

# DEVELOPMENT OF MUNICIPAL FORMATIONS

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## Territorial Differentiation and Mechanism for its Reduction



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**Abstract.** Interterritorial socio-economic differentiation is one of the main internal challenges that hamper sustainable development of Russian regions and impede the transition of the economy to a new techno-economic paradigm. The weakening of economic ties and the uneven distribution of resources have led to an increase not only in interregional, but also in intraregional inequality in the development of territories; this disrupts the cohesion of the common economic space. In this regard, it becomes necessary to substantiate scientifically the mechanism of territorial development regulation that can reduce the scale of intraregional differentiation and overcome its negative implications; this predetermined the goal of our study. We use the data on the Vologda Oblast to systematize and analyze factors that cause intraregional differentiation; we identify the most significant of them, assess the scale and depth of socio-economic differentiation, determine the trends of change in socio-economic development of municipal districts, and substantiate the use of methods that help decrease the inequality of territories. We use analysis, synthesis, comparison, generalization, as well as methodological tools based on economic-statistical and comparative analysis and expert survey, as a methodological basis of

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the study. Scientific novelty of our research findings consists in the fact that they help develop methods to analyze, evaluate and regulate intraregional differentiation. The findings of our study can be used by federal and regional authorities and serve as a basis for further research on this topic to facilitate a more detailed study of a differentiated approach to the implementation of state support measures provided to municipalities with different development levels and capacities.

**Key words:** intraregional differentiation, municipal entities, socio-economic development, regulation mechanism, Vologda Oblast.

### Introduction

Russia, the largest country in the world, is characterized by significant differences in climatic conditions, in the availability and diversity of natural resources and national and cultural composition of its population. At the same time, about 2/3 of the country is located in the climatic zone of the North with unfavorable and severe natural and climatic conditions. Russia has more than 190 peoples and nationalities; they practice all the world religions and have their own historical, cultural, and national traditions and features. These and other factors determine the territorial heterogeneity of the country's economic space. At the same time, in the 1990s, during Russia's transition to a market economy, the role of the state in regulating spatial and territorial development decreased significantly; competition for human resources, investors' funds, federal support and production location increased between Russia's constituent entities and municipal entities in the process of territorial division of labor. As a result, there has been an increase in territorial and especially intraregional differentiation by which we mean the phenomenon caused by a variety of natural-geographical, economic, and political factors and expressed in significant differences between municipalities in the main parameters of socio-economic development. Increased differentiation leads to the weakening of the connectivity of economic space, the loss of control over territories due to the slowdown

of development and "extinction" of entire settlements, to the emergence of problem areas that require special support measures (leveling mechanisms), significant differences in the standard of living and quality of life, and migration of residents to more favorable areas.

The relevance of research on territorial differentiation is confirmed by the fact that recently a number of important documents were adopted at the federal level; they should determine the vector of development of Russian regions. A special place among them belongs to the Decree of the President of the Russian Federation # 13 dated January 16, 2017 "On approval of the fundamentals of the state policy for regional development of the Russian Federation for the period up to 2025", which defines the following goals of the state policy: providing equal opportunities for the implementation of economic, political and social rights of citizens of the Russian Federation throughout the country granted by the Constitution of the Russian Federation and federal laws, improving the quality of life, ensuring sustainable economic growth and scientific and technological development in regions, improving the competitiveness of the economy of the Russian Federation in the world markets on the basis of balanced and sustainable socio-economic development of Russia's constituent entities and municipal entities, and full-fledged involvement of people in addressing regional and local issues. The

problems that require special attention and that are identified in the draft strategy for spatial development of the Russian Federation for the period up to 2025 prepared by the Ministry of Economic Development of the Russian Federation in 2018<sup>1</sup> include the necessity to reduce differences in the level of socio-economic development of Russia's constituent entities and municipal entities.

It should be noted that Russian and foreign regional science and practice do not overemphasize the task of equalizing the level of development of territories and reducing differentiation to a certain level. It is of fundamental importance to ensure equal conditions and relatively equal opportunities for the development of territories, to achieve decent social standards and the quality of life. Territorial differentiation issues remain in the focus of attention of foreign scientists [1,2, 3, 4, 5] and Russian researchers [6-18]. These works propose different approaches to the analysis and evaluation of intraregional differentiation, as well as the tools to overcome excessive inequality and its negative implications.

It should be noted that the Russian Federation as a whole has developed a mechanism for regulating and promoting the development of municipalities based on the application of a wide range of methods and tools both within the framework of regional policy and other types of national and local socio-economic policy. However, this mechanism is not fully aimed at addressing the problem of reducing intraregional differentiation and overcoming its negative implications. As a result, despite the efforts that are being made, the rate of reduction of socio-economic inequality

remains insufficient, which poses a threat to sustainable development in regions. At the same time, there still remain the issues related to the comprehensive assessment of uneven socio-economic development in municipalities and the rationale for the choice of methods to regulate intraregional differentiation depending on the characteristics of different types of territories and the conditions in which their development is carried out.

#### **Description of the research methodology and substantiation of its choice**

The relevance of the issue of socio-economic differentiation of regions and municipalities makes it necessary to study the reasons for this phenomenon. Each territory has a certain set of resources: natural and geographical (natural conditions and resources), labor, economic (production assets and facilities), financial, infrastructure (transport, utilities, industrial and other infrastructure), scientific and innovative (applied technologies, organizations engaged in research and development, innovative infrastructure), management (qualification of management personnel, applied technologies in management), cultural and other resources. Quantitative and qualitative characteristics of resources, the degree of their involvement in reproductive processes, interaction with each other (within the system of the appropriate level and with the environment) not only determine the features of the territory, but also form territorial differentiation factors.

In the course of studying relevant scientific works we have found out that the work of the authors (S.N. Bolshakov, A.G. Granberg [6], A.A. Zhabrev [11], N.V. Zubarevich [7], E.A. Kolomak [8], V.A. Krivoshey, O.V. Kuznetsova [9], E.I. Kulikova, B.L. Lavrovsky [10], N.M. Mezhevich [11], T.G. Morozova, A.O. Polynyov [16], V.A. Sukhanova, E.V. Frolova,

<sup>1</sup> Draft strategy for spatial development of the Russian Federation for the period up to 2025. Ministry of Economic development of the Russian Federation. Available at: <http://economy.gov.ru/minec/activity/sections/planning/sd/201817081>

M.V. Shmakova, etc.) pay considerable attention to the factors that influence socio-economic development of territories and formation of regional inequality. Many authors focus mainly on the allocation of objective and subjective, internal and external factors, but some works do not classify the factors and only enumerate them.

Having analyzed the works mentioned above, we can say that the range of features is insufficient for assessing comprehensively the effects of the above factors and for using the classification for management purposes. In this regard, we propose the following grounds to classify the factors under consideration: 1) *place of origin*: internal, which arise and exist within Russia's constituent entities, and external, which exist outside the region; 2) *internal content*: economic, which are formed and operate in the processes of economic relations of various entities, and non-economic (natural, demographic, political, etc.), which are formed in the fields that are not directly related to economic development; 3) *possibility of managerial impact*: uncontrollable, which arise without direct dependence on the activities of the authorities, and they cannot have a direct impact on them, and controllable – the authorities of different levels can directly affect their change; 4) *duration of impact*: short-term (impact lasts 1–3 years), medium-term (3–6 years), long-term (more than 6 years); 5) *government levels (depending on the level of authorities that may affect the factor)*: federal, regional, municipal (local); 6) *impact on the development of municipal entities*: direct and indirect; 7) *possibility of forecasting* (predictable, unpredictable). A general representation of differentiation factors is given in *Table 1*.

The classification of factors expands the opportunities for a more in-depth study of the reasons for the changes in the uneven

development of regions and for a more accurate assessment of the place and role of each of them in this process. At the same time, the understanding of the features (content, impact, nature, duration, causes and conditions of emergence) of various factors and the mechanism of their influence on the socio-economic development of the territory makes the process of regulation more orderly and systematic. At the same time, the use of different classification features makes it possible to make a more detailed description of each individual factor and to make the choice of methods of influence of the relevant authorities more reasonable. The national government and local governments as subjects of management of social and economic processes at the regional level find the greatest interest in internal factors, the impact on which can help regulate intraregional differentiation.

Recognizing the objective nature of intraregional differentiation, we find it necessary to carry out its comprehensive assessment in order to study the real state of the processes of development of municipalities in the region, to identify the causes of differences in the level of socio-economic development of territories and to substantiate methods for overcoming excessive inequality and its negative consequences. Having reviewed the works of Russian scientists we find out that there are different approaches to address these problems. For instance, A.G. Granberg [6], A.O. Polynev [16], S.A. Suspitsin [17], and R.M. Mel'nikov [12] assess territorial differentiation on the basis of calculating the indicators of variation of the indicators of socio-economic development provided by official statistics: coefficient of variation, oscillation, magnitude of variation, Theil index, etc. A methodological approach suggested by A.A. Pobedin [15] and A.A. Mitroshin [13]

Table 1. Factors that influence differentiation of development of municipal entities

Factor	According to the place of their emergence	According to their inner content	According to the possibility of management impact	According to the duration of impact	According to the levels of management	According to the nature of impact	According to the possibility of forecasting
Economic and geographical position of municipal entity	In	NE	UC	LT	-	D	UP
Level of accumulated economic potential (natural resource potential, production and technological, etc.) of municipal entity	In	E	UC	LT	-	D	UP
Level of human capital development (abilities, knowledge, skills, health status, migration, mobility and adaptability of the population, monetary incomes of the population, etc.) in municipal entities	In	NE	C	LT	R, M	D	P
Agglomeration processes in the region	In	E	C	LT	R, M	D	P
Degree of development of market infrastructure and institutional environment in the region	In	E	C	LT	R, M	D	UP
Degree of development of production (transport, utilities, innovation, etc.) and social infrastructure in municipal entity	In	NE	C	LT	R, M	D	P
Macroeconomic situation in the world	Ex	E	UC	C	-	ID	P
Macroeconomic situation in the country	Ex	E	UC	C	F	ID	P
Position of the country in the system of world economic relations	Ex	E	UC	LT	F	ID	UP
Position of the country in the system of world political relations	Ex	NE	UC	LT	F	ID	UP
Activities of economic entities in municipal entity	In	E	C	C	R, M	D	P
Spatial and sectoral structure of regional economy	In	E	C	LT	R, M	D	P
Settlement system in the region	In	NE	C	LT	R, M	D	P
"Shadow sector" of regional economy	In	E	C	LT	R, M	ID	UP
Federal regulatory framework	Ex	NE	UC	ST	F	D	UP
Regional regulatory framework	In	NE	C	ST	R	D	UP
Regulatory and legal framework of municipal entities	In	NE	C	ST	M	D	UP
Current mechanism of state regulation of economy	Ex	NE	C	C	F, R	D	UP
System of inter-governmental fiscal relations in the country	Ex	E	C	ST	F	ID	P
System of inter-governmental fiscal relations in the constituent entity of the Russian Federation	In	E	C	ST	R, F	D	P
Socio-economic policy in the constituent entity of the Russian Federation	In	E	C	C	R	D	UP
Socio-economic policy of local self-government bodies	In	E	C	C	M	D	UP
Interaction between public authorities of the constituent entity of the Russian Federation and local authorities (formal and informal relations)	In	NE	C	ST	M, R	ID	UP
Inter-municipal (industrial, cultural, organizational and other) relations	In	NE	C	ST	M	ID	UP
Effectiveness of local self-government bodies	In	NE	C	C	M	ID	UP

Factors in the table are denoted as follows: In – internal, Ex – external; E – economic, NE – non-economic; C – controlled, UC – uncontrolled; ST – short-term, MT – medium-term, LT – long-term; F – Federal, R – regional, M – municipal (local); D – direct, ID – indirect; P – predictable, UP – unpredictable

is based on the assessment of intraregional inequality not only with the use of variation indicators, but also with the application of a comprehensive assessment of differences between municipalities in terms of the level of development based on the calculation of the integral indicator and the typology of territories. A.E. Chepik [18] uses indicators of structural changes to analyze uneven

development of municipalities, carries out their multidimensional classification and assesses the impact of economic reproduction factors on uneven development of municipalities.

It should be noted that some methods contain complex calculations and use an excessively large number of indicators, some of which are absent in official statistics. Main features of the methodological approach to

Table 2. Algorithm for analyzing intraregional differentiation

Stage	Content and results
Preliminary	Selecting the indicators available in official statistical information and characterizing various aspects of socio-economic development of municipalities for the formation of the information base of the study
First	In order to assess the depth, scale and trends of differentiation, the dynamics of the indicators of variation selected for the analysis is calculated: 1) average value of the indicator; 2) scale of variation; 3) standard deviation; 4) coefficient of the range of variation (ratio between the maximum and minimum values of the indicator); 5) coefficient of variation; 6) Theil index of entropy; 7) share of the territory in the total value of the coefficient of variation, etc.
Second	<p>In order to identify groups (types) of territories with similar parameters and features of socio-economic development, the level of socio-economic development of municipalities is assessed, the sequence of this assessment consists of the following actions:</p> <p>1) Formation of the list (18 indicators) and blocks of indicators (“Demography”, “Improvement”, “Standard of living”, “Economy”) that reflect the various aspects of development of territories [19; 20].</p> <p>2) Standardization of indicators relative to regional averages (by region):</p> $k_i = x_i/x_{cpi} \quad (1)$ $k_i = x_{cpi}/x_i \quad (2)$ <p>where <math>k_i</math> – a standardized coefficient, which is calculated according to formula 1 for the direct indicators, and according to formula 2 for reverse indicators; <math>x_i</math> – the value of the <math>i</math>-th indicator in the municipal entity; <math>x_{cpi}</math> – average value of the <math>i</math>-th indicator for all municipal districts and urban districts of the region or for districts only.</p> <p>3) Calculation of an aggregate indicator for each of the blocks (<math>R_j</math>) according to the formula:</p> $R_j = (\sum_{i=1}^n k_i)/n \quad (3)$ <p>where <math>n</math> – number of indicators in the block;</p> <p>4) Calculation of the integral indicator of the level of socio-economic development of the municipal entity (<math>I_{sedj}</math>):</p> $I_{sedj} = (R1 + R2 + R3 + R4)/4 \quad (4)$ <p>where <math>R1, R2, R3, R4</math> – aggregate indicators of the corresponding blocks.</p> <p>5) Grouping of municipalities by level of development based on the values of the integral indicator: high – <math>I_{sedj}</math> over 1.1; average – <math>I_{sedj}</math> from 0.9 to 1.1; low level – <math>I_{sedj}</math> lower than 0.9.</p>
Third	In order to identify differentiation factors and determine the priority areas of development of municipalities so that the government could implement regulatory measures, the analysis of trends and factors in intraregional differentiation is carried out. First, we analyze the possibility of reducing inequality (when testing the $\beta$ -convergence concept) both with the help of existing objective processes and due to the action of various government regulation factors (the volume of financial support provided to municipalities from the budget of the RF subject, the volume of budget investments, etc.). Second, the relationships between the statistical indicators characterizing the scale and scope of intraregional differences (ratio between the maximum and minimum values of the indicator), and indicators reflecting the consequences of differentiation (mortality, migration outflow, population decline, etc.) are analyzed. The factors are also identified on the basis of expert assessments in the framework of a questionnaire survey of the heads of municipalities.

the assessment of intraregional differentiation proposed in this study are as follows: complex nature, universality and simplicity of calculations, and the use of expert assessments in addition to statistical data. On the basis of this approach it becomes possible to solve a set of interrelated tasks using the data of state statistics and expert assessments. The universal nature of the proposed approach makes it possible to use it in any constituent entity of the Russian Federation and apply it to any type of territories. The algorithm for analysis is presented in *Table 2*.

### Research results, analysis and explanation of the results

As of the end of 2016, there were 218 municipalities in the Vologda Oblast, including two urban districts (Vologda and Cherepovets), 26 municipal districts, 22 urban settlements

and 168 rural settlements. The general picture of development of municipal districts and urban districts for 1990–2016 is presented by the dynamics of key indicators of their socio-economic development (*Tab. 3*).

According to *Table 3*, the development of the region's territories during the period under consideration was characterized by multidirectional trends: there was an increase in industrial production in some districts (in Kaduysky District – also an increase in investment), but most districts faced a decrease in the values of all presented indicators. In 2016 compared to 2000, the population in all districts of the Oblast was below the level of 2000; it declined more than 1.5-fold in 11 districts (Babushkinsky, Belozersky, Vashkinsky, Vytegorsky, Kichmengsko-Gorodetsky, Mezhdurechensky, Nikolsky, Nyuksensky,

Table 3. Dynamics of the main economic indicators in the districts and urban districts of the Vologda Oblast, times

District (urban district)	P	IP	AP	I	District (urban district)	P	IP	AP	I
	2016 to 1990	2015 to 1990	2016 to 1996	2013 to 1990		2016 to 1990	2015 to 1990	2016 to 1996	2013 to 1990
Babaevsky	↓1.45	↓3.8	↓3.9	↓5.5	Nyuksensky	↓1.58	↑1.7	↓3.2	↓11.8
Babushkinsky	↓1.50	↓4.6	↓3.7	↓26.5	Sokolsky	↓1.32	↓1.5	↓1.5	↓2.6
Belozersky	↓1.63	↑1.6	↓2.5	↓3.0	Syamzhensky	↓1.51	↓2.8	↓3.8	↓2.8
Vashkinsky	↓1.73	↑1.6	↓2.6	↓9.8	Tarnogsky	↓1.55	↑2.4	↓1.9	↓5.6
Velikoustyugsky	↓1.36	↓1.5	↓2.4	↓4.7	Totemsky	↓1.22	↓1.6	↓1.2	↓8.7
Verkhovazhsky	↓1.41	↓2.1	↓2.5	↓6.9	Ust-Kubinsky	↓1.42	↓5.9	↓2.3	↓2.4
Vozhegodsky	↓1.49	↓1.8	↓2.1	↓32.2	Ustyuzhensky	↓1.35	↓2.9	↑1.1	↓5.8
Vologodsky	↓1.10	↑2.2	↑1.2	↓7.1	Kharovsky	↓1.74	↓1.6	↓2.3	↓1.3
Vytegorsky	↓1.53	↑3.7	↓3.3	↓2.4	Chagodoshchensky	↓1.45	↓1.04	↓2.1	↓1.4
Gryazovetsky	↓1.40	↓2.0	↑1.1	↓1.8	Cherepovetsky	↓1.22	↑1.4	↓1.2	↓5.8
Kaduysky	↓1.18	↑2.8	↓2.0	↑7.0	Sheksninsky	↓1.03	↓1.7	↓1.1	↓5.0
Kirillovsky	↓1.44	↓6.7	↓1.2	↓4.1	City of Vologda	↑1.08	↑1.8	-	↓1.2
Kichmengsko-Gorodetsky	↓1.62	↓7.0	↓2.6	↓23.6	City of Cherepovets	↑1.01	↓1.1	-	↓1.3
Mezhdurechensky	↓1.68	↑1.2	↓1.6	↓18.5	<i>Vologda Oblast</i>	↓1.15	↑1.2	↓1.2	↓1.03
Nikolsky	↓1.54	↑1.1	↓2.2	↓5.7					

Legend: ↑ – indicator growth; ↓ – indicator decline; P – resident population at the end of the year; IP – physical volume of industrial production; AP – physical volume of agricultural production; I – physical volume of investment in fixed assets.

Note: due to the lack of statistical information on individual indicators and its non-comparability in individual years, the calculations are presented for different time periods.

Source: here and in *Tables 4 and 5*, calculated with the use of: *Municipal districts and urban districts of the Vologda Oblast. Socio-economic indicators 2000–2016: statistics collection*. Vologdastat. Vologda, 2017. 293 p.; *Districts of the Vologda Oblast in 1990–1999: statistics collection*. Vologdastat. Vologda, 2001. 384 p.

Syamzhensky, Tarnogsky, Kharovsky). In many ways, these facts determined the aggravation of differences between municipalities in key parameters of socio-economic development (Tab. 4).

The greatest differences between districts of the Vologda Oblast are observed in the volume of production (shipment) of industrial products per inhabitant. Differentiation of districts in terms of agricultural output has increased almost twice as compared to 1996. The differences between districts of the Oblast in the size of average monthly wage in 2016 reached two times, having decreased compared to the level of 2005 (2.8 times). There still remain noticeable differences in the number of doctors (2.7–3.0 times). On the basis of the analysis it can be concluded that intraregional differentiation has increased in the period under consideration, reaching critical values in some cases.

In the course of studying the trends in intraregional differentiation we reveal that some municipalities in the region have similar characteristics, trends and features of development. This can become the basis for the allocation of groups of districts, for each of which specific priorities and tools for implementation of regional and local socio-economic policy can be defined. Based on the provisions of the methodological approach outlined above, we grouped municipal districts of the Vologda Oblast according to the level of socio-economic development, which confirms the existence of significant intraregional differentiation (Tab. 5). At the same time during the period under consideration the level of development of most districts of the Oblast has not changed significantly, almost half of the districts belong to the group with a low level of development. The results of the grouping of municipalities of the Oblast

Table 4. Indicators of variation of the main parameters of socio-economic development in municipal districts of the Vologda Oblast

Indicator	Type of variation indicator	Year						
		1990	1995	2000	2005	2010	2015	2016
Industrial output per inhabitant	Max/min, times	16.2	368.7	100.4	69.1	507.5	29.3 <sup>1</sup>	33.5 <sup>1</sup>
	CVariation, %	59.9	143.1	188.7	120.9	140.4	78.6 <sup>1</sup>	97.8 <sup>1</sup>
Agricultural output per inhabitant	Max/min, times	-	10.1 <sup>2</sup>	9.2	18.1	19.8	18.1	19.8
	CVariation, %	-	56.4 <sup>2</sup>	56.0	71.6	68.5	63.3	66.0
Investments in fixed capital per inhabitant	Max/min, times	7.1	7.3	7.8	40.9	50.4	52.1 <sup>3</sup>	13.0 <sup>3</sup>
	CVariation, %	31.0	60.8	70.1	163.9	99.3	112.4 <sup>3</sup>	78.4 <sup>3</sup>
Average monthly nominal accrued wage	Max/min, times	1.3	2.2	2.2	1.6	1.6	1.8	2.0
	CVariation, %	6.5	17.4	18.8	15.3	14.1	15.5	16.2
Retail turnover per inhabitant	Max/min, times	1.3	3.1	2.3	2.8	1.8	2.1	2.0
	CVariation, %	5.9	29.3	22.7	28.7	15.6	16.7	16.6
Number of doctors per 10,000 population	Max/min, times	2.3	2.7	3.0	3.5	3.0	2.5	2.7
	CVariation, %	20.9	26.2	25.7	25.8	25.1	22.2	23.5

Notes:

Max/min – ratio between the maximum and minimum values of the indicator for the districts of the Oblast; CVariation – coefficient of variation of the values of the indicator among the districts of the Oblast.

<sup>1</sup> Data on the volume of industrial production were not available in the official statistical reports for 2015–2016; so for this year we present the data on the volume of shipment of goods of own production, work performed and services rendered (excluding the volume of production of small business entities).

<sup>2</sup> Data for 1996.

<sup>3</sup> Excluding small business entities.

Table 5. Classification of municipal districts of the Vologda Oblast according to the level of socio-economic development at the end of 2000 and 2016

Level	2000	2016
High	1. Kaduysky (1.655), 2. Vologodsky (1.405), 3. Cherepovetsky (1.354), 4. Sokolsky (1.265), 5. Sheksninsky (1.222), 6. Chagodoshchensky (1.202), 7. Gryazovetsky (1.149), 8. Velikoustyugsky (1.141)	1. Sheksninsky (1.385), 2. Vologodsky (1.370), 3. Gryazovetsky (1.363), 4. Sokolsky (1.237), 5. Kaduysky (1.226), 6. Totemsky (1.114), 7. Velikoustyugsky (1.110)
Average	9. Totemsky (1.036), 10. Vytegorsky (0.957), 11. Vashkinsky (0.937), 12. Babaevsky (0.930), 13. Nyuksensky (0.928)	8. Nyuksensky (1.085), 9. Chagodoshchensky (1.062), 10. Tarnogsky (1.041), 11. Mezhdurechensky (1.008), 12. Belozersky (1.007), 13. Cherepovetsky (0.990), 14. Kharovsky (0.954), 15. Kirillovsky (0.949)
Low	14. Kharovsky (0.895), 15. Belozersky (0.878), 16. Kirillovsky (0.872), 17. Tarnogsky (0.861), 18. Ustyuzhensky (0.857), 19. Mezhdurechensky (0.840), 20. Vozhegodsky (0.818), 21. Ust-Kubinsky (0.813), 22. Verkhovazhsky (0.766), 23. Babushkinsky (0.756), 24. Syamzhensky (0.755), 25. Kichmengsko-Gorodetsky (0.709), 26. Nikolsky (0.693)	16. Verkhovazhsky (0.875), 17. Ustyuzhensky (0.869), 18. Babaevsky (0.867), 19. Syamzhensky (0.835), 20. Vytegorsky (0.831), 21. Vozhegodsky (0.805), 22. Ust-Kubinsky (0.791), 23. Vashkinsky (0.783), 24. Nikolsky (0.743), 25. Babushkinsky (0.731), 26. Kichmengsko-Gorodetsky (0.717)
Note: the value of the integral indicator of the level of socio-economic development is given in brackets next to each district of the Oblast.		

allow us to conclude that the level of socio-economic development and the quality of life above average is typical for the territories adjacent to the urban districts of Vologda and Cherepovets. The development of these territories shows positive trends; a significant proportion of the total volume of production and investment is concentrated there, as well as the migration inflow of the population. Most of the peripheral districts of the Oblast (except for Velikoustyugsky District) are characterized by a low level of development and low investment attractiveness, which hampers development prospects and leads to migration outflow to the cities and more favorable districts.

In the course of our research we have found out that the main factors shaping intraregional differentiation are as follows: economic and geographical position (including the remoteness of the district from major cities), socio-economic potential of the municipality, spatial and sectoral structure of the economy, level of development of production and social infrastructure, level of human capital development, flaws in the federal and regional regulatory and legal framework, insufficient

capacity of local government bodies in addressing current problems and managing the development of the municipality, low efficiency of territorial development management and interaction between public authorities and local government bodies. As for intraregional differentiation factors, special attention was paid to such factors as socio-economic policy of the subject of the Federation and the interaction between the public authorities of a constituent entity of Russia and local authorities. RAS Vologda Research Center conducts annual surveys of heads of municipalities of the Vologda Oblast<sup>2</sup>; the results of the surveys show that local governments cannot address territorial socio-economic development issues effectively due to the following barriers: lack of financial resources (lack of own revenue sources, lack

<sup>2</sup> In order to study the problems and prospects of local self-government reform, since 2007, Vologda Research Center of the Russian Academy of Sciences (VoIRC RAS, previously – ISEDT RAS) conducts a questionnaire survey of heads of municipal entities of the Vologda Oblast. Annually, 160–210 heads of municipal entities out of 218–372 fill in the questionnaires (30–40 questions), which allows for the sampling error of 4–5%. The heads assess the results of the past calendar year: for example, they assess the results of 2017 in the 2017 survey.

Table 6. Distribution of answers to the question “How do you assess the work of regional authorities aimed at supporting municipalities in the year...?” (% of respondents)

Answer	Municipal entities								
	municipal districts			urban settlements			rural settlements		
	2009	2015	2016	2009	2015	2016	2009	2015	2016
No assistance was provided	3.8	0.0	0.0	18.2	11.1	0.0	12.0	14.6	19.8
In general, the assistance was ineffective (the developed measures are difficult to implement, and they did not help improve the situation)	19.2	5.9	16.7	27.3	0.0	0.0	21.5	26.8	14.3
Changes have occurred, but they are insignificant	38.5	47.1	55.6	27.3	55.6	21.4	36.1	31.7	38.5
The actions taken have improved the situation	23.1	29.4	22.2	18.2	33.3	57.1	12.0	8.5	14.3
It is difficult to answer	15.4	17.6	5.6	9.1	0.0	21.4	18.4	18.3	13.2

Source: Database of the monitoring of the conditions of reforming local self-government in the Vologda Oblast. VolRC RAS (formerly – ISED T RAS). Vologda, 2007–2017.

of financial support from the state); flaws in the legislation concerning the functioning and development of municipal authorities; passivity of local population and lack of mechanisms for accounting balances of business, government and population in the development of territories; lack of effective interaction with public authorities (dependence on regional governments, red tape, lack of consistency of policy documents aimed at the development of the territory); limited powers in the field of economic development of the municipality. We should note that the list of key problems in the development of municipalities of the region throughout the study period remains constant throughout all the eleven surveys of heads of municipalities [20; 21].

Most of the heads of municipalities of the Vologda Oblast do not note any significant changes in the development of municipalities as a result of the implementation of regional policy by the regional authorities (*Tab. 6*), while almost 20% of the heads of rural settlements pointed out that either there is no assistance from the regional authorities or their actions are ineffective.

Thus, the results of the analysis indicate the need to adjust regional and local socio-

economic policy taking into account the factors stated above in order to create conditions for reducing inter-municipal inequality and eliminate its main negative consequences.

In order to find a solution to the problems connected with the aggravation of intraregional differentiation it is necessary to reconsider the approaches to the regulation of the process under consideration from the standpoint of main provisions of the Decree of the President of the Russian Federation dated January 16, 2017 No. 13 “On approving the fundamentals of state policy for regional development of the Russian Federation for the period till 2025”. The principles that reveal the content of state policy for regional development contain a differentiated approach to the provision of state support to regions and municipalities depending on their socio-economic and geographical features. We believe that this very principle together with the principles of purposefulness, consistency, taking into account development specifics of the municipality, coherence of interests, self-development and self-government, adaptation and balance should form the basis for a scientific and methodological approach to the regulation of intraregional differentiation.

Table 7. Objectives and main activities for the regulation of intraregional differentiation

Objective	Activities
1. Reducing the lag between “problem” and developed municipalities on the main parameters of social and infrastructure development	Developing and promoting investment projects aimed at the creation or reconstruction of industrial, transport and social infrastructure; providing active support to business structures involved in the implementation of projects in the “problem” districts
2. Creating the incentives to enhance the development of all municipalities in the region (ensuring their self-development through the fullest use of existing potential)	Development of clusters (forest, tourism, agriculture), territories of advanced development, zones of territorial development; promotion of development institutions (PPP, MPP); stimulation of the functioning of small and medium-sized businesses, activities to consolidate personnel, attracting domestic and foreign investors. This will contribute to the opening of new and expansion of existing industries, which will improve the standard of living and quality of life, and the replenishment of the local budget.
3. Coordinating the interests and effective interaction (cooperation) of public authorities and local self-government	Implementation of activities related to the delimitation of powers, responsibilities and property between the state authorities and municipalities; providing support to projects in the field of inter-municipal cooperation; active development of organizational forms of interaction between the authorities (coordination councils, administrative districts, etc.).
4. Increasing the role of the institution of local self-government in addressing the issues related to the development of municipalities	Improving various forms of self-organization of the population and its participation in management at the local level (territorial public self-government, self-taxation of citizens, projects of local initiatives, funds of local communities); providing financial and organizational support to the specified institutions on the part of public authorities and local governments; studying and disseminating the experience of the best practices of municipal management

Public authorities of constituent entities of the Russian Federation and local governments are the subjects of regulation of intraregional differentiation. Regional authorities (departments for strategic planning, economic development, and finance) play the key role; they develop main directions of spatial development of the region taking into account socio-economic features of municipalities and implement activities in accordance with the defined goals and objectives.

The practice of the last decades has shown a significant impact of the so-called actors of influence (regional development institutions, business communities and the population) on the decision-making process of legislative and executive authorities. The object of regulation is the processes of socio-economic development in municipalities, and their distinctive feature lies in their significant differentiation.

The effectiveness and efficiency of regulation is largely determined by the choice and substantiation of the main goals and objectives in accordance with which the process of development of municipalities is carried

out. It is important to take into account the interests of all stakeholders and the barriers that affect the process of regulation. The goal of regulating intraregional differentiation is to create conditions for reducing differentiation and overcoming its negative effects. In order to achieve this goal it is necessary to solve a number of interrelated tasks and implement relevant activities (*Tab. 7*).

If these tasks and activities are implemented, it will create opportunities for an optimal combination of alignment and stimulation of development of municipal entities and enhance the role of the institute of local self-government.

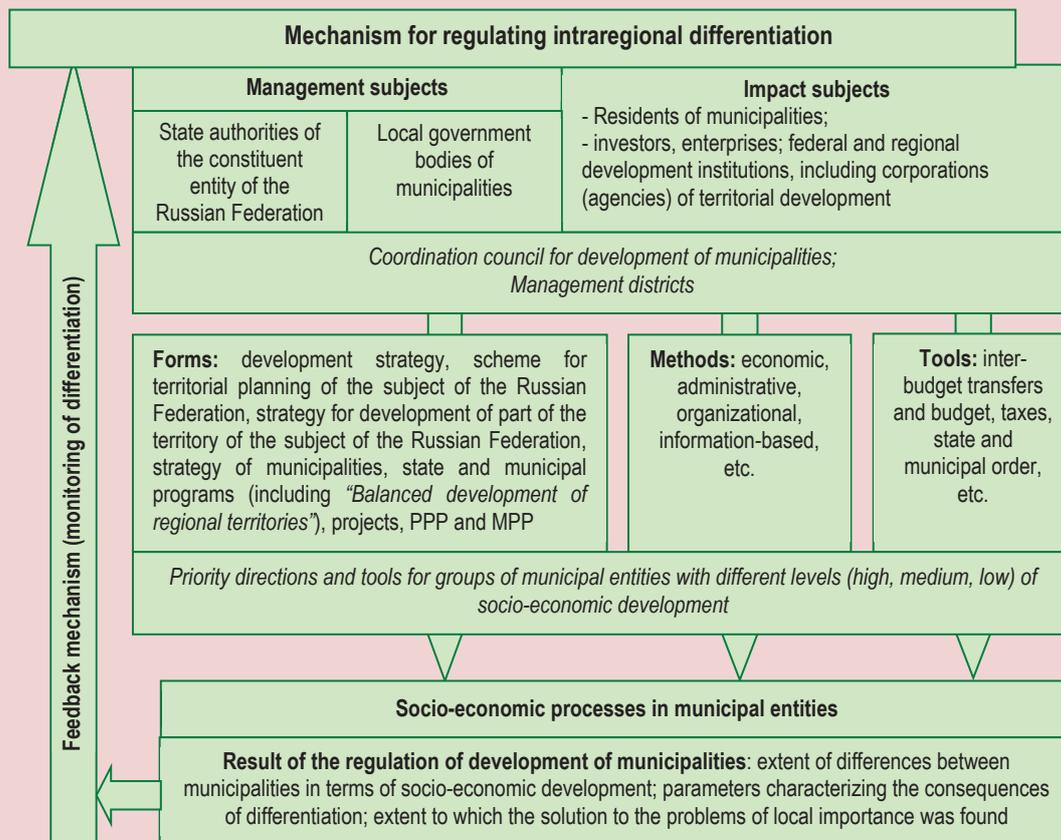
The complexity and interdependence of the tasks, a special nature of the relationship between the subjects of management, and the continuously changing external environment impose certain requirements on the mechanism of regulation of intraregional differentiation, which is defined as a set of forms, methods and tools by which state and regional authorities and local governments affect the processes of socio-economic development of municipalities. The main requirements of this mechanism are

as follows: flexibility and ability to respond to various changes (environment, goals and objectives), presence of feedbacks, provision of balanced development of economic and social spheres of territories, creation of conditions for the interaction of regional and local authorities, efficiency and effectiveness. We think that in order to regulate intraregional differentiation it is necessary to form a special mechanism, the general scheme of which is shown in *Figure 1*.

Within the framework of the mechanism under consideration, it is planned to implement a differentiated approach to municipalities with different levels of socio-economic development, which will make it possible to determine the

priority directions and tools of regulatory impact for each group of districts. Thus, for districts with a high level of development it is important to create incentives for self-development of territories and formation of “growth points” of regional importance (including the generation and dissemination of innovations), etc. In districts with an average level of development it is necessary to create conditions for diversification of their economies and use of available development reserves that have not been utilized before. For the most problematic territories, first of all, it is necessary to ensure the guaranteed provision of the necessary minimum of infrastructure and social services for the population (including

Figure 1. Mechanism for regulating intraregional differentiation\*



Elements of the management mechanism that are not currently in use are given in *italics*.

the development of road and transport infrastructure); it is also necessary to preserve and develop existing production facilities and create opportunities for the opening of new enterprises with more efficient use of all available development resources.

One of the ways to synchronize the actions of state and municipal authorities is to create special territorial areas (administrative districts) within the boundaries of the region, which represent a special form of interaction between state authorities of the constituent entity of the Russian Federation and local self-government bodies. We can define the following criteria for the allocation of administrative districts: common borders of municipal districts/urban districts); similar specialization of the economy in the districts/urban districts; transport and geographical connectivity of the districts – the distance from the administrative center of the district to the administrative centers of the district's areas should not exceed 200 km, and, in addition, there should be constant transport links along the closest routes; similar trends in the socio-economic development of the districts. It is proposed to form six administrative districts on the territory of the Vologda Oblast: Western, Northwestern, Vologodsky, Cherepovetsky, Northern, and Eastern [22].

For ensuring effective interaction between the participants of the process of regulation of intraregional differentiation we find it expedient to create a coordination council on development of municipalities – an advisory and coordinating body (that would not be an independent legal entity) under the supreme executive body of the state authority of the constituent entity of the Russian Federation. This will ensure a comprehensive and system-wide implementation of regional policy aimed at the development of municipalities.

The council will include representatives of the legislative and executive authorities of the constituent entity of the Russian Federation, local authorities, representatives of academia and non-governmental organizations.

The efficiency of management of territorial development should be improved by establishing a municipal-territorial structure that would suit modern conditions and features of development of municipalities. The municipal-territorial structure is the division of the territory of the region (constituent entity of Russia) into municipalities (or other administrative-territorial units that are the object of management at the local level), and it includes procedures for the transformation of municipalities (association, division, change of their status).

In order to implement projects aimed at the development of municipalities in the region for the purpose of reducing intraregional differentiation, we find it advisable to develop and adopt a special state program “Balanced development of the region's territories” in the constituent entity of Russia. A distinctive feature of this program, which can take its place among other state programs of the constituent entity of Russia, consists in the fact that it will help combine activities related to the promotion of development of municipalities and improve the efficiency of management at the local level. Within the framework of this program, funding will be granted to 1) priority projects in municipalities aimed at reducing differences in the development of municipalities (primarily infrastructure and social sphere), 2) measures to support local self-government (local initiatives, territorial public self-government, etc.), 3) measures for training and retraining of personnel for local self-government. A separate subprogram is envisaged for each of these three areas.

There exist the following sources of funding for activities and projects: 1) federal funds (participation in federal programs); 2) funds of the budget of a constituent entity of the Russian Federation; 3) local budgets; 4) off-budget sources (funds of the business in the implementation of joint investment projects in the framework of public-private and municipal-private partnership; funds of the population). We propose the following proportions between these sources for the whole program: 10%, 50%, 20% and 20%, respectively. The proportions of distribution of funds between subprograms should be established as follows: 70% – for the first subprogram; 15% – for the second subprogram; 15% – for the third subprogram.

Under the *subprogram “Enhancing socio-economic development in municipalities”*, two types of subsidies will be provided. The first type is priority support for investment and social projects in municipal districts (urban districts), where the value of the integrated development index ( $I_{sedj}$ ) defined in accordance with the above methodology is less than 1. The amount of support for the  $j$ -th municipality ( $C_j$ ) is determined according to the formula

$$C_j = A \cdot \frac{1 - I_{sedj}}{\sum_{j=1}^m (1 - I_{sedj})}, \quad (5)$$

where  $A$  is the total amount of support for projects for a year in the framework of this subsidy in accordance with subprogram 1;  $I_{sedj}$  is the value of the index of socio-economic development of the  $j$ -th district (urban district);  $m$  is the number of municipalities with an index value of less than 1.

The implemented project(s) should be aimed at achieving the specific goal and objectives of the municipality and should have a measurable result, expressed in increasing the provision of certain services, infrastructure,

etc. Any municipality should have the right to receive the second type of subsidy on a competitive basis. The criteria for the selection of projects for subsidies under subprogram 1 can be as follows: proportion of extra-budgetary sources in the co-financing of the project; proportion of the population of the municipality for which the implementation of this project is relevant; payback period of the project; compliance of the task in the implementation of the project with the goals and objectives of socio-economic development of the constituent entity of the Russian Federation; availability of developed design and estimate documentation of the project; level of co-financing of the project from local budgets, etc.

In order to implement the subprogram *“Support and development of local self-government in the subject of the Russian Federation”*, municipalities will receive inter-budget transfers aimed at co-financing territorial public self-government projects, projects for self-taxation of citizens, support of local initiatives, etc. The subprogram *“Development of personnel potential of local self-government bodies of a constituent entity of the Russian Federation”* will require funding for training and retraining of employees of local self-government bodies, for the implementation of various personnel projects and projects to stimulate municipalities and their heads to improve the efficiency of municipal administration.

In addition, one of the prerequisites for solving the problems of intraregional differentiation should consist in the development of the institution of local self-government (provision of support to territorial public self-government, self-taxation of citizens, community funds, projects to support local initiatives, etc.). To achieve this goal, the *“Public dialogue platform”* project is proposed,

which makes it possible to discuss problems related to the development the municipality, ideas, projects and activities via a special Internet portal, as well as to unite the resources of the population, business and government for the implementation of these projects.

Thus, the contribution of our study to the development of theoretical science consists in the fact that it systematizes the factors that cause intraregional differentiation and

substantiates the mechanism of its regulation. Our study contributes to the development of applied science by improving the methodological tools for comprehensive assessment of the differentiation and typology of territories for administration purposes, and by providing specific recommendations for improving regional socio-economic policy in order to reduce territorial inequality and overcome its negative implications.

### References

1. *Priorities for 2014-2020*. European Commission. Available at: [http://ec.europa.eu/regional\\_policy/en/policy/how/priorities](http://ec.europa.eu/regional_policy/en/policy/how/priorities)
2. *Territorial Agenda of the European Union 2020. Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions*. Available at: [http://ec.europa.eu/regional\\_policy/sources/policy/what/territorial-cohesion/territorial\\_agenda\\_2020.pdf](http://ec.europa.eu/regional_policy/sources/policy/what/territorial-cohesion/territorial_agenda_2020.pdf)
3. Kutscherauer A. et al. *Regional Disparities in Regional Development of the Czech Republic: Their Occurrence, Identification and Elimination*. Ostrava: VŠB-Technical University of Ostrava, 2010. 120 p.
4. Naschold F., Bogumil J. *Modernisierung des Staates: new public management in deutscher und internationaler Perspektive*. Wiesbaden: Springer Fachmedien GmbH, 2000. 250 p.
5. Porter M.E. *Regions and the New Economics of Competition: Global City-Regions: Trends, Theory, Policy*. Oxford: Oxford University Press, 2001.
6. Granberg A.G. *Osnovy regional'noi ekonomiki: uchebnik dlya vuzov. 3-e izd.* [Fundamentals of Regional Economics: Textbook for Universities. Third edition]. Moscow: GU VShE, 2003. 495 p.
7. Zubarevich N.V. *Regiony Rossii: neravenstvo, krizis, modernizatsiya* [Regions of Russia: Inequality, Crisis, Modernization]. Moscow: Nezavisimyi institut sotsial'noi politiki, 2010. 160 p.
8. Kolomak E.A. Interregional disparities in Russia: economic and social aspects. *Prostranstvennaya ekonomika=Spatial Economics*, 2010, no. 1, pp. 26-35. (In Russian).
9. Kuznetsova O.V. Typology of factors governing the social-economic development of Russian regions. *Vestnik Moskovskogo universiteta. Seriya 5: Geografiya=Moscow University Bulletin. Series 5. Geography*, 2014, no. 2, pp. 3-8. (In Russian).
10. Lavrovskii B.L. Territorial differentiation and approaches to its reduction in the Russian Federation. *Ekonomicheskii zhurnal Vysshei shkoly ekonomiki=Higher School of Economics Economic Journal*, 2003, vol. 7, no. 4, pp. 524-537. (In Russian).
11. Mezhevich N.M., Zhabrev A.A. Regional differentiation – a factor in socio-economic development of regions. *Ekonomika i upravlenie=Economics and Management*, 2011, no. 5 (67), pp. 159-158. (In Russian).
12. Mel'nikov R.M. *Problemy teorii i praktiki gosudarstvennogo regulirovaniya ekonomicheskogo razvitiya regionov: monografiya* [Problems of Theory and Practice of State Regulation of Economic Development of Regions: Monograph]. Moscow: Izd-vo RAGS, 2006. 199 p.
13. Mitroshin A.A. *Metody otsenki kachestva zhizni naseleniya i sotsial'no-ekonomicheskoi differentsiatsii territorii (na primere Moskovskoi oblasti): avtoref. dis. na soisk. uch. st. k.e.n.: 08.00.05* [Methods for Assessing the Quality of Life and Socio-Economic Differentiation of Territories (Case Study of the Moscow Oblast: Candidate of Sciences (Economics) Dissertation Abstract]. Moscow, 2013. 23 p.

14. Oreshin V.P., Fetisov G.G. *Regional'naya ekonomika i upravlenie: uchebnik* [Regional Economics and Management: Textbook]. Moscow: INFRA-M, 2006. 416 p.
15. Pobedin A.A. *Politika regulirovaniya vnutreregional'noi differentsiatsii sotsial'no-ekonomicheskogo razvitiya (na primere Sverdlovskoi oblasti): avtoref. dis. na soisk. uch. st. kand. ekon. nauk: 08.00.05* [Policy for the Regulation of Intraregional Differentiation in Socio-Economic Development (Case Study of the Sverdlovsk Oblast): Candidate of Sciences (Economics) Dissertation Abstract]. Yekaterinburg, 2008. 24 p.
16. Polynev A.O. *Mezhhregional'naya ekonomicheskaya differentsiatsiya: metodologiya analiza i gosudarstvennogo regulirovaniya. 2-e izd.* [Interregional Economic Differentiation: Methodology for Analysis and State Regulation]. Moscow: Editorial URSS, 2011. 208 p.
17. Suspitsyn S.A. (Ed.). *Proekt SIRENA: metody izmereniya i otsenki regional'noi asimmetrii* [SIRENA Project: Methods for Measurement and Evaluation of Regional Asymmetries]. Novosibirsk: IEiOPP SO RAN, 2002. 248 p.
18. Chepik A.E. *Statisticheskoe issledovanie neravnomernosti sotsial'no-ekonomicheskogo razvitiya munitsipal'nykh obrazovaniy regiona : avtoref. dis. na soisk. uch. st. kand. ekon. nauk: 08.00.12* [Statistical research into uneven socio-economic development of region's municipal units: Candidate of Sciences (Economics) dissertation abstract: 08.00.12]. Moscow, 2015. 23 p.
19. Voroshilov N.V., Gubanova E.S. Assessment of the level of socio-economic development in municipal formations of the Vologda Oblast. *Ekonomicheskie i sotsial'nye peremeny: fakty, tendentsii, prognoz=Economic and Social Changes: Facts, Trends, Forecast*, 2014, no. 6 (36), pp. 54-69. DOI: 10.15838/esc/2014.6.36.5. (In Russian).
20. Uskova T.V., Voroshilov N.V., Gutnikova E.A., Kozhevnikov S.A. *Sotsial'no-ekonomicheskie problemy lokal'nykh territorii: monografiya* [Socio-Economic Issues of Local Territories: Monograph]. Vologda: ISERT RAN, 2013. 196 p.
21. Bukhval'd E.M., Voroshilov N.V. Current issues in the development of municipal entities and in reforming the institution of local self-government. *Ekonomicheskie i sotsial'nye peremeny: fakty, tendentsii, prognoz=Economic and Social Changes: Facts, Trends, Forecast*, 2018, vol. 11, no. 1, pp. 132-147. DOI: 10.15838/esc.2018.1.55.9. (In Russian).
22. Voroshilov N.V. Assessing the efficiency of regional policy for development of municipal entities. *Vestnik Cherepovetskogo gosudarstvennogo universiteta=Cherepovets State University Bulletin*, 2014, no. 7 (60), pp. 54-59. (In Russian).

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