of the Russian Federation as the basis for their differentiation and typology

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Abstract. The article presents a methodology for comparative assessment of the state and regulation of rural territories of the constituent entities of the Russian Federation in terms of socio-economic development. Within the scope of the research, the paper developes evaluation criteria and indicators for analyzing the level and dynamics of rural development, on the basis of which the authors propose the differentiation and typology of rural territories.

1. Introduction

In a Message to the Federal Assembly of the Russian Federation on March 1, 2018, President of the Russian Federation V. V. Putin proposed to launch a large-scale program for the spatial development of Russia, in which special attention should be paid to the social and infrastructural development of rural territories. The Government of the Russian Federation on February 2, 2015 (No. 151-p) approved the basic document in the field of rural development – "The Strategy for the Sustainable Development of Rural Territories of the Russian Federation for the Period up to 2030". As an important strategic objective of the Strategy, it is postulated not only to ensure sustained sustainable growth in the well-being of the rural population of Russia, but also it focuses on the relative elimination of the existing significant regional differences in the level of socio-economic development of rural territories and the conditions generating this differentiation.

At the same time, there is still no comprehensive scientific analysis of modern conceptual approaches, current mechanisms, and methods of rural development, including allowing to offer an effective tool of state regional policy, aimed at smoothing the imbalances in the level of socio-economic development of rural territories of various constituent entities of the Russian Federation, as well as the introduction at the federal level of effective mechanisms for regulating these processes.

Deep interregional (as well as intraregional, but this is a separate study) differences in the level and dynamics of rural areas prevent the optimization of the territorial-sectoral division of labor and lead (a) to a weakening of the mechanisms of socio-economic interaction, under-utilization of land, forest, and water resources with all the consequences implications for import substitution and ensuring the country's food independence, and (b) to the threat of social destabilization and separatist sentiment, the growth of the process of desertion and shredding of the rural settlement network.

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2. Research Methods

Assessment of rural development as an integrated system involves studying the characteristics of its three components: the economic subsystem, and the subsystems of social and environmental, respectively.

The proposed algorithm for assessing the socio-economic development of rural areas of Russian regions in terms of the level and dynamics of indicators includes the following steps:

- Formulating basic principles and assessment mechanisms;
- Determining an approximate list of evaluation criteria (as in statics, time series);
- Selecting appropriate areas (specific aspects of rural development) for which an assessment is made;
- Each direction of the assessment must be disclosed using private indicators;
- Developing methods for calculating private indicators and their integration into the aggregated indicator;
- Conducting an integral assessment of rural territories of the constituent entities of the Russian Federation according to the level and dynamics of their development, which would enable their subsequent distribution into subgroups (clusters) and the development of relevant principles, mechanisms, methods, and specific measures of state policy regarding rural development, differentiated by the identified clusters.

The methodology was based on two approaches: (a) comparative-static (the situation is studied in comparison of two periods) and (b) comparative-trend (the situation is studied in dynamics).

As an estimate, the average annual value of each indicator for a certain chronological period is taken (for example, over five years; naturally, the greater the chronological span of the dynamic series, the more statistically relevant value of the estimates we get). It is in contrast to the one-time (one date) characteristics, because the later allows to eliminate fluctuations in the indicator during the year and to obtain sufficiently adequate characteristics for subsequent comparisons of development indicators.

For aggregation of natural, relative, and also cost indicators of static information, the ratio of private regional indicators with their value for Russia as a whole is calculated. We will apply the same technique with comparative trend assessments to ensure the unity of calculations.

3. Results

In accordance with the methodology developed by the specialists of the Department of Social Development of Rural Territories, FSBSC FSC of Agrarian Economy and Social Development of Rural Territories - All-Russian Research Institute of Agricultural Economics, the assessment of the socio-economic status of rural territories of Russian regions is carried out in five areas: (a) the economy of rural areas; (b) indicators of demographic development; (c) human potential; (c) regional indicators of the rural labor market; (5) housing, social, and engineering infrastructure development of rural areas.

For each direction on the basis of the above principles, a system of indicators is developed.

For example, in direction 1 (“state of the economy of rural areas”) we propose to include the following indicators: agricultural products in all categories of farms per 1 employed in agriculture, thousand rubles (used for the comparative-static method); the index of agricultural production for all categories of farms in the region in comparable prices,% (used in comparative trend calculations); the share of profitable organizations in the total number (by the combined group: “agriculture, hunting, and forestry, %); the cost of fixed assets in the combined group per employed, thousand rubles; budget revenues of rural settlements per resident, thousand rubles.

In turn, the direction 2 “Indicators of demographic development” is characterized by the following: the coefficient of vitality (the ratio of the number of births per year and the number of deaths per year); the ratio of the number of arrivals (arrivals) and the number of departures (departures); the proportion of persons of the working age, %.

Similarly, their baseline groups have been defined for other areas of the regional rural development assessment.

The comparative-static approach in the framework of this methodology is deployed according to the following algorithm:

1. Private indicators of rural development for each of the constituent entities of the Russian Federation are correlated with the average Russian value for each year of the analyzed period;
2. We calculate the average annual indicator for the period (the ratio of regional and national values);
3. For certain areas of regional rural development, we define integral indicators.

With a comparative trend approach, the dynamics of changes in rural development in the regions over a certain period of time are estimated. Thus, the integral indicator (which is obtained by aggregation of indicators of all assessment directions) for the reporting (final) period (upper level of the dynamic series) with the indicator of the base period (lower level of the dynamic series), respectively.

1. Values of ratios of all private indicators of regional rural development with all-Russian values for the reporting and base period are calculated (for example: for 2017 and 2013).
2. We summarize the calculated values in the relevant areas of assessment, thus we obtain partial integral indices for the analyzed period.
3. Then we calculate the aggregated integral indicator of rural development for the base and reporting period by summing up the private integral indicators in the regions in each of the areas;
4. At the fourth stage for each subject, we calculate the index of changes in the aggregated integral indicator in the reporting and base periods.

Further, for example, the calculations of the integrated indicators of the level and dynamics of rural development and the ranking of the subjects of the Russian Federation based on the statistical reporting data for 2013-2017 are presented: regional aggregated integral indicator of the level of development (RAIPS or RAIIS) in Figure 1 and regional aggregated integral indicator in dynamics (RAIPD or RAIID) in Figure 2.

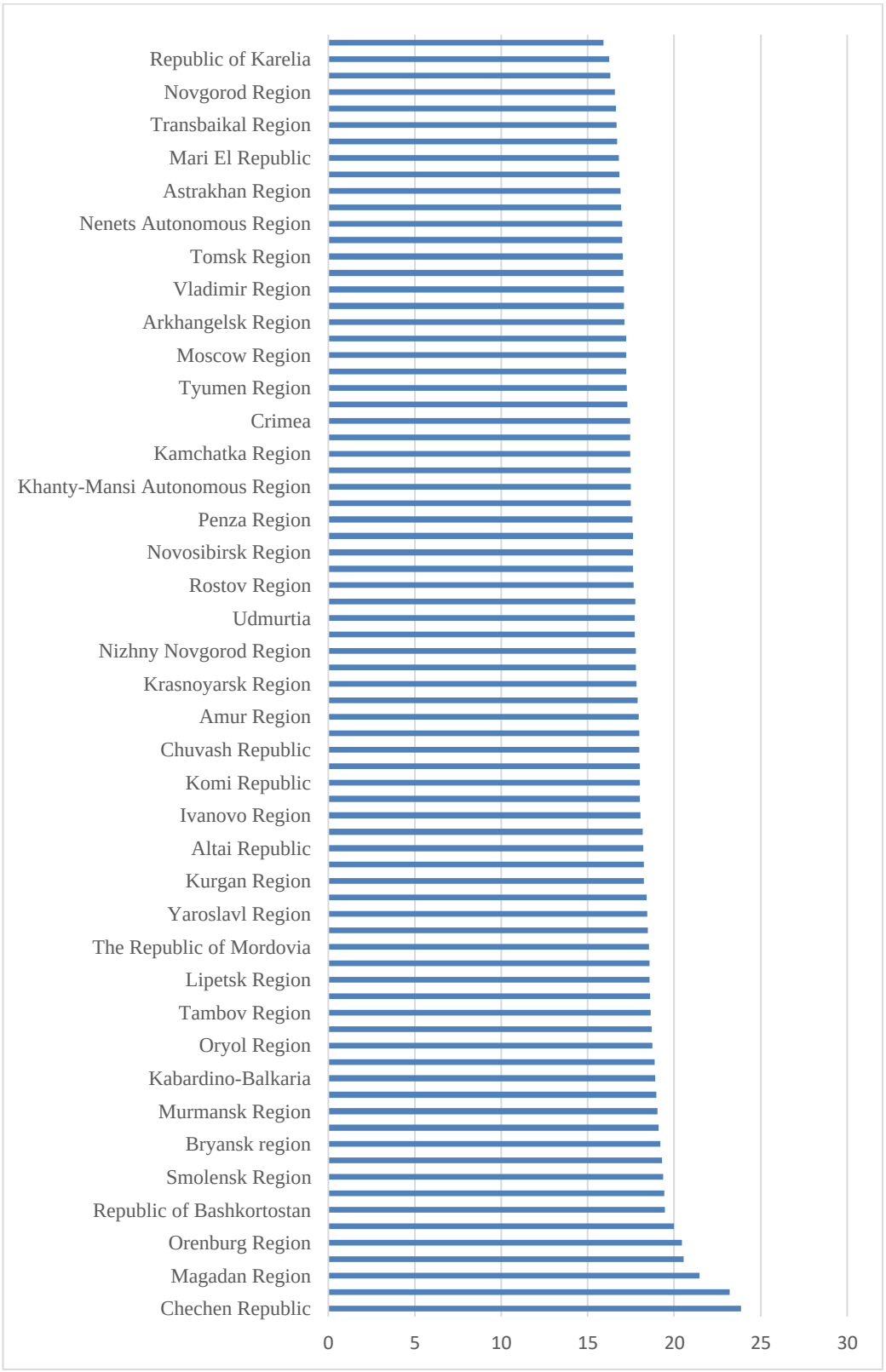

Figure 1. Ranking of subjects of the Russian Federation in descending order of RAIPS or RAIIS values in rural areas.

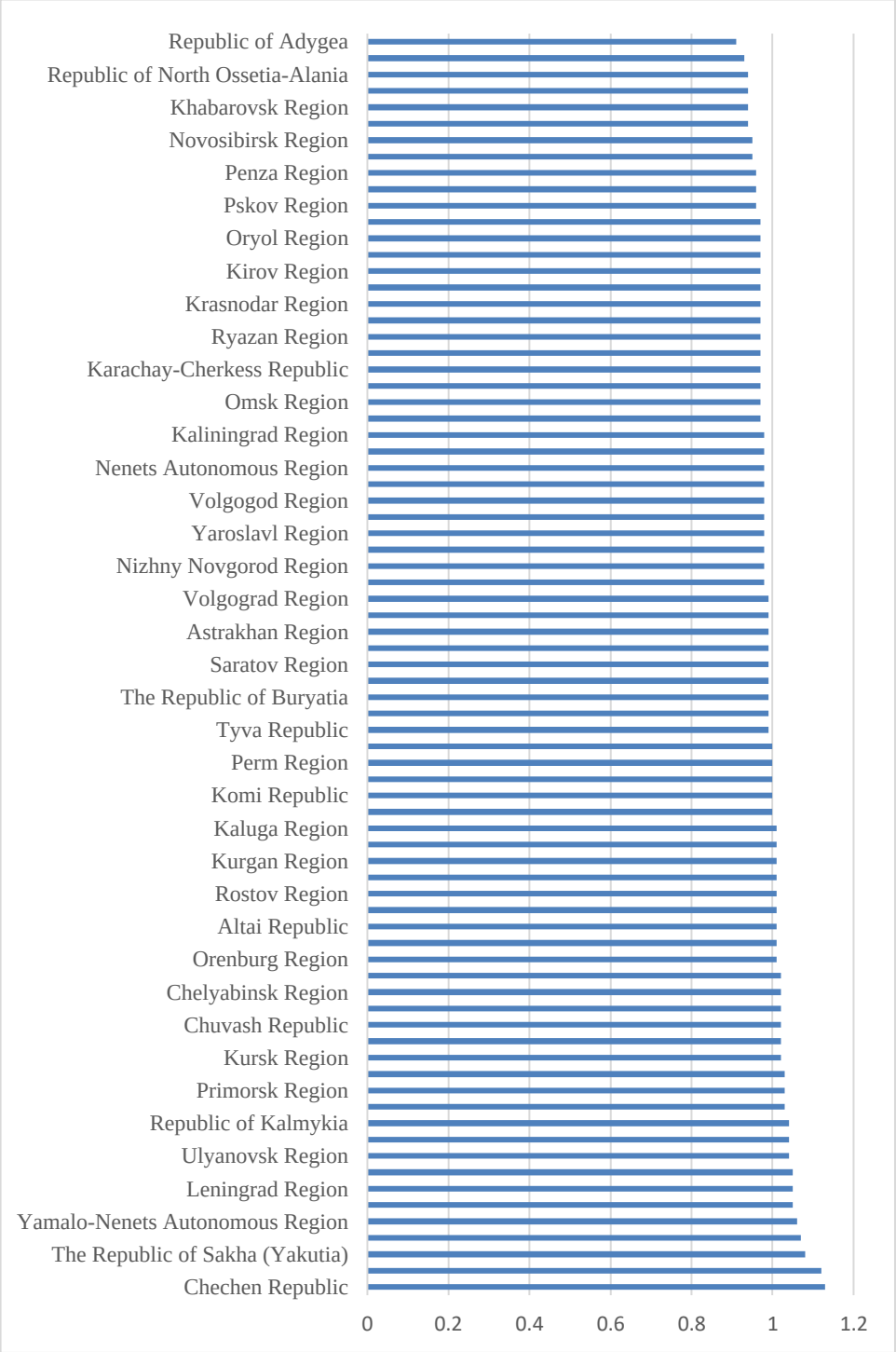

Figure 2 Ranking of subjects of the Russian Federation in descending order of value of RAIID in rural areas.

By the nature and dynamics of the deviation of the regional integral indicator (in statics and dynamics) from the all-Russian significance, it is possible to make a differentiation, first, and then a typology of rural territories according to their level of development, which involves three stages.

At the beginning, we rank the regions according to the size of the regional aggregate integral indicator (RAIIS).

Next, we group the regions by the quantitative value of RAIIS. It is proposed to consider fa total of our basic groups: 1 – with a high value of RAIIS (more than 19,44); 2 – RAIIS value of 18,00-19,43 units (average); 3 – RAIIS value of 17,00-17,99 units (low); 4 – RAIIS value of less than 17,00 (extremely low).

The third stage involves ranking each of the four groups of subjects of Russia identified in the second stage (according to RAIIS), decreasing the value of the regional aggregate integral indicator in dynamics (RAIID). This will allow, in turn, in each of the four groups already identified, to form three subgroups according to the value of RAIID: progressive – RAIID ≥ 1.01za for the analyzed period, stagnating – RAIID of 0.99-1.01; regressing – RAIID <0,99, respectively.

4. Conclusions

The application of the proposed methodology allowed the differentiation of Russian regions by the level of development of rural areas.

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