

# Methods to Evaluate Public Administration Efficiency: The Case of The Volga Region

Dmitry Rodnyansky, Ruslan Abramov, Gulnara Valeeva, Ivan Makarov, Oleg Levchegov

**Abstract:** *The article considers the efficiency of state administration in the regions of the Volga Federal District (VFD): the estimation has been made on the basis of two methods that systematically evaluate the efficiency of state government bodies. The quantitative methodology that includes management financing indicators and management and management performance indicators focuses on the indicators of the population's life quality in the region: it is the life quality that is the key factor characterizing the efficiency of regional authorities. The second methodology estimates the internal environment of the activity performed by regional authorities based on the following indicators: their number, training, wages, publicity, budget expenditures for national issues, the number of multifunctional centers (MFC), socially oriented nonprofit organizations (NPO), the impact rating of subjects' heads, and the number of corruption crimes. Based on comparing the results of quantitative and qualitative estimations, four mechanisms have been offered to improve the efficiency of the activities performed by regional authorities: stimulating, anti-crisis, activating, and supporting.*

**Keywords:** *state administration, efficiency of state administration, region, regional authorities, life quality.*

## I. INTRODUCTION

The desire to improve the efficiency of state government bodies in the modern society is one of the priority areas in managing the socio-economic development of territories. The efficiency of the activity performed by state government bodies is closely related to state reforms that are being implemented in various countries. The administrative reform that started in Russia at the beginning of the 21<sup>st</sup> century aimed at changing state administration, including improving the performance and efficiency of state government bodies. This reform actualizes the need in an adequate system of state administration, defining parameters that would contribute to improving the efficiency of the activity performed by state government bodies. When monitoring the reform, today it is possible to state that the activities of state government bodies are very slowly getting new qualities that meet modern tasks and requirements. In addition, it also has negative tendencies that reduce the efficiency of the activities and authority of the

government. Most transformations are superficial in nature, inexecutable in practice, and come down to unreasonably frequent reorganizations of state government bodies. Today, it is possible to say with certainty that it is necessary to reconsider the system of state administration. In particular, first of all, it is necessary to introduce structured mechanisms for estimating the efficiency of the activity performed by state government bodies. Therefore, this study is relevant because it is necessary to make a scientific analysis of the formation and development of the state administration system in the modern Russia. It must result in scientifically based, applied recommendations on improving the activities of state government bodies in order to improve their efficiency. The purpose of this study is to estimate the efficiency of the activities performed by the state government bodies in the regions of the VFD based on the authors' system methodology.

## II. LITERATURE REVIEW

Foreign theorists started studying the problems related to the efficiency of state government bodies in the late 18<sup>th</sup> and early 19<sup>th</sup> centuries, when it was necessary to reform the public sector. Today, these problems, in particular the issues related to the efficiency of state government bodies are the object of the studies carried out by many foreign and Russian researchers. The improvement of the activity performed by state government bodies is an object of the scientific studies carried out at the Russian Academy of Public Administration. E. Dobrolyubova and V. Yuzhakov consider the efficiency of state administration through the implementation of the *result-based management* concept. To their mind, at the present stage *result-based management* is a set of management principles based on the interrelation of goals, resources and results at all stages of the managerial influence. It can be realized as a new model of government that synthesizes all advantages of the existing models. This principle is a key requirement for an adequate quality of state administration [1], [2], [3]. In the article *Evaluation of the Efficiency of Government Programs of Socioeconomic Development of Russia*, V.N. Leksin and B.N. Porfiriev showed the importance to estimate the efficiency of state programs as an instrument for estimating the efficiency of state administration, in general. This approach is explained by wider use of the program approach in the system of state administration, strategic planning and budgeting at all levels [4]. In their study *The Quality of Government* published in the *Journal of Law, Economics, and Organization*, R. La Porta, F. Lopez-de-Silanes, A. Shleifer, and R. Vishny empirically studied the determinants of management quality in many countries.

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When estimating government activities, they used government intervention, public sector efficiency, provision of public goods, size of government, and political freedom. They proved that poor countries had low efficiency of state administration; on the contrary, as a rule, the largest governments were more efficient [5]. A. Rodriguez-Pose M.di Cataldo analyzed the impact of the quality of regional government on innovation indicators in the regions of Europe. They studied the quality of state administration by estimating the corruption control, the rule of law, state administration efficiency, and government answerability. As a result, they revealed a relation between the management quality and the ability of regions to innovate. All this is stated in the article Quality of Government and Innovative Performance in the Regions of Europe [6]. The estimation of the efficiency in the sector of public services is an important part of improving the confidence that in its turn is an essential factor when meeting needs of the population. Lacko R. Hurný and F. Rozkošová offer to use the two-stage DEA approach as a conceptual basis for estimating the efficiency of state administration: firstly, to calculate individual efficiency, and secondly, to determine the impact of independent variables by using the trimmed regression model [7]. In their studies, based on modern economic and mathematical instruments, A. Kalinina, E. Petrova, and M. Buyanova calculated the correlations between indicators of the efficiency of the regional management system and key indicators of the socio-economic development of territories. The study resulted in revealing a weak correlation between the subject-object variables of the meso-level economic systems. A visible correlation was revealed between the development of the economic territory and the average monthly salary of the state government bodies in Russian regions, their number, as well as the proportion of budget revenues of municipalities

in the total revenues. The authors concluded that the lack of correlation between such indicators as socio-economic development of territories and the efficiency of regional management systems demanded to re-consider the existing formal approach to this estimation [8].

### III. METHODS

#### A. Block Diagram

The authors have developed two methodologies that estimate the efficiency of state administration in the VFD regions in a consistent manner. The quantitative methodology, which includes management financing indicators, management and management performance indicators, is focused on the indicators of the population’s life quality in the relevant region: according to the authors, the life quality is a key factor that objectively shows the efficiency of regional authorities [9]. The second methodology – qualitative – estimates the internal environment of the activities performed by government bodies. Only by comparing the calculations made by using these methodologies, it is possible to speak about objective estimation of the efficiency of the activities performed by government bodies. The quantitative methodology developed by the authors is based on the approach of the researchers from the Center for Economic Security – V.P. Chichkanov, Doctor of Economic Sciences, a Corresponding Member of the Russian Academy of Sciences and E.V. Vasilyeva, Candidate of Economic Sciences. They focus on result-based management [10]. There are three components in management: management subject, management impact, and object of management. Figure 1 shows their interrelation.

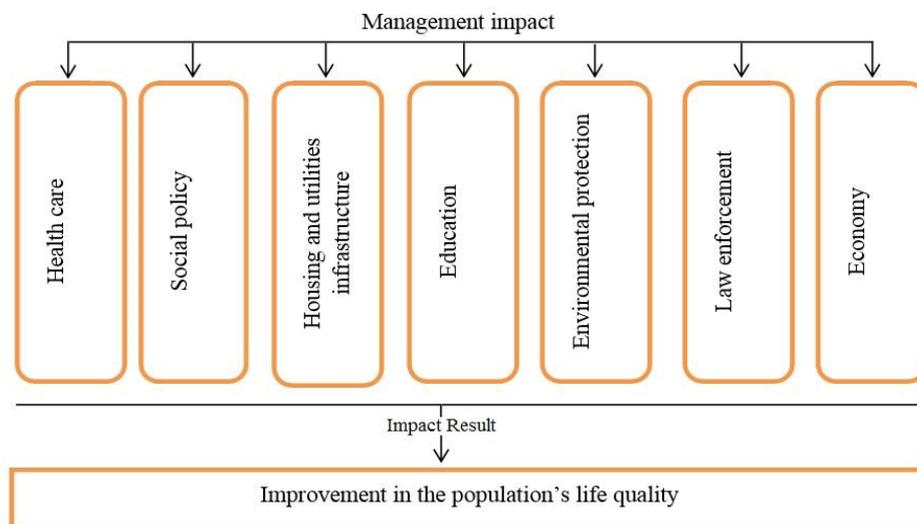


Fig. 1. Management Impact Model

In order to determine the management and management efficiency parameters, it is necessary to formulate the results regional authorities want to achieve through the management impact for improving the life quality. To do this, it is necessary to structure the object of the management impact in such a way that it is transformed into the relevant target results of the activity of a certain government body (its structural subdivisions).

In this methodology the life quality will be reflected in nine elements: economic well-being, population reproduction,

social security, health status, education, living conditions, environment, employment, and crime rate. Based on the above components of the life quality concept, indicators were selected to calculate the estimations of the activities performed by regional authorities.

B. Algorithm

Thus, the methodology includes three successive stages of calculation.

Stage 1 aims at collecting and processing the selected indicators. The indicators used by the authors are classified into three groups:

- Management financing indicators,
- Management indicators, and
- Management performance indicators.

Table 1 shows all of them:

**Table 1: Indicators of Estimating the Efficiency of Public Authorities**

Indicators of management financing	Indicators of management process	Indicators of management efficiency
Ratio of expenses of the consolidated budget and the territorial state extra-budgetary fund for health care as to the gross regional product (GRP), %	Capacity of the outpatient polyclinics, the number of visits per shift/10,000 persons	1. Morbidity of the population, persons/1,000 persons 2. Ratio of the birth and death rates
Ratio of the expenses of the consolidated budget and the territorial state extra-budgetary fund for social policy as to GRP, %	1. The average duration of job search by unemployed people, months 2. Share of social payments in cash income of the population, %	1. Ratio of the average per capita income as to the subsistence rate, units 2. Commissioning of residential buildings, per 1,000 persons, m <sup>2</sup> of the total area 3. General unemployment, %.
Ratio of the expenses of the consolidated budget and the territorial state extra-budgetary fund for housing and communal services as to GRP, %	Ratio of the households' expenses for paying for housing and communal services (% of the total consumer expenses)	Ratio of the wrecked and failing housing stock in the total area of the entire housing stock
Ratio of the expenses of the consolidated budget and the territorial state extra-budgetary fund for education as to GRP, %	Number of the students studying according to vocational education programs in state and municipal educational institutions, persons/10,000 persons	1. Employment rate of the graduates of higher educational institutions from the total number of graduates 2. Provision of pre-school children with seats in organizations carrying out educational activities according to pre-school educational programs, child care, seats per 1,000 children
Ratio of the expenses of the consolidated budget and the territorial state extra-budgetary fund for environmental protection as to GRP, %	Air polluting substances from stationary sources are captured and neutralized, as a percentage of the total volume of waste pollutants, %	Specific emissions of harmful substances into the atmosphere, wastes from stationary sources of pollution in the territory, 1,000 t/km <sup>2</sup>
Ratio of the expenses of the consolidated budget and the territorial state extra-budgetary fund for public order as to GRP, %	Number of the unsolved crimes as to the total, %	The overall crime rate, cases/100,000 persons
Ratio of the expenses of the consolidated budget and the territorial state extra-budgetary fund for the national economy as to GRP, %	Retail turnover per capita	1. Investments per capita 2. Corporate profit tax paid to the budgets of the Russian subjects

The management performance indicator is a generalizing indicator of both financing and management. However, it is necessary to note that, in particular cases, the distinction between management and management performance indicators is conditional because in practice they are interdependent and interrelated when implementing the main management mission – the creation of terms and conditions for improving the population’s life quality. The sources of statistical data include *Regions of Russia*, the collection of the Federal State Statistics Service, and the *Report of Consolidated Budgets of Russian Subjects and Budgets of*

*Territorial State Extra-Budgetary Funds* published on the official website of the Treasury of Russia. At stage 2, the indicators are standardized. In order to compare indicators, it is necessary to standardize their values. It is obligatory to determine their “positivity” or “negativity” – the higher value of the positive indicator is, the higher its standardized value must be, and vice versa.



1. If the indicator is “positive”, its standardized value will be calculated by using the following formula:

$$P_{ij} = \frac{a_{ij}^P - a_{i\_VFD}^{min}}{a_{i\_VFD}^{max} - a_{i\_VFD}^{min}}, \text{ where}$$

$P_{ij}$  is the standardized value of the  $i$  indicator of the management of the  $j$  subject of the VFD, actual value,

$a_{ij}^P$  is the value of the  $i$  “positive” indicator of the  $j$  subject of the VFD, actual value, and

$a_{i\_VFD}^{max}, a_{i\_VFD}^{min}$  are the maximum and minimum values of the  $i$  indicator among all VFD subjects, actual value.

2. In case the indicator is “negative”, its standardized value will be

$$P_{ij} = 1 - \frac{a_{ij}^N - a_{i\_RF}^{min}}{a_{i\_RF}^{max} - a_{i\_RF}^{min}}, \text{ where}$$

$P_{ij}$  is the value of the  $i$  “negative” indicator of the  $j$  subject of the VFD, actual value.

The standardized values of the management financing indicators ( $F_{iy}$ ) and the management performance ( $E_R$ ) are calculated similarly to the standardized value of the management indicators.

At stage 3, the efficiency estimate is calculated.

The integral estimate of the efficiency of state government bodies consists of an estimate of the management ( $E_P^t$ ) and performance ( $E_R^t$ ) efficiency calculated by comparing changes in indicators:

$$E_P^t = \sum \frac{P_{ij}^t / P_{ij}^{t-1}}{F_{ij}^t / F_{ij}^{t-1}} / m, \text{ where}$$

$E_P^t$  is the estimate of the management efficiency for the analyzed period, actual value, and

$m$  is the number of management indicators.

Further, in order to systematically estimate the efficiency of regional authorities, a qualitative estimation methodology is developed. The methodology includes ten criteria. According to the authors, they display the efficiency of the activities performed by state government bodies best of all. The list of criteria is not exhaustive, but is limited by the lack of statistical information.

1. The number of executive authorities in the region in relation to 1,000 persons.

2. The ratio of the average monthly wage of the executive authorities in Russian subjects as to the average monthly nominal wages accrued for employees of organizations.

3. The ratio of expenses of the consolidated budget and the territorial state extrabudgetary fund for national issues as to GRP, %.

4. Training of state civil service HR in Russian subjects.

5. The number of socially focused nonprofit organizations.

6. The number of MFC.

7. The number of registered crimes under Art. 285 of the Criminal Code – abuse of power.

8. The number of corruption crimes detected per 1,000 people.

9. The total number of the published datasets.

10. The impact rating of heads of Russian subjects [11].

The efficiency of state government bodies will be calculated by rating each region according to ten indicators mentioned above:

1) the higher the indicator is, the higher the score assigned to the region according to the following indicators is: the rating of the region head, the number of socially-oriented nonprofit organizations, MFC, the published Datasets, and training of state civil service HR,

2) on the contrary, the higher the indicator is, the lower the score assigned to the region according to the following indicators is: the number of registered crimes under Art. 285, corruption crimes, the number of executive authorities per 1,000 persons, and the ratio of the budget expenses on the national needs as to the GRP.

Further, the average value is calculated for each region by adding all rating values and dividing by the total number of indicators (by ten).

Ultimately, the lower the final value of the region is, the more efficient regional authorities are.

#### IV. RESULTS

The methodology has been tested in 14 regions of the VFD.

The data of the financial block are standardized according to the above formulas. Table 2 shows the results (the table is based on the calculations made according to the methodology presented in the work).

Table 2: Standardized Values of the Financial Block

	Tatarstan	Kirov Region	Saratov Region	Ulyanovsk Region	Udmurt Republic	Chuvash Republic	Bashkortostan	Mari El	Mordovia	Nizhny Novgorod Region	Samara Region	Orenburg Region	Penza Region	Perm Region
Health care	1.43	1.05	0.84	1	0.77	1.11	0.96	0.86	0.96	0.58	0	0.63	0.72	0.48
Social policy	0.87	1	0.99	1.06	0.73	1.09	0	0.93	0.77	0.86	0.98	0.96	0.9	0.58
Education	0.27	1	0.74	0.85	0.93	0.98	0.59	0.76	0.9	0.56	0.7	0	0.53	0.49

Housing and utilities infrastructure	1.66	0.82	0	2.09	0.17	0.58	0.65	0.88	1.1	0.36	0.48	0.72	0.39	0.14
Environmental protection	4.53	4.67	6.69	0	3.78	5.64	12.5	3.67	8.96	0.99	3.12	6.84	0	4.16
National security, law enforcement	1.27	1.27	1.92	1.2	1.03	1.04	0.85	1	1.1	0.95	0.67	0	1.52	0.47
General state needs	0.64	1.08	1.17	1.23	0.69	1.35	0.59	1.31	1	1.27	0.89	0	1.08	1.01
National economy	1.58	1.03	1.29	2.43	0.42	1.3	1.6	0.86	1	1.03	0.45	0	0.81	0

The management and management performance efficiency were calculated by standardizing the values of management and management performance indicators.

Table 3 shows the final data on calculating the management efficiency (the table is based on the calculations made according to the methodology presented in the work).

**Table 3: Final Data on Calculating the Management Efficiency**

	Capacity of outpatient polyclinics, the number of visits per shift/10,000 persons	Share of social payments in cash income of the population, %	The average duration of a job search by unemployed people, months	Ratio of households' expenses for paying for housing and communal services	Number of students who study, 10,000 persons	Air polluting substances from stationary sources captured and neutralized, % of the total volume of waste pollutants	Number of unsolved crimes as to the total, %	Retail turnover per capita	Average final value
Republic of Bashkortostan	0.92	0	0	1.24	1.57	0.15	0	0.59	0.56
Mari El Republic	1.07	1.05	1.79	0.92	0	0	1.39	0	0.78
Republic of Mordovia	0.87	1.36	0.07	0.75	1.05	0.11	1.041	1.01	0.78
Republic of Tatarstan	0.26	1.53	0.64	1.04	3.7	0.38	0	0.63	1.12
Udmurt Republic	1.12	0.85	1.47	2.71	1.1	0.2	0.556	2.21	1.28
Chuvash Republic	0.9	0.9	0.73	2.34	0.89	0	0.784	0.72	0.91
Perm Region	0	0	0.75	0	1.9	0.24	3.108	0	0.75
Kirov Region	0.86	1.05	1.38	2.16	0.96	0.35	0.651	0.91	1.04
Nizhny Novgorod Region	1.87	1.14	1.43	4.42	1.61	3.82	0.992	0.91	2.02
Orenburg Region	1.35	0.91	0.22	1.26	0	0.23	0	0	0.5
Penza Region	0.88	1.08	1.74	4.37	1.81	0.34	0.789	1.23	1.53
Samara Region	0	1.4	0.83	1.43	1.37	0.41	2.572	2.11	1.27
Saratov Region	1.16	0.95	0	0	1.3	0.15	0.545	0.75	0.61
Ulyanovsk Region	0.9	1.07	0.36	0.65	1.09	0	0.686	0.41	0.65

For clarity, the data obtained are presented in the following histogram (Figure 2):



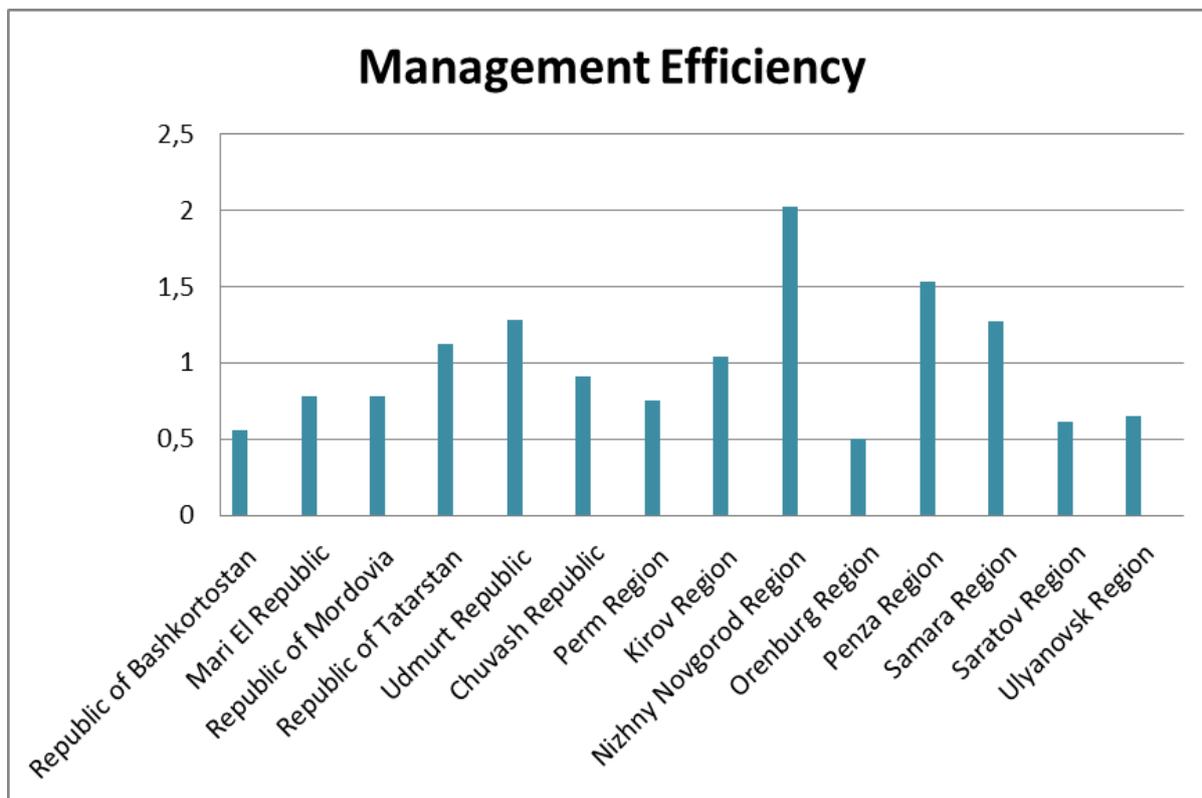


Fig. 2. Management Efficiency of Regions in the VFD

The results of the calculation show that the Nizhny Novgorod Region, the Penza Region, the Udmurt Republic, and the Republic of Tatarstan are leading in terms of the management efficiency among the VFD regions – their total indicator is more than one, which points at the positive estimate of the executive authorities of the region.

The management performance efficiency is calculated in a similar way ( $E_R^t$ ). Table 4 shows the results (the table is based on the calculations made according to the methodology presented in the work).

Table 4: Estimating the Management Efficiency

	Morbidity of the population, persons/1,000 persons	Ratio of birth and death rates	Ratio of average per capita income as to the subsistence rate, units	General unemployment, %.	Commissioning of residential buildings, per 1,000 persons, m <sup>2</sup>	Ratio of wrecked and failing housing stock in the total area of the entire housing stock	stationary sources of pollution in the territory, 1,000 t/km <sup>2</sup>	The overall crime rate, cases/100,000 persons	Investments per capita	Corporate profit tax paid to the budgets of the Russian subjects	Provision of children with seats in kindergartens, seats per 1,000 children	Proportion of graduates employed of the total number of graduates	Average final value
Republic of Bashkortostan	0.92	0.91	0	0	0	1.52	0.09	0.68	0.68	0.57	0	1.21	0.55
Mari El Republic	1.29	1.04	0	1.04	1.11	1.09	0.28	0.92	0.51	0	1.2	0.67	0.76
Republic of Mordovia	0	0	2.3	1.65	0	0.88	0.12	0.93	1.17	0	1.5	0.85	0.78
Republic of Tatarstan	0.48	0.7	1.01	1.34	1	0.6	0.27	0.69	0.63	0.63	1.73	4.27	1.11
Udmurt Republic	1.35	1.25	1.79	2.45	2.25	5.64	0.47	1.06	1.13	2.09	0.94	1.07	1.79
Chuvash Republic	0.77	0.9	1.55	1.44	0.74	1.69	0.21	0.88	0	0.84	1.02	0	0.84
Perm Region	1.97	1.93	2.04	0	2.92	6.97	0.25	0	0	0	2.15	1.71	1.66
Kirov Region	0.94	0.89	0.97	1.38	1.15	0	0.22	0.52	0	1.68	1.01	0.92	0.81



Nizhny Novgorod Region	1.59	3.47	1.12	1.4	0	2.81	0.98	1.04	0.53	0.97	1.77	3.01	1.56
Orenburg Region	1.38	1.48	1.04	1.07	1.03	1.32	0.08	0	0	0	0	0	0.62
Penza Region	2.55	1.5	0.97	1.44	1.06	2.44	0	0.66	1.34	0.65	0.4	0	1.08
Samara Region	0	0	1.02	1.02	1.36	2.32	0	2.13	1.64	1.79	1	1.21	1.12
Saratov Region	1.48	1.11	1.24	1.3	0.29	0	0.15	0.5	0.68	0.65	1.35	0.41	0.76
Ulyanovsk Region	1.18	0.9	0.74	1.27	1.64	0.46	0	0.83	0.55	0.46	0	0.96	0.75

Figure 3 schematically shows the final data on calculating the management performance efficiency.



Fig. 3. Management Efficiency of Regions in the VFD

According to the calculation results, the Udmurt Republic, the Perm Region, the Nizhny Novgorod Region, the Samara Region, and the Republic of Tatarstan are leading in terms of the management performance efficiency among the VFD regions – their total indicator is more than one, which points at the positive estimate of the executive authorities of the region.

The integral estimate of the efficiency of state government bodies is calculated with the aid of a matrix (Table 5) by correlating the obtained calculations of the management and management performance efficiency.

Table 5: Final Matrix of Efficiency Estimation

		Estimation of management	
		Unsatisfied ( $E_p^t < 1$ )	Satisfied ( $E_p^t > 1$ )
Estimation of management	Unsatisfied ( $E_R^t < 1$ )	I. Problematic subjects: Republic of Bashkortostan, Mari El Republic, Mordovia Republic, Chuvash Republic, Orenburg Region, Saratov Region, Ulyanovsk Region	II. Stagnating subjects: Kirov Region
	Satisfied ( $E_R^t > 1$ )	III. Developing subjects: Perm Territory	IV. Prosperous subjects: Republic of Tatarstan, Udmurt Republic, Nizhny Novgorod Region, Penza Region, Samara Region.



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According to the analysis results, seven regions are classified as problem regions: the Republic of Bashkortostan, the Republic of Mari El, the Republic of Mordovia, the Chuvash Republic, the Orenburg Region, the Saratov Region, and the Ulyanovsk Region. Here the contribution of the regional authorities is insignificant and does not allow to solve the existing problems related to developing life quality. According to the calculations, the only region of the VFD — the Kirov Region — is a stagnant region. It does not have sufficient management impact to overcome the crisis phenomena in terms of the population's life quality. The Perm Region is the only developing region in the VFD. It has the potential to maintain an acceptable level of the population's life quality under the little impact of the regional authorities.

Prosperous regions of the VFD include the Republic of Tatarstan, the Udmurt Republic, the Penza Region, the Samara Region, and the Nizhny Novgorod Region. In these subjects, the impact of regional authorities is considerable and creates conditions for relatively prosperous life quality (efficient management). According to the results of the calculation made by using the second method that estimates the internal environment of government bodies, each subject of the VFD was rated according to ten indicators. Based on them, the average value was calculated, and the final indicator that showed the efficiency of performance of the regional authorities was calculated. Table 6 shows the results.

**Table 6: Estimating the Efficiency of Government Agencies**

	Number of executive bodies	Ratio of wages of executive authorities as to wages of employees of organizations	Ratio of expenses for national needs as to GRP, %	Training the state civil service HR	Number of socially-oriented non-profit organizations	Number of MF C	Number of registered crimes according to Article 285	Number of corruption crimes	Total number of Datasets	Rating of the subject head	Final rating
Republic of Bashkortostan	7	3	3	5	9	9	13	8	2	2	6.1
Mari El Republic	14	10	12	1	11	6	1	11	10	13	8.9
Republic of Mordovia	11	7	14	4	13	14	2	14	13	6	9.8
Republic of Tatarstan	10	1	2	2	2	7	14	9	13	1	6.1
Udmurt Republic	13	4	4	7	5	11	3	5	6	11	6.9
Chuvash Republic	3	6	5	9	10	13	11	13	3	7	8
Penza Region	6	2	7	13	3	1	12	10	4	8	6.6
Kirov Region	12	5	13	11	12	3	8	12	6	5	8.7
Nizhny Novgorod Region	8	12	9	3	6	10	5	1	5	3	6.2
Orenburg Region	1	14	1	10	1	5	7	2	11	12	6.4
Penza Region	4	8	10	6	4	8	6	4	12	9	7.1
Samara Region	5	13	8	8	14	2	9	6	9	14	8.8

Saratov Region	2	9	6	14	7	12	10	3	8	4	7.5
Ulyanovsk Region	9	11	11	12	8	4	4	7	1	10	7.7

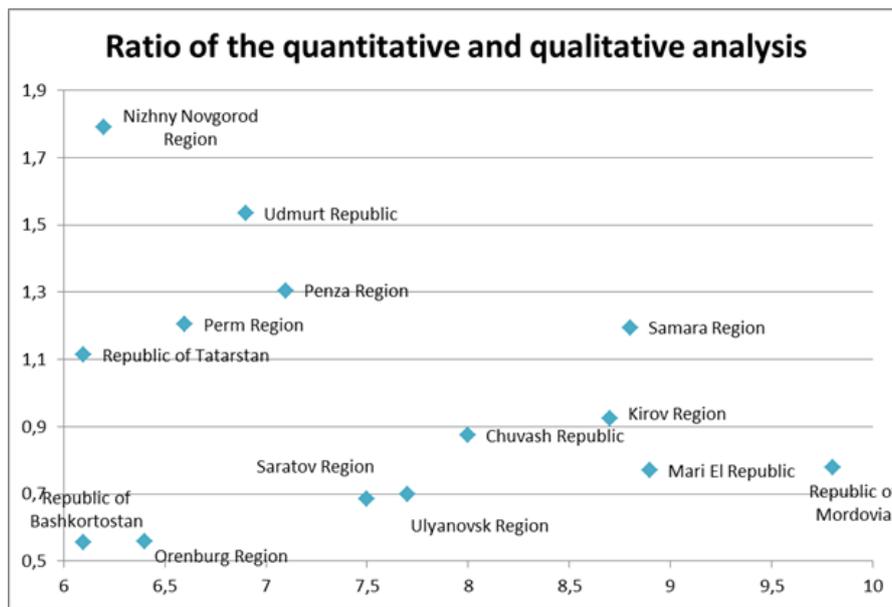
Based on the final data, Table 7 shows the rating of the regions in the VFD according to the qualitative analysis:

**Table 7: Final Rating of Quality Estimation**

Republic of Tatarstan	6.1
Republic of Bashkortostan	6.1
Nizhny Novgorod Region	6.2
Orenburg Region	6.4
Perm Region	6.6
Udmurt Republic	6.9
Penza Region	7.1
Saratov Region	7.5
Ulyanovsk Region	7.7
Chuvash Republic	8
Kirov Region	8.7
Samara Region	8.8
Mari El Republic	8.9
Republic of Mordovia	9.8

The table shows that the leaders of the rating are the Republic of Tatarstan, Bashkortostan, the Nizhny Novgorod

Region, while the outsiders are the Samara Region, the Republic of Mari El, and Mordovia.



**Fig. 4. Ratio of the Quantitative and Qualitative Analysis**

The data of quantitative and qualitative analysis are compared, and the results are analyzed. The point according to the quantitative analysis is only positive, and its maximum limit is unlimited theoretically. According to the calculations, the maximum and minimum points are 1.8 and 0.5, respectively. That is why the data on the Y axis, with the data on the quantitative analysis, will be placed in this range.

The point according to the qualitative analysis is also only positive. Its limits are theoretically in the range from one to ten. However, its values for the VFD regions are in the range from six to ten. Therefore, the X axis that characterizes the results of the qualitative analysis will be made within these boundaries. Graphically, the ratio of the quantitative and qualitative analysis is shown in Figure 4 (the X axis is the

results of the qualitative analysis, and the Y axis is the results of the quantitative analysis). The higher the rating according to the quantitative analysis is, the higher they are. The higher the rating according to the qualitative analysis is, the more leftward they are. Consequently, the regions that have high values and are located more leftward are characterized by a high efficiency of regional authorities. According to the quantitative analysis, Tatarstan, the leader by the qualitative estimate of efficiency, was also referred to the prosperous regions.



The Nizhny Novgorod Region that was ranked third in the qualitative analysis also was classified as a prosperous region. The Republic of Bashkortostan that also occupies a leading position according to the qualitative analysis is quantitatively referred to the problem regions because of low social indicators — indicators of social payments, unemployment, which when standardizing data, assign to it the indicators equal to zero. Consequently, it affects the integral value both by management and performance. The Orenburg Region that is ranked fourth in the qualitative analysis, is also classified as a problem region. It seems possible to explain this by extremely low indicators of economic development: investment per capita, trade turnover, tax on the profit of organizations, as well as lagging crime rates. The developing region – the Perm Region that is the fifth in the quality rating – is characterized by the maximum number of MFC, the approximation of the wages of the state government bodies as to the average wages in the region. However, here the number of state government bodies exceeds the average figures in the district. One of the negative points also includes a relatively large number of crimes related to abuse of authority. The Udmurt Republic and the Penza Region that are the sixth and seventh in the qualitative methodology. They comply with the requirements set to prosperous regions. The only region that does not correspond to a prosperous region according to the qualitative analysis is the Samara Region. It occupies the second last place in the qualitative analysis. This can be explained by the last position in the rating of regions heads among the VFD regions and the extremely excessive wages of the state government bodies as compared to those of employees of organizations. The Kirov Region is a stagnating region. It occupies the 11th place in the qualitative rating. Such a low position is because of too high number of state government bodies and a large share of budget expenses on general state needs. One fact may result from another: the larger the number of employees is, the more funds are needed to keep them. As for the remaining problem regions – the Republics of Mari El, Mordovia, Chuvashia, Orenburg, Saratov, and Ulyanovsk Regions, they are problematic in the quantitative analysis, and became outsiders in the qualitative analysis of the efficiency of state government bodies.

### V. DISCUSSION

Based on comparing two ratings of estimating the activities of regional authorities, mechanisms were suggested, and algorithms and parameters for improving the efficiency of regional authorities were developed. Summarizing them, it is necessary to note the following:

- 1) Problematic subjects need a stimulating mechanism. Its main idea is the creation and implementation of innovative and infrastructure-utility systems, the construction of infrastructure facilities, and the search for resources,
- 2) Stagnating subjects need an anti-crisis mechanism that focuses on the implementation of results-based management, changing priorities for spending monetary funds,
- 3) Developing regions need an activating mechanism. Their authorities should attract additional funds to activate and improve the efficiency by using the existing infrastructure, and
- 4) Prosperous regions need a supporting mechanism: these regions have the whole infrastructure and all resources. It is

necessary to continue their efficient work and maintain the dynamics of their socio-economic development.

### VI. CONCLUSION

According to the results of estimating the efficiency of the state administration in the VFD regions based on the comprehensive authors' methodology, the leading regions are the Republic of Tatarstan and the Nizhny Novgorod Region, while the outsider regions are the Republic of Mari El and Mordovia. The efficiency of government activity should be estimated systematically and, first of all, in terms of the impact on the quality of the population's life on a certain territory (after all, the state authorities do not produce any tangible items, which complicates the estimation of their activities). The activities of the state bodies will be recognized as efficient if they result in creating goods and services that meet public needs and contribute to the progressive growth of the population's life quality.

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