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Essence And Peculiarities Of Monitoring Of Socio-Economic And Spatial Development Of The Region.

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ABSTRACT

The article has revealed the essence of monitoring the socio-economic and spatial development of the region. The study has concluded that it is necessary to methodically differentiate spatial monitoring and «classical» monitoring of social and economic development. Besides, indicators of monitoring of spatial development of the region have been given and the order of their estimation has been described on the example of regions of the South of Russia. An assessment of the model of spatial organization of territories has shown that the most even distribution of economic power and impulses of economic development are noted in the Stavropol Territory. The economy of this region develops on a network principle, unlike other regions of the South of Russia, although it has a similar specialization and comparable conditions for the resource potential. The paper concludes that the implementation of monitoring of socio-economic and spatial development of the regions should be indivisible elements of the tools of the regional management system, aimed at timely identification of the existing differentiation of the territories in order to further smooth it. The application of methods of spatial analysis makes it possible to identify such important parameters of the development of the region as the level of centralization, narrowing, fragmentation of economic space. The analysis of spatial development allows reducing the asymmetry in the development of the regions of Russia through the application of complex targeted regional development programs, the activities of which are built individually for each typological group of regions, depending on the level of spatial development.

Keywords: region, monitoring, spatial development, socio-economic development, narrowing, economic space.

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INTRODUCTION

The traditional problem of the Russian economy is the even development of territories. It is connected primarily with the lack of necessary information for making managerial decisions. Various methods are used to monitor the socio-economic development of the territories, but they all have shortcomings and do not allow smoothing the asymmetry in the development of mesoeconomic systems.

The methodological aspects of monitoring are largely determined by the specific information needs of the main categories of users. In the course of the study, we have determined the information objectives, the required result and the subject of monitoring for the main categories of users (state, business community, investors, and population).

In the regional economy, much attention is paid to the study of socio-economic differentiation of territories according to the level of their development. [Gerasimov A.N. (2015)], [Bobrishev A.N. (2011), Bobrishev A.N. (2016)], [Usenko, L. N., Usenko, A. M., Uryadova, T. N., Bashkatova, T. A., & Beliaeva, S. V. (2017)], [Manzhosova I.B., Putrenok E.L. (2017)], [Trukhachev, V.I., Sklyarov, I.Y., Sklyarova, J.M., Latysheva, L.A. and Lapina, H.N. (2016)].

In the Russian economy, the uneven development of the territories is due, on the one hand, to the peculiarities of the existing system of division of labour and territorial specialization, and on the other, the result of the spatial policy of the authorities. In the study, the authors carried out a comparative analysis of the monitoring of spatial and socio-economic development, and concluded that there are significant differences between them (Table 1).

Table 1: Distinctive features of spatial monitoring and monitoring of socio-economic development of the region

The sign of demarcation	Monitoring of socio-economic development (MSED)of the region	Monitoring of spatial development of the region
Substantial basis	It is focused on the study of socio-economic processes and the results of the functioning of the economic entity (the main diagnosed factor is the level and quality of life of the population, as well as reproductive processes in the region). In essence, it is more “human-contented”.	It is complementary in nature and is a part of **MSED** of the region, but it has significant differences (the main diagnosed object is the physical basis - the location of material (resource) factors of production). It is most focused on the format of assessing the geopolitical component of development.
Object of monitoring	The object is not the very life space of the region, but the results of its functioning. More important is the assessment of a particular sector of the economy in the development of the region.	The physical basis of the economic space, the degree of its saturation, the type of localization of objects, the features of the networked and nodal organization. It is important not only the combination of industries and the parameters of their functioning, but also their spatial characteristics.
Monitoring target setting	Assessment of the parameters of the state of the social sphere and the level of development of the economy from the position of equalizing territorial policy for raising the standard of living of the population	Estimation of the degree of narrowing (expansion) of the economic space, the degree of disruption of its elements and the disruption of communication between them
Subject of monitoring	Assessment of the sustainability of the development of the regional socio-economic system (RSES)	Assessment of socio-economic processes in the context of peripheral, semi peripheral and central areas
The result of monitoring	Assessment of the state of development of the sectors of the regional economy, awareness of the nature and pace of socio-	Estimation of the degree of economic space rareness, the search for potential “growth points” of the regional economy, the

	economic development of individual territories	assessment of spatial asymmetry and heterogeneity

Monitoring of social and economic development of the region involves an assessment of indicators that characterize the state of various sectors of the economy, the level and quality of life of the population, the state of infrastructure. The conducted research has led to the conclusion that the traditional composition of socio-economic development monitoring indicators does not take into account the important parameters of the spatial development of the region, such as the level of centralization, narrowing, fragmentation and openness of the economic space (Figure 1).

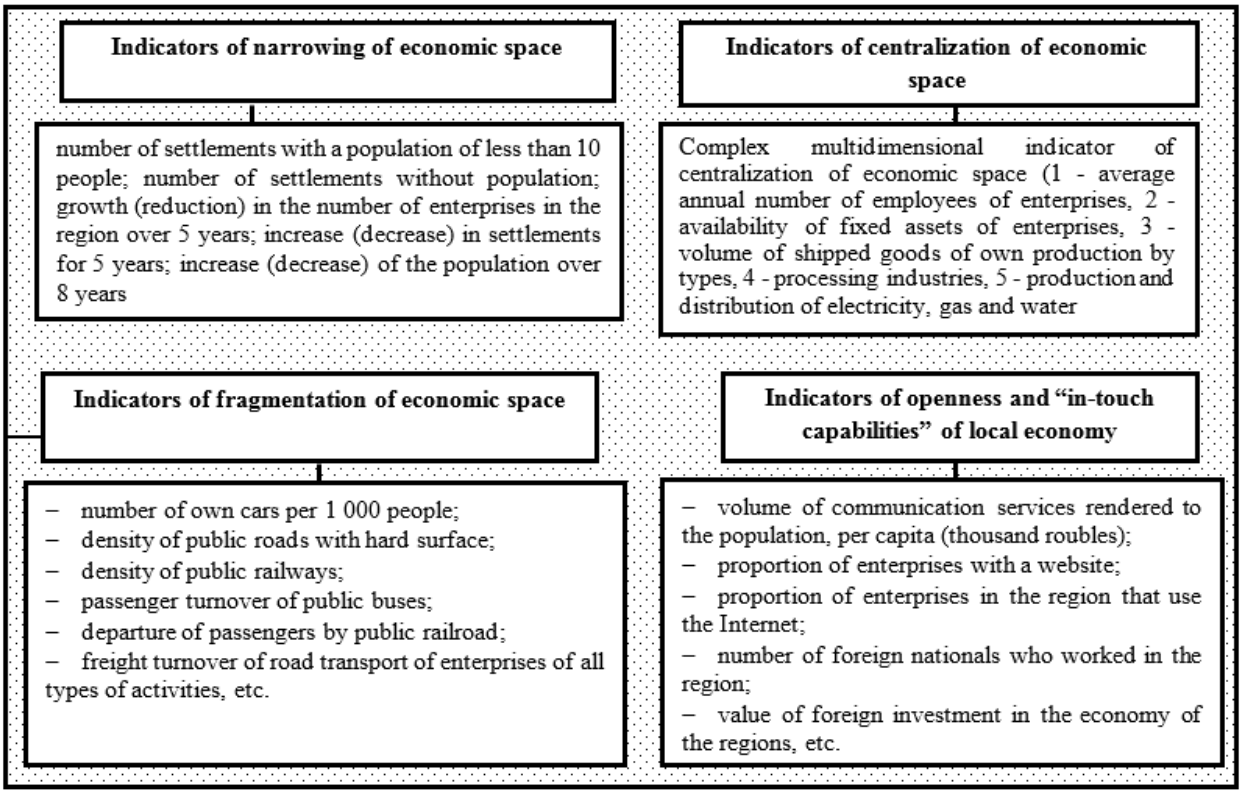

Figure 1: Indicators of monitoring of the spatial development of the region

In the course of the study, the authors have monitored the parameters of social and economic development in the regions of the South of Russia for 24 basic social and economic parameters. The proposed methodology allowed to diagnose not only the current state of the region, but also to reveal structural disproportions of endoterritorial parameters of social and economic development. The authors made segmentation of territories in the context of two multidimensional components: the level of economic development of the region and the conditions and quality of life of the population in it, as well as the application of the method of the sum of places, which assumes the preliminary ranking of all regions for each indicator characterizing the phenomenon under analysis. The first places are assigned to their best values (Table 2).

Table 2: Ranking of individual regions of the South of Russia by the criteria of socio-economic development (fragment)

Factors of economy and social sphere development of the region	Stavropol Territory	Republic of Daghestan	Chechen Republic	Republic of North Ossetia-Alania	Kabardino-Balkarian Republic	Karachayevo-Cherkessian Republic	Republic of Kalmykia
1.1. Unemployment rate	4	9	12	7	10	8	11

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1.2. Need for employees	4	11	12	9	7	10	13
1.3. GRP volume	4	5	7	9	8	11	12
1.4. Fixed capital accumulation	5	4	7	8	9	11	12
			…				
The sum of places	53	79	102	89	105	115	135
Region rank	4	6	8	7	9	10	11
2.1. Average per capita income of the population	6	2	-	9	10	8	11
2.6. Number of own cars per 1000 people	4	11	12	7	10	8	9
2.7. Emissions of pollutants into the air	9	7	8	5	3	6	2
2.8. Number of preschool institutions	3	5	8	7	12	10	11
2.9. Housing construction	3	4	13	8	7	9	12
The sum of places	62	55	71	85	83	105	113
Region rank	4	3		8	7	10	11

Having calculated the sums of places for all the indicators considered, the ranks of the regions were obtained according to their level of development. Further, the results of ranking on the indicators of economic development were imposed on the results of ranking by indicators of the level and quality of life of the population (Table 3).

Table 3: Parameters of the level and quality of life of the population

Typological group of social and economic development of territories	Interval value by level of economic development (points)	Interval value on the level and quality of life of the population (points)	Region
The most developed regions	10-31	10-31	-
Developed regions	32-61	32-64	Stavropol Territory
			Krasnodar Territory
			Rostov region
Dynamically developing	62-91	65-94	Republic of Daghestan
			Astrakhan Region
			Volgograd Region
			Republic of North Osetia-Alania
Low-developed	92-121	95-125	Republic of Adygeya
			Chechen Republic
			Karachayevo-Cherkessian Republic
			Kabardino-Balkarian Republic
Depressive	122-152	126-156	Republic of Ingushetia
			Republic of Kalmykia

The identification of typological groups is based on the diagnosis of the parameters of social and economic development of regions by the method of the sum of places. At the same time, the smaller the

indicator, the greater the number of competitive advantages the region has over the corresponding parameter. At the next stage of the study, some parameters of the spatial development of individual southern Russia have been diagnosed.

In the opinion of the authors, the parameters of the centralization of the region's economic space are crucial in analyzing and evaluating the effectiveness of spatial policies of regional socio-economic systems. In this regard, the type of model of spatial organization of territory was determined. So, in the geo-economic space, most scientists and specialists distinguish two basic models of spatial organization of territories: integrated (centralized) and network.

The integrated model was formed in the era of industrialization, and was characterized by the presence in the region of large-scale mass industrial enterprises that dominate the regional space, which concentrate economic power and spread the impulses of economic development to smaller settlements. At the same time, the share of such an economic centre in the GRP structure of the region is the largest and peripheral territories develop exclusively due to impulses from the centre.

In turn, *the network model* of spatial organization of the territory is characterized by an even distribution of economic power and the impulses of economic development between several settlements of different scale. The economic power of the region with a network model of spatial development is determined not by the volume of production, but by the mobilization resource of the entire network, its overall influence on the global convergent links of various actors in the regional economy.

The carried out research has allowed conducting typology of models of the spatial organization of territory of the South of Russia regions (Table 4).

Table 4: Evaluation of the model of spatial organization of territories

Region	Cities-millionaires	Thelargest (0.5-1 million)	Great (250-500 thousand)	Large (100-250 thousand)	Medium (50-100 thousand)	Small (upto 50 thousand)	Total	Type of model of spatial organization of the territory
Republic of Dagestan	–	1	–	3	2	4	10	Centralized *
Republic of Ingushetia	–	–	–		1	3	4	Weak network
Kabardino-Balkarian Republic	–	–	–	1	1	6	8	Weak network
Karachayevo-Cherkessian Republic	–	–	–	1	–	3	4	Weak network
Republic of North Ossetia-Alania	–	–	1	–	–	5	6	Highly centralized
Chechen Republic	–	–	1	–	–	4	5	Highly centralized
Stavropol Territory	–	–	1	4	4	10	19	Highly network

* With network interaction on the periphery and semi-periphery.

The most even distribution of economic power and impulses of economic development was noted in the Stavropol Territory, where Stavropol dominates only in two respects: retail turnover (54% – which is natural due to the possession of this agglomeration of the most capacious market for the sale of products) and

availability of fixed assets of organizations (52.5% - which is also explained by the presence of large production capacities). At the same time, other agglomerations dominate in some indicators, for example, in terms of shipped goods of own production in the manufacturing sector and the production and distribution of electricity, gas and water, the city of Nevinnomyssk is the leader (29.5% and 24.5% respectively), while the share of the city of Stavropol according to these indicators is 16.6 and 9.8%, respectively.

In turn, in terms of the volume of work performed in the construction sector, Pyatigorsk is leading - 31.8% (Table 5).

Table 5: The share of Stavropol and towns with population of more than 100 thousand people in the main socio-economic indicators of the Stavropol Territory in 2010, %

Indicator	Larges tcities					Coefficient of centralization	
	Stavropol	Yessentuki	Kislovodsk	Nevinnomyssk	Pyatigorsk	1-fractional	5-fractional
Population size	14.3	3.6	4.9	4.2	7.6	0.143	0.346
Average number of employees	24.8	3.1	4.1	5.3	9.0	0.248	0.463
Availability of fixed assets	52.5	0.8	3.2	5.2	7.4	0.525	0.691
Processing industries	16.6	1.0	2.6	29.5	4.1	0.166	0.538
Production and distribution of electricity, gas and water	9.8	2.4	3.5	24.5	17.7	0.98	0.579
Scope of work in the construction sector	18.7	2.6	2.8	19.7	31.8	0.187	0.756
Commissioning of the total area of residential buildings	44.0	5.8	4.2	2.4	7.4	0.440	0.638
Retail trade turn over	54.0	1.8	1.8	2.2	18.6	0.540	0.784
Investments in fixed assets	10.0	3.1	4.3	32.1	3.4	0.100	0.529
Total	–	–	–	–	–	3.331	5.326

CONCLUSION

The economic power of the Stavropol Territory, in which the network model of spatial development is clearly visible, is determined not by the volume of production, but by the mobilization resource of the entire network, its general influence on the subjects of the regional economy. Based on the obtained values of one fractional centralization coefficients (by the ratio of the largest city in the total value of the indicator for the region), a comprehensive indicator of centralization was calculated, while the higher the value of this indicator, the more centralized is the economic space of the region. The study concluded that the most centralized economic space among the regions of the South of Russia with absolute dominance of the central agglomeration in the implementation of economic power is the Republic of North Osetia-Alania (complex coefficient of centralization is 0.698). High centralization of the economic space was also noted in the Chechen Republic (0.616).

The Stavropol Territory has the most prominent network organization of the economic space. At the same time, the level of centralization of the economy is low. There is a high diversification of the sectors of the regional economy in comparison with other regions of the South of Russia, as well as the poly-profile of large and medium-sized urban settlements. At the same time, the high dependence of territorial entities on the administrative centre has not been revealed, which makes it possible to speak about the high mobilization potential of territorial entities in the region that give even impulses for the development of smaller towns and settlements, which ultimately contributes to the even development of the territories.

REFERENCES

[1] Bobrishev A.N., Kulish N.V., Tunin S.A., Sytnik O.E., El'chaninova O.V. Accounting and analytical procurement of business performance in an inflationary environment. International Journal of Applied Business and Economic Research, 14(14), 2016, pp. 627-637.

[2] Gerasimov A.N., Gromov Y.I., Skripnichenko Y.S. Assessing of the prospects for the creation of advanced socioeconomic development centers in the agricultural sector of the Stavropol Krai. Actual Problems of Economics, 164(2), 2015, pp. 396-402.
[3] Manzhosova I.B., Putrenok E.L., Alekseeva O.A., Litvin D.B., Tatarinova M.N. Justification for perspective directions of fat-and-oil industry development of agricultural regions in the South of Russia Espacios, 2017, 38(26), 8.
[4] Trukhachev V.I., Sklyarov I.Y., Sklyarova J.M., Latysheva L.A. and Lapina H.N. Contemporary state of resource potential of agriculture in South Russia. International Journal of Economics and Financial Issues, 2016, 6(5), pp. 33-41.
[5] Usenko L. N., Usenko A. M., Uryadova T. N., Bashkatova T. A., Beliaeva, S. V. Monitoring methodology for socio-economic development of a region (through the example of the south of Russia regions). Espacios, 2017, 38(23).
[6] Bulgakova S.V., Bobryshev A.N., Bobrova E.A., Dzhavadova O.M. and Dudayev G.H. Management Accounting In Effective Structures Of An Organization. RJPBCS 2018, 9(5), pp. 1095-1105.
[7] BobryshevA.N., GolchenkoY.V., KazakovM.Y. Directions of municipal territoria land economic transformation in a monopolar highly urbanized region. Actual Problems of Economics. 2014.2(152), pp. 230-238.
[8] Bobryshev A.N., Uryadova T.N., Lyubenkova E.P., Yakovenko V.S., Alekseeva O.A. Analytical and management approaches to modeling of the accounting balance sheet. Life Sci J 2014, 11(8), pp. 502-506.
[9] Bobryshev, A.N., Yakovenko, V.S., Tunin, S.A., Germanova, V.S., Glushko, A.Y. The Concept of Management Accounting in Crisis Conditions, Journal of Advanced Research in Law and Economics, (Volume VI, Winter), 2015, 3(13), pp. 520-527.
[10] Bobryshev, A.N., El'chaninova O.V., Tatarinova M.N., Grishanova S.V., Frolov, A.V. Management Accounting in Russia: Problems of Theoretical Study and Practical Application in the Economic Crisis, Journal of Advanced Research in Law and Economics, (Volume VI, Winter), 2015, 3(13), pp. 511-519.
[11] Trukhachev V.I., Kostyukova E. I., Bobryshev A.N. Development of management accounting in Russia. Revista ESPACIOS. 2017. 38 (27), P. 30.
[12] Averchenkova E.E., Kulagina N.A., Averchenkov A.V. Designing of the information advising system to assess the potential of creation and development of cluster agglomeration in the industrial complex of the region. Journal of Physics: Conference Series. 2017. 803. 1. P. 012011.