

Assessment of Quality Management over Public Sector: Problems, Contradictions, Development of Methodology

Kozhevina Olga V.¹, Balunova Nataliya V.¹, Yurchenko Evgeniya V.¹, Trifonov Pavel V.¹ & Guseva Anna V.¹

¹ Financial University under the Government of the Russian Federation, Moscow, Russia

Correspondence: Kozhevina Olga V., Doctor of Economics, Director of the Research and Education Center for Analysis of the Effectiveness and Performance Governance, Financial University under the Government of the Russian Federation, 125993, Moscow, Russia. E-mail: ol.kozhevina@gmail.com

Received: February 12, 2015

Accepted: March 20, 2015

Online Published: June 22, 2015

doi:10.5539/mas.v9n9p1

URL: <http://dx.doi.org/10.5539/mas.v9n9p1>

Abstract

Development of a methodology for assessing the Quality Management entities in the Public Sector is an important scientific and practical problem of Economic Research. Using the results of the assessment provided by the authors on the basis of the methodology allows for ratings of Public Sector organizations, base your decisions on the reorganization and privatization, to monitor changes in the level of Quality Management of the organization of the Public Sector. The study revealed the contradictions associated with the assessment of management quality and reasonable conditions for effective design of Public Sector organizations, a mechanism with an integrated evaluation system of economic, budgetary, social and public information and innovation criteria. The main conclusion of the article is that the evaluation of the Quality Management of the organization of the Public Sector should be based not only on the performance achieved in the dynamics used in the analysis of the effectiveness of management, but also take into account the reference levels for the values of these indicators. Comparison of indicators would assess not only the degree of achievement of objectives and results, but also the extent to which the chosen development strategy from the perspective of their quality control.

Keywords: public sector, quality management, effectiveness of management, monitoring, quality of management characteristics

1. Introduction

The Public Sector of economy is the material basis that helps the government to meet economic, industrial, political and social targets. In most countries the public sector of the economy addresses issues of restoring to health and supporting industries that provide the most common conditions for production and commercial operations and scientific and technical development: power industry, communications, fundamental researches and developments, military, aerospace and nuclear industries. The Public Sector can be divided into the following segments: government-owned unitary enterprises; federal budget-supported enterprises; enterprises established in form of joint stock companies, limited liability companies and their subsidiaries that usually operate as natural monopolies or strategic enterprises and have charter capital where the government owns the whole charter capital of such entities or a majority interest therein; budgetary establishments.

The above segmentation is based on using the classification criterion «legal form». Using the classification criterion «type of business activity», we can divide the public sector of the economy into other segments such as: 1) strategic enterprises and companies; 2) natural monopolies whose members belong to the public sector of the economy; 3) budget-funded establishments.

2. Methods

Solving scientific issues raised in this study is based on the use of system analysis methodology for allowed us to study various approaches to assessing the Quality Management in the state and municipal organizations.

When constructing a model assessing the quality control were used economic and mathematical methods and models, including methods of expert assessments, hierarchy analysis, correlation, factor analysis and others.

3. Results

The study suggested author's interpretation of the concept of «Quality Management», «efficiency management»,

«quality of state (municipal) administration», the Quality Management system of state organization», «evaluation of the quality control» in relation to the organization of the Public Sector.

The place quality control Public Sector organizations in the «quality of governance - the effectiveness of the enterprise».

Generated model of integral evaluation of the Quality Management of Public Sector organizations, including the financial and economic, social, innovation, information and institutional quality indicators management. The set of indicators of Quality Management of public sector organizations justified the results of the survey of experts.

4. Discussion

There is no common opinion about management quality assessment for Public Sector establishments. Quality Management means a level of development of the entity's human potential and satisfaction of needs of society, economic partners and interested parties with the help of the total array of management characteristics: functions, methods and technologies of decision making and conflict management.

Basic components of management quality are the following: 1) needs that form targets and requirements, i.e. criteria of effectiveness of quality management impact; 2) meeting needs and interests of parties involved in the management process; 3) a complex of characteristics (features, qualities) of management required to meet needs of all participants of the management process and stakeholders.

In our opinion, evaluation of management quality is a process of analysis and synthesis aimed at determination of the level of achievement by an entity of its functional (innovative, market, financial, social) targets, satisfaction of needs of interested parties (owners, employees, shareholders, society, contractors), competitive ability and capability of further development of human potential.

Since components of high quality management can be differentiated, parameters of evaluation thereof also will be different: a) quality of management work (evaluation parameter is administrative resource); b) quality of personnel (parameter is professional skills); c) quality of resources (parameter is entity's capabilities); d) quality of management processes (parameter is interim and final operational results: responsiveness, good timing, fulfillment of obligations, existence of claims and complaints, motivation, budgeting, document workflow, formalization); e) quality of management system (parameter is intermediary and final functional results: production, marketing, finances, human resources).

The theory of management provides controversial definitions of efficiency and effectiveness of management. Therefore, in this article management effectiveness shall mean a level of achievement by the production and commercial system of final results through securing conformity of interim and final targets of the management system and optimizing resources (both internal and external sources of development). In turn, management efficiency shall mean a level of management effectiveness compared to costs of implementation of management functions and achievement of goals of the managed entity.

One can identify five main conditions of effective management.

1. The social and economic system achieved final results and the system's common goal and mission are completed (the level of completion of the strategic goal is evaluated)
2. Final targets of production and management elements of the system are achieved
3. Final results are comparable to the needs, as well as to qualitative and quantitative costs of achieving the goals
4. Potential future need is determined as the basis for setting new goal(s) of operation and consistent development of the entity; the level of possible expansion of production, scaling and growth is determined.
5. Final targets of all types of functional management are achieved, i.e. correspondence of the vision, functional results and goals is secured.

Only effective management can be efficient. Thus, effective and efficient management is of high quality. Quality Management is a result of the management system quality.

5. Description of the Subject Area

Efficiency of the Public Sector in developed countries results from well designed management system which is based on informational monitoring of use of state-owned property at the macro and meso levels with due account of industry-specific factors.

The public sector includes over 65 thousand various entities (see Table 1).

In the current situation one governmental agency is required to manage several hundreds or even thousands of entities and this fact has negative impact on efficiency of management in general. An adequate solution would be decrease of the number of entities under the governmental agency’s jurisdiction. This process can be observed currently in the Russian Federation. For example, the total number of entities and establishments organized by governmental authorities decreased by 4417 (see Table 1), i.e. by 6.4%, during the period from January 1, 2012 to October 1, 2013. The most significant changes have been observed for government-owned unitary enterprises. For example, during the same period their number decreased by 1303 which amounts to 22.4%.

Not only excessive amount of managed entities is a negative factor in the process of management of government-owned enterprises, but also the current laws impede general coordination carried out by governmental bodies.

Table 1. Change of the number of entities organized by governmental authorities (Note 1)

Time period	Total		Government-owned unitary enterprises (including federal budget-supported enterprises)		Government-owned establishments		Business entities whose majority interest (over 50% of shares) are owned by			
	number	% compared to 2012	number	% compared to 2012	number	% compared to 2012	the government		business entities of the public sector	
							number	% compared to 2012	number	% compared to 2012
As of 01.01.2012	69689	100	5805	100	57839	100	3733	100	2312	100
As of 01.01.2013	67003	96,1	4891	84,2	56247	97,2	3501	93,8	2364	1,02
As of 01.10.2013	65272	93,6	4502	77,6	55244	95,5	3195	85,6	2331	1,01

A governmental body’s powers to control an entity under its jurisdiction are set forth in the Federal Law № 161-FZ of November 14, 2002 «On government-owned and municipal enterprises» and aimed at determination of business purposes and permission of certain transactions with property on the case by case basis. Results are controlled on the basis of submitted manager’s report, accounting statements and other related documents.

Economic effect of operation of government-owned unitary enterprises for the last five years positive in respect of the general structure of funds transferred to the state budget of the Russian Federation (see Figure 1).

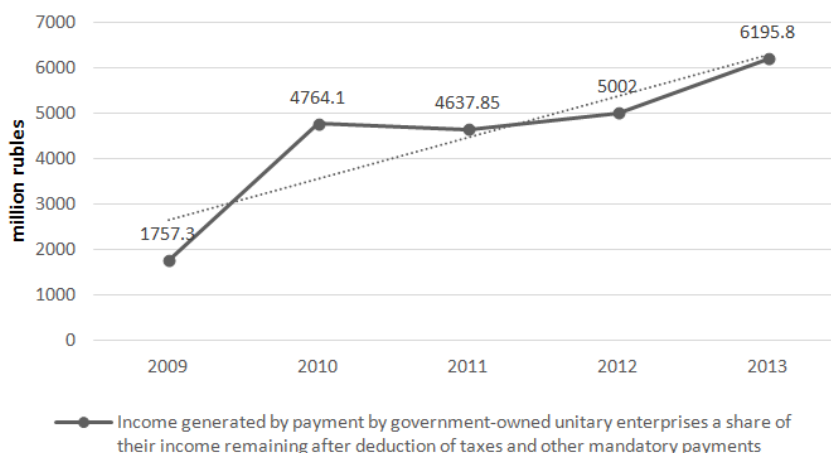


Figure 1. Change of income generated by payment by government-owned unitary enterprises a share of their income remaining after deduction of taxes and other mandatory payments, million rubles (Note 2)

In 2011 average amount of transferred funds was 0.8 million rubles, in 2012 it was 1.02 million rubles, however the number of government-owned unitary enterprises decreased for the same period by 914 entities (15.8%). Income growth rate cannot be described as stable. For example, in 2010 income generated by government-owned unitary enterprises' operations increased in 2.7 times compared to 2009, while in 2011 it decreased by 2.65%; in 2012 and 2013 growth rate was 7.85% and 23.8% respectively. During the period from 2009 to 2012 the share of income generated by government-owned unitary enterprises in the general structure of income generated by management of property owned by the Russian government tended to decrease to 2.2%, and in 2013 this indicator increased up to 4.02% (see Figure 2).

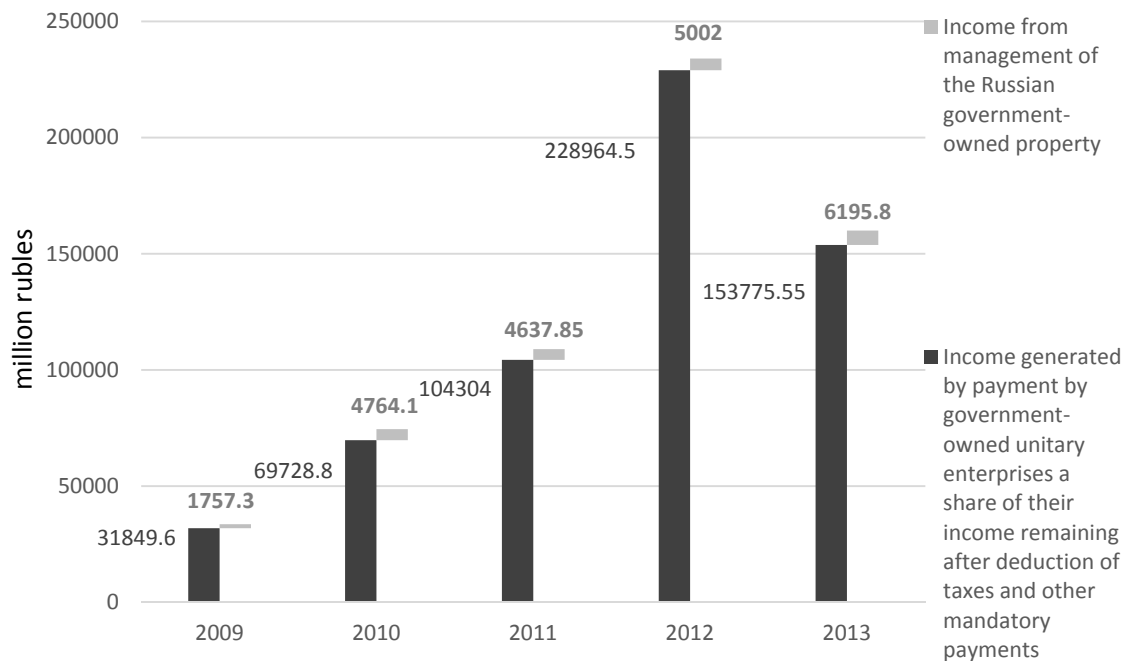


Figure 2. Change of the share of income from government-owned unitary enterprises in the total income from management of the Russian government-owned property, million rubles (Note 3)

During the reviewed period this indicator reached the maximum in 2010 when it amounted to 6.8%, and we can conclude that it is the lowest source of revenues.

Considering the main features of management of government-owned unitary enterprises we can certify that they are primarily relating to «self-removal» of the governmental authority from the management process through assigning a third party manager and due to malfunction of feedback between the managing and the managed body.

The feature of researching Quality Management of Public Sector organizations is a special status of the owner, i.e. governmental and local authorities. They are a supersystem relative to public sector organizations and have to pursue interests of society rather than of any individual person and therefore they must set such milestones for Public Sector organizations and provide them with such opportunities that would secure achieving of public goals. For this purpose governmental and local authorities provide Public Sector organizations with a structural and functional framework [Kozhevina, Sirotenko, 2014] implying completion of the goals. This means that quality of the management system used for Public Sector enterprises is determined by its owners (see Figure 3). Therefore, it should be noted that quality of state and municipal administration influences on Quality Management of Public Sector organizations.

It follows from the above that Quality Management of a public sector organization is a derivative of quality of state (municipal) administration and management system of the public sector organization and determines efficiency of management and efficiency of the public sector organization's operations. In our opinion, quality of state (municipal) administration is the aggregate of characteristics of state administration reflecting the level of satisfaction of society's needs, provided that property is used efficiently. The purpose of public property operations has dual nature and shows itself at the macro and micro levels.

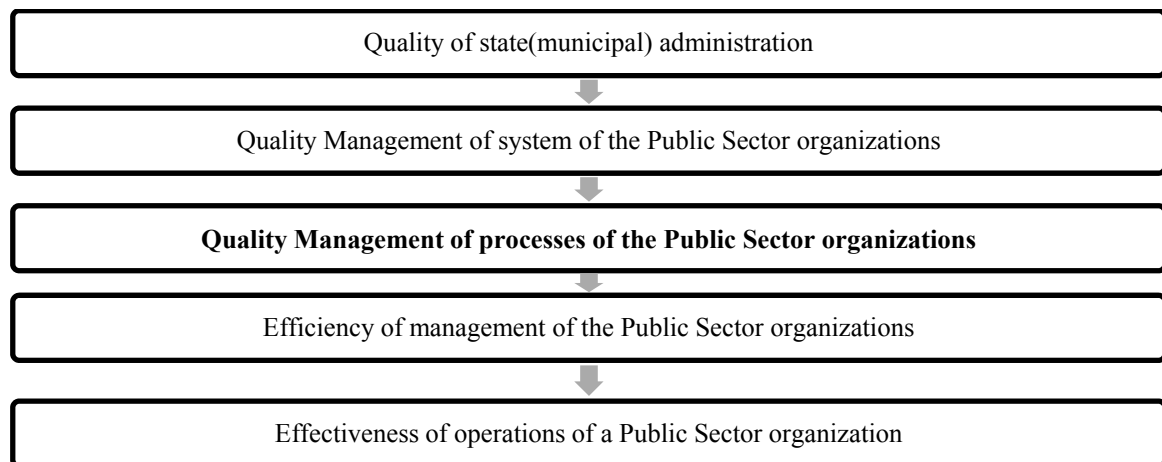


Figure 3. Interrelation between management quality and quality of state (municipal) administration and efficiency of operations of a Public Sector organization

At the macro level it means carrying out state constitutional functions and meeting vital needs of society through maximizing efficiency of national economy rather than securing profitability of a single economic entity. At the micro level it means maximizing commercial efficiency of operation of government-owned property: government-owned, municipal and federal budget-supported enterprises. The following data serve as commercial efficiency indicators: earnings, net profit, production cost, amount of work and materials per unit of production, turnover of funds, profitability, liquidity, etc.

Evaluation of state (municipal) administration is based on studying social and economic parameters. Social parameters represent how well authorities work to meet needs of the nation and economic parameters represent savings and benefits resulting from optimization and improvement of governmental authorities' work [Nagimova, 2009].

Comparative analysis of conditions determining quality of work in the public sector allows us to identify a number of conflicts (see Table 2).

Table 2. Conflicts relating to management quality evaluation

Conditions facilitating improvement of quality of management processes	Conditions hindering achievement of high quality of management processes
Entity produces a product/service as a relatively independent business entity	Entity is bound by obligations/limitations (government contract, tender, etc.)
Product/service is simple	Product/service is complex or new
Independent business	Joint venture (cooperation, integration, alliance, clustering, association)
Product is produces independently from other products	Products are interdependent within the fabrication cycle
Known cause and effect relationship	Unknown cause and effect relationship, decisions are made in the conditions of «uncertainty»
Quality can be measured with indicators	Quality cannot be measured with indicators
Stable environment	Dynamic environment

High quality of state (municipal) administration results in high quality of management system of Public Sector organizations. Quality of a Public Sector organization's management system is an integral characteristic and a value representing the level of orderliness of structural and functional organization of the management system and assessed interval results (efficiency) of management.

High quality state (municipal) administration facilitates accumulation of competences required to design public sector organizations in an optimal way. The most general conditions for design of public sector organizations that

determine management system structure of these organizations are the following: social goal which determines functions of a public sector organization, territorial specifics of social processes establishing and long-established structure of social production.

One of the most important attributes of a high quality management system is its ability of self-regulation, i.e. the system must be built in a way to be capable to automatically detect emerging deviations from government assignments, cost sheets or plans of development and work out actions to eliminate the detected deviations.

Managers of public sector organizations enjoy high level of independence in managing their organizations, and no real evaluation of their performance, i.e. quality of their management, is done. Quality of management activity is a level of its conformity with generally accepted requirements or standards.

Differences between approached to Quality Management evaluation for a public sector organization will be based on differences between procedures of evaluation. This means that evaluation of management quality of a Public Sector organization must be based not only on indicators achieved over time (as it is done in analysis of management efficiency) but also take into account benchmark levels and values of these indicators. Such comparison will show both reached results and the level of conformity of the development strategy that was selected by or set for the Public Sector organization, i.e. Quality Management.

Herein, mechanism of management quality evaluation for Public Sector organizations shall mean the aggregate of task-oriented and interrelated actions and results thereof that make it possible to compare actual Quality Management with its desired level.

Matters of the nature and contents of management mechanisms are reviewed in many publications [1, 3, 4, 5]. Elements of Quality Management evaluation mechanism for an organization established by governmental or local authorities are shown in Figure 4.

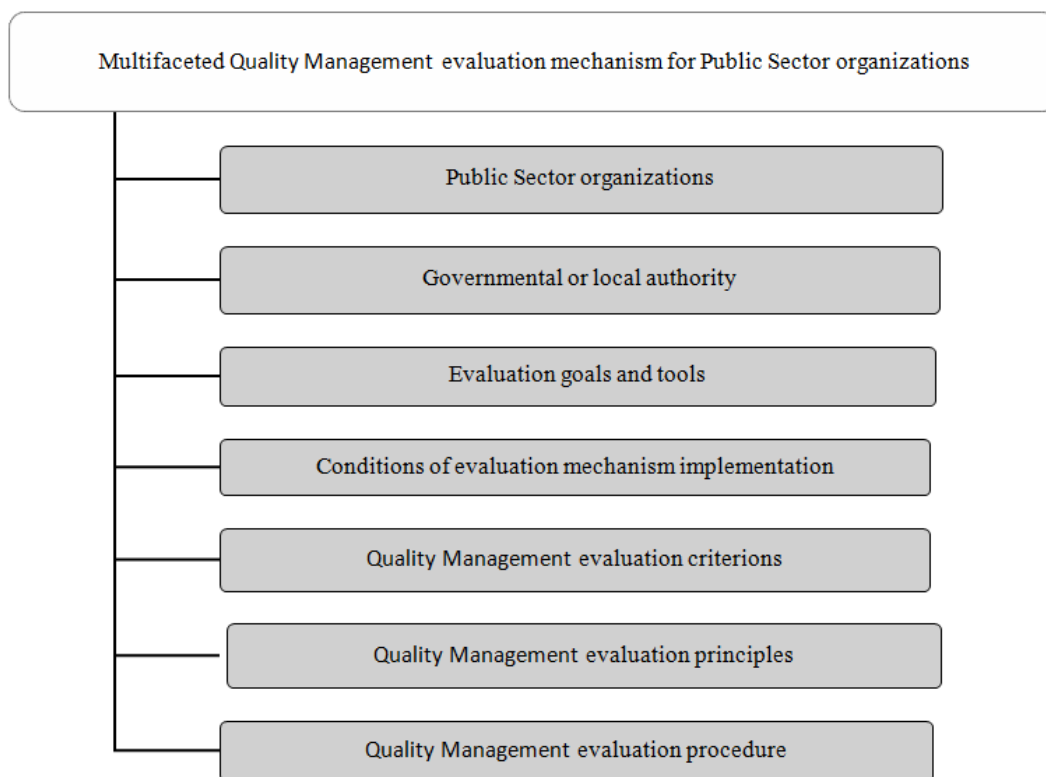


Figure 4. Elements of multifaceted management evaluation mechanism for Public Sector organizations

Purposes of management quality evaluation are the following:

- Determination of management quality level of public sector organizations;
- Rating of Public Sector organizations;
- Justification of decisions on liquidation, reorganization or privatization of public sector organizations;

- Monitoring of changes and reactions of an organization to management impacts.

The following conditions must be met for successful implementation of the said mechanism: completeness of information on operations of the managed entity; reliability of data provided by the managed entity; high quality of expert evaluations; availability of technical and software tools to support the management decision making and analysis system.

Due to a large number of functional management subsystems, goals of management system and managed organization, specifics of the organization's operations and other factors, there are a variety of criteria and indicators that refine them. In this respect we agree with the opinion of the authors [Ishchenko, Krylova, 2007] that one criterion even encompassing several indicators is inefficient for evaluation of complex economic systems, projects, etc. and can provide only approximate idea of quality of processes or phenomena. It is necessary to have a system of criteria and indicators that make them more specific. Moreover, if we are referring to management quality evaluation, we need criteria that would make it possible to evaluate the level of completion of goals set for the organization's management subsystem. These goals might significantly differ from goals set for functional subsystems of the organization [Kozhevina, 2012]. There are goals that can be achieved only with a management system.

The following Quality Management evaluation criteria can be identified for organizations established by government and local authorities:

- *Economic criterion* representing a level of achievement of economic and/or commercial results by the managed subsystem in the process of employment of high quality management impacts;
- *Budget criterion* representing a level of influence on forming budgets of all levels;
- *Social and national criterion* representing a level of completion of the organization's mission: completion of required volume of social services of required quality according to a governmental (municipal) order or cost sheet;
- *Informational criterion* representing quality of informational support and feedback of the organization management system and, in particular, of the risk and crisis management subsystem;
- *Innovational criterion* representing the ability of the management system to facilitate development (improvement) of the managed entity.

The main underlying principle of management quality evaluation for public sector organizations is the principle of aggregation of data on the managed entity's operations. The aggregation is carried out on the basis of convolution of a large number of indicators which results in aggregated data on key directions of operations of public sector organizations. Using the aggregated indicators, one can make integral evaluation of management quality of an organization.

The information sufficiency principle suggests using such volume of information that would be necessary and sufficient for making an evaluation with acceptable accuracy.

The validity principle suggests that chosen particular methods and algorithms of evaluation correspond to goals of the evaluation, i.e. allow making objective assessment of management quality and efficiency.

The relevancy principle means that results of an evaluation must provide answers to questions (honor requests of information) of the owner (the subject of the evaluation, governmental bodies and local authorities) in respect of efficiency and quality of management.

The feasibility principle means the possibility to obtain evaluations as such in predicted time.

Determination of the level of significance of characteristics, weight coefficients for indicators, priority of goals and creation of the convolution tree allow implementation of the ranking evaluation principle.

In addition, the efficiency principle suggests that benefits from measuring and evaluation of efficiency and quality of management in government-owned and municipal sector organizations will be significantly greater than the costs of their arranging and carrying out.

Some parts of the multifaceted evaluation mechanism may rely on other principles too, for example principles of economic, statistical or sociological analysis.

The author's vision of building a model of management quality evaluation suggests obtaining of appropriate generalized and quantitatively measurable values of management quality of Public Sector organizations on the basis of available, accessible and understandable for managers of government-owned (municipal) enterprises indicators without carrying out large scale and time and material consuming management analysis.

In the process of the research we developed an algorithm of building a model of management quality evaluation for Public Sector organizations (see Figure5).

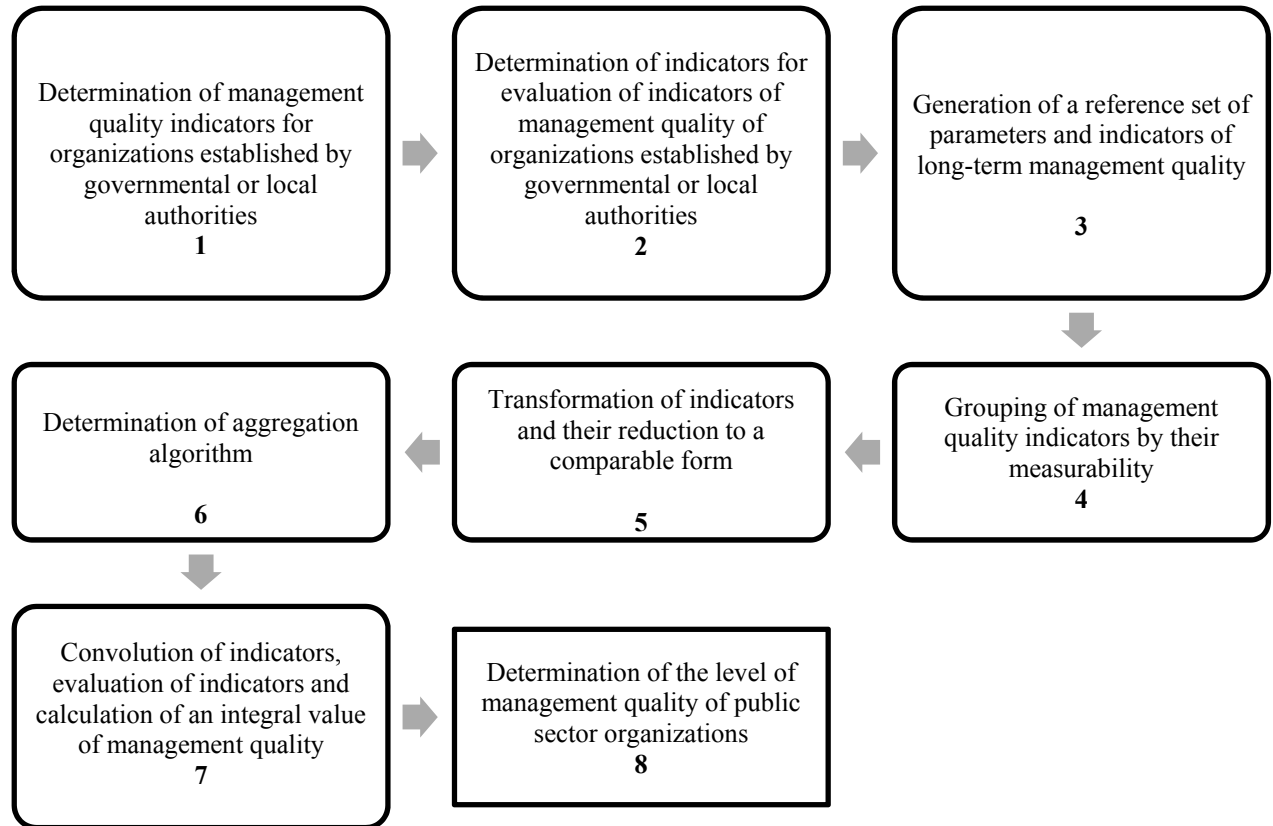


Figure 5. Algorithm of building a model of management quality evaluation for government-owned (municipal) organizations

A questionnaire survey of managers of over 90 public sector organizations belonging to the same branch of the Russian economy was performed to determine parameters and indicators of management quality for government-owned and municipal enterprises. During the research particular attention was paid to territorial distribution of organizations included in the research panel (see Figure 6).

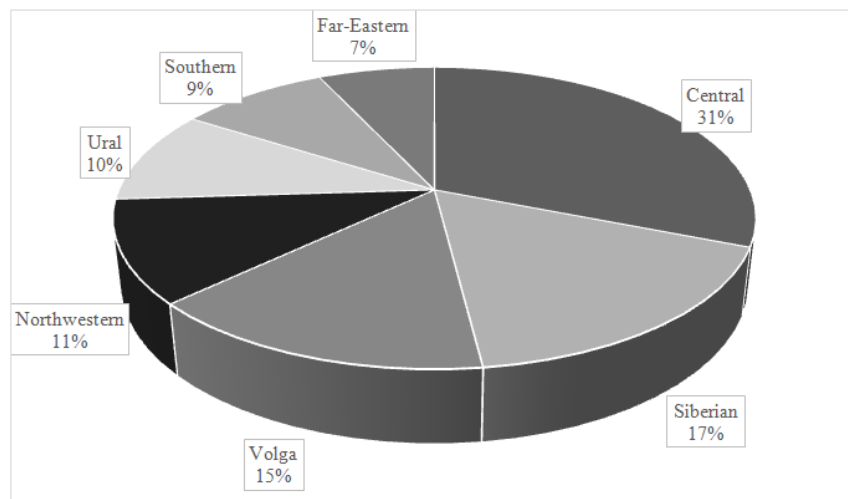


Figure 6. Territorial structure of organizations included in the research panel (by federal districts)

The performed questionnaire survey allowed us to develop a model of evaluation of management quality for public sector commercial organizations and identify the following quality indicators for them:

- financial and economical;
- social;
- innovational;
- informational;
- institutional.

We conducted an expert poll regarding the existing issue in order to determine the level of influence of identified management quality indicators on the integral indicator of management quality. The purpose of the poll was to determine the value of the significance coefficient of each management quality indicator on the basis of the rank of each of these indicators.

According to the measurement theory, in order to find values of corresponding ranks we chose an ordinal scale from 1 to 5 where 1 means the highest rank and 5 means the lowest rank. In this case statistical findings should be considered adequate to reality because they are invariant in respect of acceptable transformation of the scale.

The minimum number of experts depends on the number of indicators to be ranked and can be found using the following formula:

$$N = 0,5 \left(\frac{3}{\alpha} + M \right) \quad (1)$$

where M is the number of indicators to be ranked,

$0 < \alpha \leq 1$ is the indicator determining the minimum error level of the expert evaluation.

Assuming that the number of indicators to be ranked is five, the minimum number of experts will be 4. In this regard we assumed the expert evaluation error equal to zero, i.e. $\alpha = 1$.

We formed the expert group taking into account education level of the experts, their experience in the area of expertise, administrative independence from it and experience in performing expert evaluations. Experts performing ranking of management quality indicators were managers and employees of public sector enterprises, academic and teaching staff and representatives of the executive branch of Moscow government.

The level of significance of indicators was assessed via assigning them rank numbers, where the indicator chosen by an expert as the most significant received the rank 1. Based on results of the questionnaire review a consolidated rank matrix was compiled that allowed us to calculate weight coefficients of the indicators (see Table 3).

Table 3. Weight coefficients of management quality indicators calculated using the consolidated rank matrix

Management quality indicator	Rank, expert opinion							Sum of ranks	Reciprocal of the sum of ranks	Weight coefficients for indicators
	I	II	III	IV	V	VI	VII			
Financial and economic (M1)	2	1	3	2	2	2	5	17	0,0588	0,2
Social (M2)	1	2	1	1	1	1	1	8	0,13	0,42
Institutional (M3)	4	3	2	5	5	3	3	25	0,04	0,13
Innovational (M4)	3	4	4	4	3	4	4	26	0,0385	0,13
Informational (M5)	5	5	5	3	4	5	2	29	0,0345	0,12
Total	15	15	15	15	15	15	15	105		1,0

Evaluated opinion consistency level of all employed experts showed average opinion consistency level because the concordance coefficient (W) was equal to 0.592. Evaluation of the concordance coefficient is based on calculation of the Pearson criterion:

$$x^2 = \frac{12S}{mn(n+1)}$$

$$x^2 = \frac{12 \cdot 290}{7 \cdot 5(5+1)} = 16.57 \quad (2)$$

Calculated χ^2 is comparable to the table value for the number of degrees of freedom $K = n-1 = 5-1 = 4$ at the given level of significance $\alpha = 0.05$ (level of reliability = 95%). Since the calculated χ^2 (16.57) exceeds the table value (9.48773), $W = 0.592$ is not a random value and has practical importance.

According to the expert opinions and results of performed evaluations the first rank was assigned to the social indicator with weight coefficient of 0.42. This supports the opinion that for public sector organizations the key criterion is the criterion of completion of certain social goals. The second place was awarded to the financial and economic indicator with weigh coefficient of 0.2. The lowest rank, according to the experts' opinion, should be given to the informational indicator.

The method of average evaluations and the method of median ranks gave the same picture of distribution of management quality indicators by ranks.

In the process of the research we determined for each indicator (M_i) a set of specific particular indicators of management quality (R_i) revealing the nature of the corresponding indicator, developed models of evaluation of individual management quality indicators, formulas for evaluation of indicators and the procedure for evaluation of indicators (see Figure 7).

Each management quality indicator (R_i) included in the evaluation model has a corresponding weight coefficient determined by the method of paired comparisons.

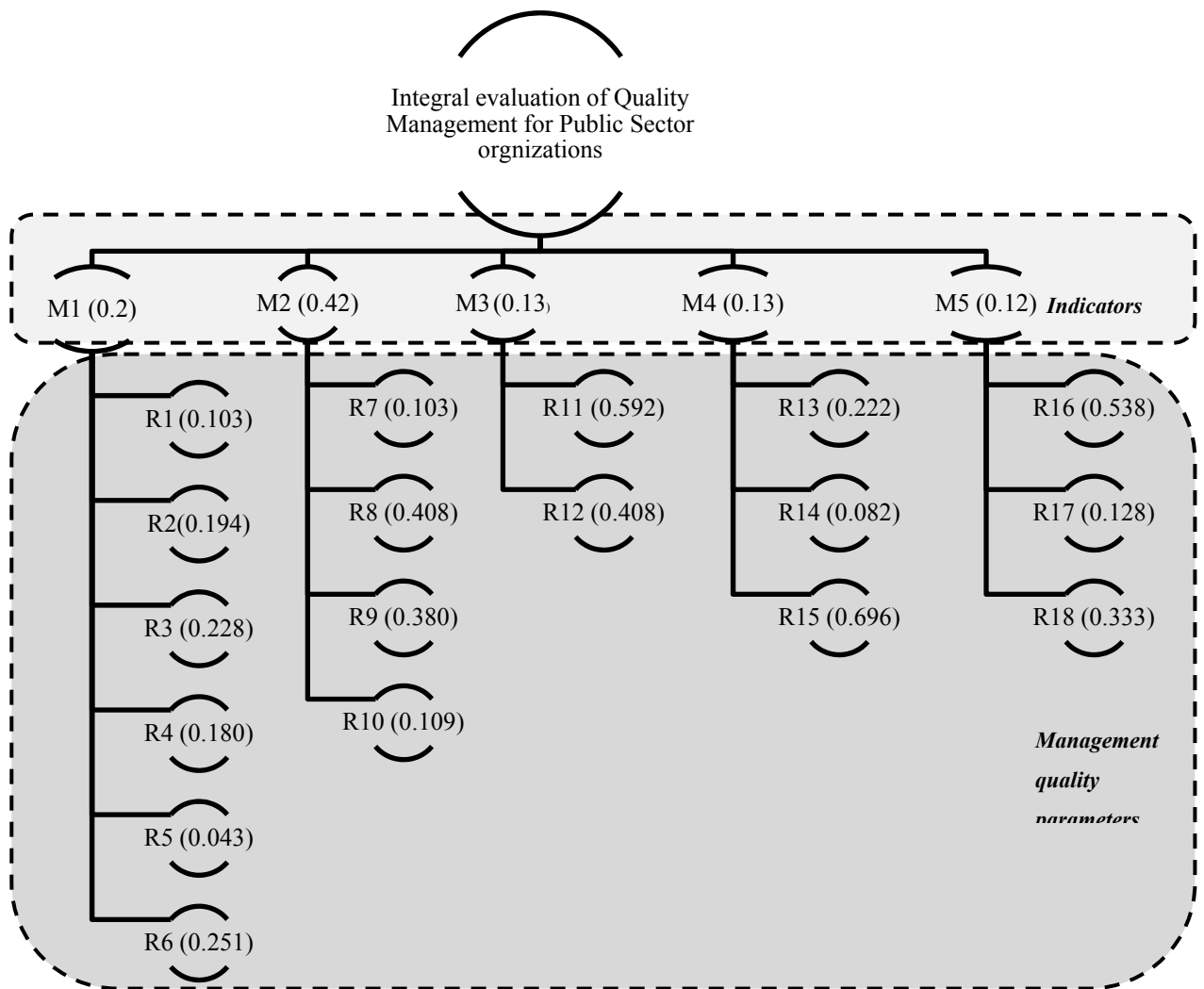


Figure 7. Decomposition of an integral indicator of Quality Management for Public Sector organizations (weight coefficients for Quality Management indicators and parameters are shown in parentheses)

Based on results of the study, we recommended state and municipal administration bodies, in order to improve quality of management of Public Sector enterprises, to implement the practice of provision by managers of the enterprises of yearly Reports with specification of indicators necessary for evaluation of Quality Management. Further, an algorithm of Quality Management evaluation for Public Sector organizations was developed based on results of an empirical study (see Figure 8).

Values of qualitative indicators evaluated by expert evaluations are assigned according to specially developed tables of expert evaluations.

The highest positive value of an indicator corresponds to the best business practice of government-owned (municipal) enterprises. The value 0 means that the evaluated indicator describes low quality management or is not available. A number of indicators even have negative values, which means significant deterioration of management quality of Public Sector enterprises.

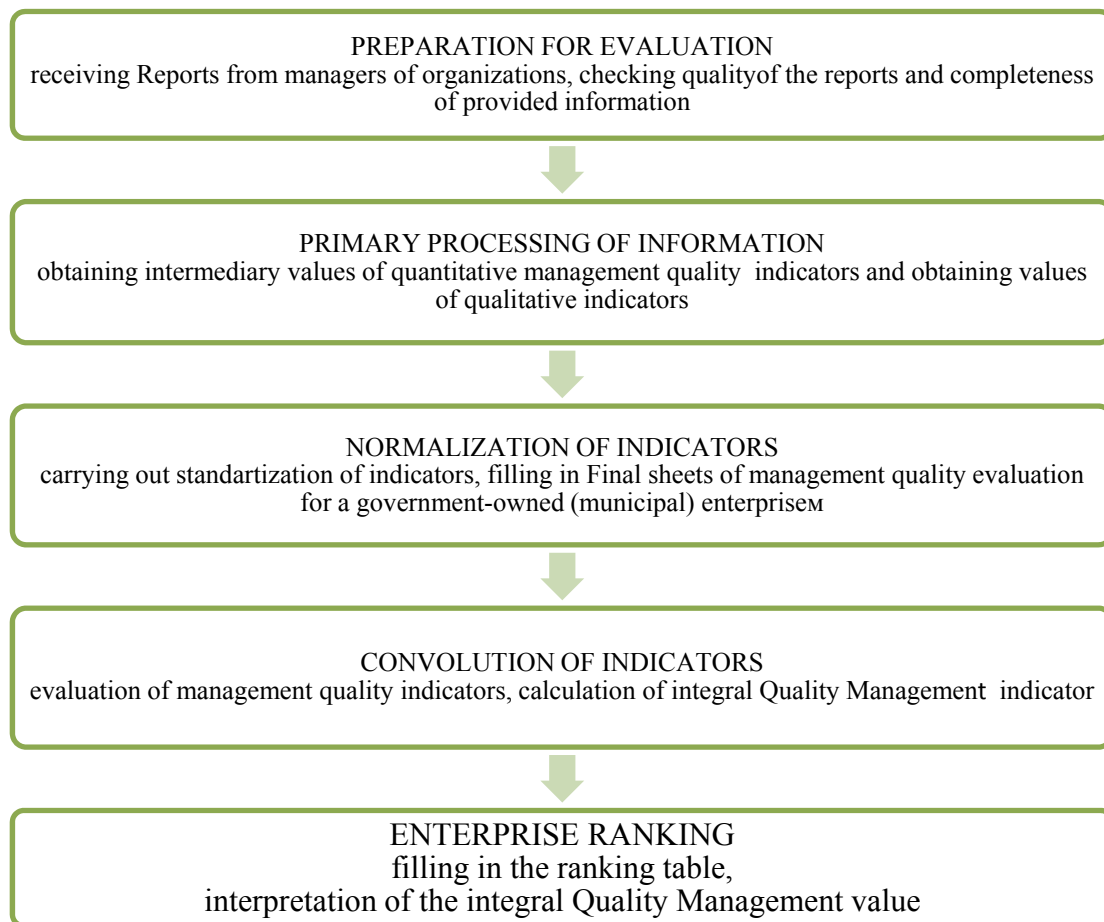


Figure 8. Quality Management evaluation and ranking algorithm for government-owned (municipal) enterprises

After primary processing of information, i.e. compilation of the evaluation base consisting of indicator values (intermediary results) is complete, the procedure of reduction of all values to a comparable form is carried out according to developed rules.

Evaluation of each Quality Management indicator is done using the formulas shown in Table 4.

Table 4. Evaluation of Quality Management indicators for government-owned (municipal) enterprises

Management quality indicator	Indicator evaluation model
Financial and economic indicator (M_1)	$M_1 = 0,103R_1 + 0,194R_2 + 0,228R_3 + 0,180R_4 + 0,043R_5 + 0,251R_6$
Social indicator (M_2)	$M_2 = 0,103R_7 + 0,408R_8 + 0,380R_9 + 0,109R_{10}$
Innovational indicator (M_3)	$M_3 = 0,592R_{11} + 0,408R_{12}$
Informational indicator (M_4)	$M_4 = 0,222R_{13} + 0,082R_{14} + 0,696R_{15}$
Institutional indicator (M_5)	$M_5 = 0,538R_{16} + 0,128R_{17} + 0,333R_{18}$

Calculation of the integral indicator of Quality Management for government-owned (municipal) enterprises (QM) is done using the following model:

$$QM = 0.2M_1 + 0.42M_2 + 0.13M_3 + 0.13M_4 + 0.12M_5 \quad (3)$$

where QM is the integral value of management quality;

and M_i are values of management quality indicators.

For interpretation of the integral value (QM) we suggest using the scale presented in Table 5.

Table 5. Quality Management scale for evaluation of Public Sector organization

Integral value	Description of management quality
0,0-0,2	Extremely low Quality Management level
0,21-0,4	Minimum allowed Quality Management level
0,41-0,6	Acceptable Quality Management level
0,61-0,8	High Quality Management level
0,81-1,0	Desired Quality Management level

Since the evaluation procedure supposes use of normalized indicators measured according to the scale from 0 to 1 where 0 means complete absence of an attribute and 1 means maximum appearance of the attribute and its full correspondence to a reference value, the integral value also falls in that range. Therefore, if the value of the integral quality indicator of management of public sector organizations is equal to zero, this means that there is no quality at all, i.e. no management is present. The closer the value of the integral indicator to unity, the higher the management quality is and so the level of completion of goals of the organization.

6. Conclusion

Advantages of implementation of the multifaceted mechanism of Quality Management evaluation for Public Sector organizations are obvious. First, it will provide a systematic approach to evaluation of operations of both organizations and their managers. Second, obtained quantitative values will allow making more justified decisions on development of organizations belonging to the Public Sector of the economy. Third, it will assist in achieving social goals. Forth, it will make it possible to promptly identify gaps in competencies of managers of Public Sector organizations and create conditions for development of these organizations.

References

- Boland, T., & Fowler, A. A. (2000). Systems perspective of performance management in public sector organizations. *International Journal of Public Sector Management*, 13(5), 417-446. <http://dx.doi.org/10.1108/09513550010350832>
- Brignall, S., & Modell, S., (2000). An institutional perspective on performance measurement and management in the 'new public sector'. *Management Accounting Research*, 11, 281-306. <http://dx.doi.org/10.1006/mare.2000.0136>
- Eucken, W. (1996). Basis of national economy. M.: Economics.
- Friedman, M. (2002). Capitalism and Freedom. The University of Chicago Press Chicago. <http://dx.doi.org/10.7208/chicago/9780226264189.001.0001>
- Galbraight, J. K. (1973). Economics and the Public Purpose. Boston.
- Hans, de Bruijn. (2005). Performance management in the public sector. Per.s Eng. M.: Institute of Integrated Economic Research. 192 p.

- Hayek, F. A. (1992). Fatal conceit. Errors of Socialism: Per. from English. M., News.
- Ishchenko, M. M., & Krylov, M. G. (2007). Theoretical bases of formation of a mechanism for evaluating the effectiveness of the management of the enterprise. *Audit and financial analysis*, 4, 351.
- Kamensky, A. A. (2005). The effectiveness of the public sector in a market economy. SPb.
- Kozhevina, O., & Sirotenko, M. (2014). Formation of metodological based of the Balanced Scorecard in strategic management development Public Sector mesoscale. Institution framework of the economy functioning in conditions of transformation. Vol. 2 – Verlag SWG imex GmbH, Nurnberg, Deutschland. 31-34.
- Kozhevina, O. V. (2012). Change Management: Textbook. - M.: INFRA-M. 286 p.
- Burkov, V. N., Burkova, I. V., sponges, M. V., Dinov, N. I., Enaleev, A. K., Kondratyev, V. V., ... Shepkin, A. V. (2011). Mechanisms of management. M.: URSS (Editorial URSS). 216.
- Nagimova, A. M. (2009). The effectiveness of the public administration as a factor in improving the quality of life in the region: Problems of evaluation and measurement. - Kazan: Kazan. state. Univ. S. 16.
- Polovinkin, P. D. (2002). Economic and organizational basis of state property management strategy.. The public sector in the regional economy: state and prospects of development mechanisms. Ed. IE Risin, YI Treschevskogo. Voronezh, 96 p.
- Samuelson, P. (2007). *Economics* (18th ed.) M. 1358 p.
- Stiglitz, J. E. (1995). Economics of the Public Sector. NY, London.
- Yakobson, L. I. (1972). The public sector of the economy: economic theory and policy. M.: HSE, 2000. 367 p. Eskaus R.S. Basis Economycs. Boston. USA. p. 18.

Notes

Note 1. This table was compiled by the author based on data published by the Federal State Statistics Service.

Note 2. According to data provided by the Federal State Statistics Service.

Note 3. According to data provided by the Federal State Statistics Service.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>).