# THE ASSESSMENT METHODOLOGY OF THE PUBLIC ADMINISTRATION EFFICIENCY

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The almost axiomatic truth in the economy is that the efficiency of economic activity can be assessed by comparing the results and costs involved. However, there are always problems and cost estimates for methodological issues, as costs are not homogeneous (current and long-term expenditures, livelihood and material costs), and the results are also varied (including social orientation) and are often difficult to measure.

In terms of effectiveness of the public administration efficiency, these issues are more complicated, especially because of the results of the governing bodies' activities, being rigorous and difficult to measure.

By the way, taking into account the peculiarities of the governing bodies of all levels, the Western partners consider that only the outcome-expenditure coordination is not sufficient to assess the effectiveness of governance. Both public administration and business management bodies are required to operate in the legal field (often to be involved in its creation), to sustain an organization's development strategy for current and long-term purposes, to calculate the necessary resources, to accurately assess the internal and external environment, especially scientific and technological capabilities, competitive threats, possible challenges, various risks, etc., and to ensure the implementation of the goals. The degree of scientific justification of management is assessed as qualitative effectiveness or productivity of managerial activities.[1]

The necessity of assessing the effectiveness of efficiency is also evident from how the objectives of public governance efficiency assessment have been formulated in international programs.[2]

a) To improve the effectiveness and productivity of public governance through rationalization of public expenditure and reduction of time, spent on administrative processes to provide better service to citizens and businesses.

b) To implement regulatory reform through Regulatory Impact Assessment and Better Regulations.

c) To reduce administrative burden with businesses and citizens in the workplace to improve the working and business environment.

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[1] See, for example, Koontz, O'Donnell 1981: 40; Mescon, Albert, Hedouri 2000: 48-50, Daft 2006 810-812

[2] Evaluation of public administrations added value to the Lisbon strategy goals (UPDATE 2010).

d) To strengthen the competitiveness, which is one of the causes of the economic crisis in Europe.

e) To make institutional changes in the public sector reconstruction to eliminate / merger (the number of administrative units or departments targeted at finding synergies and creating a new and more efficient structure by removing the corresponding functions.

f) To promote innovation and enable it as a key asset to increase productivity in all economic sectors.

g) To increase transparency and accountability by opening information to citizens for public accountability and public performance to stakeholders.

The UN uses at least three types of public governance outcomes indicators:[3]

• Situation (impact) indicators that provide an indication of whether the developments of crucial importance to the UN are taking place (impact indicators and situational indicators are essentially the same, although the first may be more specific and the latter may be more general). The situation indicators are essentially characterized by the dynamic development of evolutional situation. Such indicators are used to assess the Millennium Development Goals of the United Nations and reflect the long-term outcome or impact. The available figures provide an enlarged picture of the state of macroeconomic development in the country. These indicators are more useful for the evaluation of the country's governance performance, showing how these or that development strategies are implemented. A concrete example of such an indicator is the Human Development Index, which is used as part of the UN Development Program Implementation Assessment.

• Outcome indicators that evaluate progress in terms of specific outcomes. These figures mainly help to implement strategies in the organization or in the macro level, with key performance outcomes, and are useful for emphasizing positive changes in development. Similar indicators in the public administration system can be used to assess the effectiveness of the legal framework, as well as the allocation of financial resources as a result of parliamentary activities.

• Output indicators that evaluate the progress of specific operational activities. These indicators help to measure and verify outputs that can be measurable and can clearly show the degree of efficiency. The evaluations obtained are useful for project managers who are responsible for the results. These indices are mostly quantitative. For example, how many public schools have been renovated, how many teachers have been trained, how many jobs have been created, and more?

Recently, UN-led research has focused on qualitative assessments. Methodological approaches to the selection of effective cohorts have been developed for this or that program. The selection and application of indicators are important and meaningful work that requires a serious research potential. The use of large numbers of

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[3] *Ruby Sandhu-Rojon* Selecting Indicators for impact evaluation, *UNDP*.

indicators is often ineffective. The reliability of the indicator is highly important for a reliable result. In fact, the quantitative indicators are more objective than the qualitative observations that are subjective and largely relied on inaccurate and accurate information, but their perception is gaining momentum.

For example, as the outcome or output indicators can be used either qualitative or category, as well as quantitative or numeric indicators. Qualitative indicators can indicate a bidirectional value ("yes" or "no") and to identify a particular category in several categories (A, B, C, or D). Quantitative indicators can show an absolute or relative value (eg part or%).

Evaluation of the effectiveness of governance is the basis for formulating governance strategies. If the economic efficiency assessment system is determinate and already formed as it relies on quantitative assessments, the effectiveness of public governance can not only be quantified, as social and political impulses are also crucial and the quality indicators of management efficiency are highlighted. There are many different and often contradictory approaches in the scientific literature. It is useful to study the current experience and practical approaches to formulate more acceptable approaches to the effectiveness of public administration in Armenia.

As was mentioned above, the effectiveness of governance activities can be characterized by quantitative and qualitative indicators. Quantitative indicators typically characterize economic impacts, and qualitative indicators are mostly in the field of social and political influences.[4]

Of course, besides quantitative indicators, social factors can also be estimated from the viewpoint of economic effects. If the objective is to evaluate the success of the governance, using performance indicators, first of all it is necessary to define the concept of "executive" of public administration, as the effectiveness assessment is essentially the performance evaluation. As Neely mentions, "performance measurement is a problem that is often discussed but rarely defined."[5]

The same author presents the definition of how to understand the effectiveness of public management and its measurement. "Measuring effectiveness can be defined as a quantitative assessment of effectiveness and quality."

The performance of systems in technical sciences is relatively distributed with performance variability (unit number of work done over time). It is difficult to formulate such a clear definition of public administration. This is largely due to the fact that the public administration system is a very complex system, the investment and outcome of which are both measurable (for example, financial nature) and not directly measurable (for example, the quality of staff work, the quality of non-commercial services, and so on). There is a principle that says that one cannot measure the intrinsic limit, and even cannot control the scarcity. So, first of all, the indicators that affect the performance make it possible to make it as accurate as possible. The assessment and evaluation of

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[4] https://studfiles.net/preview/3847102/page:7/.

[5] Neely, Mills, Gregory, Platts 1995: 80-116.

the performance of public administration bodies can be answered by the extent to which the public services are offered efficiently and effectively.[6]

Performance in public administration is generally a very extensive term, especially if you consider the work of stakeholders (all individuals and institutions linked to public governance) as their interests may vary from first glance. This is especially reflected in the synergic consequences of the duality of financial relationships and the resulting public budget. Each participant of the public selection accepts different goals and actions according to his interests.

Nevertheless, if the public administration system works properly, the need to consolidate and satisfy the different interests of all stakeholders will consist of compromise solutions, or mathematically speaking, the creation of an optimal management system that also receives external signals. If we take into consideration that the benefits of public governance efficiency for certain stakeholders are defined by system inputs (i.e., investments), it is possible to define the performance of each beneficiary as a ratio of outflows or inputs or as difference between outflows and receipts.

It is widely believed that non-profit organizations that include all state-owned institutions cannot generally profit from their activities. This is wrong because the non-profit organizations are really organizations that do not generate profits for their owners, managers or beneficiaries to redistribute, but under certain circumstances they can generate profits that they need to re-invest in the same organization's development to achieve its goals.

Public organizations are currently facing the challenge of developing a clear performance measurement system that will adequately reflect the quality and effectiveness of the performance.[7] There is no universal model of public management performance measurement and the approaches are different in different organizations.

There are also approaches to the substantial similarities between public and private systems. As noted by David Holly and Emanuel Lobina,[8] one cannot say that there is considerable difference between the effectiveness of public and private organizations. As a result of the research, both in developed countries and in developing and transition ones, it has been revealed that the governance status of public and private sectors is not important in terms of governance, and the ineffectiveness of any organization is not entirely linked to its ownership. Analyzing privatization processes in the United Kingdom, Massimo Florio concluded that privatization processes had no visible impact on the operations of the entity's operations management, and net earnings were zero, taking into account the transfer of value to workers from their employees.[9]

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[6] Greiling 2005: 551-567.

[7] Wright, Nemec 2003.

[8] Hall, Lobina 2005: 3.

[9] Florio 2004.

As was noted above, the efficiency is an indicator that is obtained through a report on the outcome or consequences. Public expenditure efficiency implies a link between the economic and social consequences of the project implementation and the efforts to finance the project.

Qualitative effectiveness is the rate that is given to the result achieved to the situation to which it is programmed to achieve.

Peter Dracer believes there is no effectiveness without qualitative effectiveness, because it is more important to reach the situation that is formulated as a goal than to do something good, which is not all.[10] The relationship between productivity and qualitative effectiveness is that between the part and whole, and quality is a necessary condition for productivity.

The fact that the analysis of effectiveness and quality productivity is based on the relationships between investments (inputs), results (outputs) and product (consequences) is touched in the work of "Qualitative productivity and efficiency of public expenditure" by Ulrich Mandl Adrian Dierx and Fabien Ilzkovitz.[11]

Effectiveness affects the actual outcome and environmental factors. Environmental factors (such as lifestyle and various socio-economic effects) have a great impact on quality.

According to M. Profiroiu, *performance* in the public domain implies relationships between goals, means and outcomes, and consequently, performance is the *result of productivity, quality effectiveness and simultaneous pursuit of appropriate budget.*[12]

Recently, innovation activities have been linked to public administration. The activities of the public administration system can also be viewed as innovative activities at different levels of governance, and innovation activities can be viewed as an assessment of governance efficiency.

One of the main guidelines for public administration is to promote economic development and, of course, is one of the most important values of public governance. In this regard, it is also possible to consider the result of public administration as well as contribute to the innovative environment. With a favorable business environment, the public administration institute can also have a great impact on the economic and innovative activities of companies. Effective and high-quality public services also act as business incentives. Some authors have assessed the impact of public services on the activation of innovation sector and tried to answer the question of public sector's innovative impact on the firm's activities. The overall analysis that the Innobarometer 2011 Company conducted in 33 European countries brings to light the importance of public sector governance activities for business.[13] The effectiveness of public sector productivity has a positive impact on the recent developments in existing firms by 8.3%,

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[10] Drucker 2001.

[11] Mandl, Dierx, Ilzkovitz 2008: 3-4.

[12] Profiroiu, Profiroiu 2007: 44-47.

[13] Bianca Buligescu UNU-MERIT Maastricht University Hugo Hollanders UNU-MERIT Maastricht University.

but this does not have an impact on economic indicators and sales growth. Public innovation is a factor that positively affects the economic growth and welfare of the citizens, but the assessment and measurement of these impacts are seen as a rather complex problem.[14]

The public administration system also has a regulatory function as it forms rules and regulations for public policy implementation. A number of studies on public administration are primarily concerned with organizational types and models, the nature of the bureaucracy and their consequences, state governance reforms, and the types of state governance systems. Quantitative assessments of the above functions are related to complexes. Economic research on public governance is focused first and foremost on the evaluation of effectiveness and qualitative effectiveness of the policy implemented or to be implemented through the use of classical assessment methods and cost-benefit models. The main difficulty in measuring public sector innovation impacts is the diversity of public sector services and policies, as well as the diversity of agencies and agencies responsible for implementing stakeholders and outcomes. The diversity of government policies and services that have different outcomes create difficulties for a single assessment[15].

Innovations in public sector management can take place at different levels and with different manifestations; those are processes within public administration and public sector institutions, in policy and regulation, in public disclosure, in revenue generation (tax system, public enterprises), in public services and commodity delivery (such as education), in infrastructure and financial support (introduction of new projects, such as innovative fiscal investments), in systemic innovations[16].

At present, a wide range of economic research has been undertaken in the field of public innovation evaluation that analyzes the procurement of goods, regulations, knowledge, research and experimental development, as well as innovation, employment, sales growth, export, business innovation and impact of productivity analysis.[17]

Economic research is supplemented by political science studies that also affect the effects of the e-government.[18] The main provisions of economic studies come in particular to comparative analyzes. Implementation of public policy and state programs can lead to both positive and negative economic implications, for example, state support can promote or hamper private funding.[19]

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[14] Windrum 2008.

[15] Ibid.

[16] Andersen, Henriksen, Medaglia, Danzinger, Sannarnes and Enemærke, 2010: 549-576.

[17] Aschhoff and Sofka 2009: 1235-1247; Crespi, Maffioli, Mohnen and Vásquez 2011: 1-88. Paraskevopoulou 2012: 1058-1071.

[18] Andersen, Henriksen, Medaglia, Danzinger, Sannarnes and Enemærke, 2010: 549-576.

[19] Crespi, Maffioli, Mohnen and Vásquez 2011: 1-88.

The Institute for Franchising Systems and Innovative Research[20] (2004) analyzed the regulatory impact of innovation, based on a survey of 250 European companies. The survey found that the most effective programs of public service innovation are related to health and safety.

The government is both the main provider of public services and consumer spending in areas such as defense, education, or healthcare. As consumers, governments can act as consumers of innovations that enable companies to learn and improve their products and quickly reduce costs.[21] Public demand can also lead to private demand.

Thus, it is possible to summarize that the economic (quantitative) effectiveness of public administration in international practice is suggested to be evaluated by the total labor productivity ratio, comparing output results to access resources.[22]

And the full performance or factor productivity indicator (A) is recommended to measure the following formula.[23]

$$A = \frac{GDP}{PW + ME + AMR + I.\,DF}$$

Where

GDP - the gross domestic product in the given period expressed in the form of money,

PW - the main and additional payment of workers in the public governance system,

ME – all material expenditures which took place in the process of public, governance,

AMR - Amortization of main resources, including the annual depreciation of administrative buildings, technical facilities of the governance,

I – the volume of unfinished investments necessary for the construction of buildings and technical facilities,

DF – discount factor.


The proposed version of the quantitative performance indicator is also applicable to microcirculation. In that case, the outcome may be estimated by the volume of sales (services), and the costs can be calculated for the same entities as organizations.

Qualitative effectiveness of public management can be assessed by different approaches. The literature describes assessment models based on different indicators.

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[20] https://www.fraunhofer.de.

[21] Aschhoff and Sofka 2009: 1235-1247.

[22] See, for example, Mescon, Albert, Hedouri 2004: 48-50.

[23] For Justification of the measurement of full labor productivity see Suvaryan 1987: 41-60. In terms of public administration, the resolution has been amended to clarify the necessary changes (See Suvaryan 2016: 307-309).

In the article "Public sector efficiency: an international comparison",[24] the authors propose a measure of the overall effectiveness of public sector, which is derived from seven indicators, each of which has been developed from the combination of separate indicators.[25]

Three indicators that describe the potential performance, four performance indicators (education, health care, public infrastructure, administration) and actions that reflect the objectives of public administration bodies (sustainability, distribution, and economic performance) were proposed.

The so-called "assessment" function developed at the level of EU member states can be considered as a practical tool. We have to disclose this function, which defines the public sector performance based on the proposed indicators. The evaluation function contains seven indicators, indicators for four capabilities, and three benchmarks. However, each indicator consists of a variable number of indicators that are equally weighted in the structure of integral indicator. The main methodology is represented by the following formula:

$PAI^{26} = A1^* X1 + A2^* X2 + A3^* X3 + A4^* X4 + A5^* X5 + A6^* X6 + A7^* X7$,

where

$Ai$ = weight or significance factors,

$xi$ = the indicators of the public administration body's harassment are:

This assessment can be applied to comparisons of public administration bodies in different countries or regions, as well as the effectiveness of public governance dynamics based on these indicators.

Describe performance indicators.

X1 = Administration consisting of 4 criteria: corruption (The Corruption Perceptions Index used for the quantitative assessment of this indicator, calculated by the International Transparency Agency); red ribbon (the following indicators used for the quantitative measurement of this subcategory: Starting a Business, Ownership and Construction Permits that were built and calculated in the Doing Business Annual Report); the quality of the judicial system (the measure of efficiency of the judicial system used in the measurement of this indicator published in the annual Doing Business report); shadow economy (this subcategory shows the percentage of GDP in the shadow economy and is based on OECD reports).

X2 = Education, consisting of 2 indicators, involvement of secondary schools taken from UNESCO statistics and educational achievement, which was built by EU member states in 2006; PISA's Science, Mathematics and Reading Tests, based on the results obtained. The PISA test evaluates the results of the 15-year-olds in three domains.

X3 = healthcare, consisting of 2 indicators, child mortality and life expectancy, both counted and integrated by the World Health Organization.

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[24] Afonso, Schuknecht, Tanzi 2003.

[25] Ibid.

[26] Public Administration Index.

X4 = Public Infrastructure, which has one subdivision for quality communications and transport infrastructure and its quantitative use, we have used the results published by the World Economic Forum.

X5 = Distribution, based on one indicator, the inequality of income distribution, the ratio of 20% of the highest income to the total income of 20% of the nation's lowest income, using the data published by Eurostat.

X6 = stability, indicator based on equal weights of the following two indicators: GDP growth and inflation.

X7 = economic performance, based on three indicators, GDP, GDP growth and unemployment for the last 10 years,

As mentioned, X1, X2, X3 and X4 are potential indicators, whereas X5, X6 and X7 represent the Musgravian Indicators.

The average EU value for public management index is 7.8628, and the maximum value is 12.2015, by any non-published Member State. The maximum value of the evaluation function was obtained in Luxembourg (9.8729), followed by Sweden and Finland with the values of 9.4834 and 9.1840 respectively, and these states are leaders in terms of public sector performance. On the opposite side were Bulgaria with 5,5382 points, Romania (5,57211) and Poland (6,3844).[27]

Decision makers should create effective economic programs to look forward to future socio-economic changes. In addition, the public sector decision makers should find the final outcomes and measurable impacts on the public sector performance. From a different point of view, policymakers should find ways to increase public sector performance by referring to the following priorities:

1. Ensuring economic stability,
2. Improvement of public infrastructure quality;
3. Increased managerial performance through anti-corruption, reduction of state bureaucracy, raising the quality of justice and sharp reduction of shadow economy,
4. Improving the quality of education;
5. Expansion of income distribution and reducing inequalities in income between different populations.

The methodology described above is, of course, comprehensive, but it has complications of information security, besides, it is not practicable to evaluate qualitative productivity in separate units of public administration. The logic of the methodology does not fully address the important issues of performance of predetermined criteria and indicators, their justification, as well as the management quality indicators.

That is why there are other methodological principles for assessing qualitative effectiveness that will try to supplement the above gaps.

In terms of public administration, it is essential that a legislative framework has been created to ensure the effectiveness of public administration and local self-

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[27] Afonso, Schuknecht, Tanzi 2003: 10-12.

government, the establishment and functioning of civil society institutions, and the free development of business. The answer to the questions mentioned above may be reached through the examination (comparative) expertise of the legal field and other regulatory arrangements, or, as mentioned above, by means of evaluation of binary classifier. For this purpose, a coordinated list of key indicators is proposed (Table 1).

In addition, the issue of deviations from strategic targets and current targets is highlighted. The relevance of the country's development strategy and oversight of the results, the living standards of the population and the development of social services are crucial (Table 1).

According to the above, deviations can be assessed as "ineffectiveness" of public administration. Management effectiveness can be described by means of an integral deviation index, for which the following approach is proposed: First and foremost, the relative deviation of the absolute value of the performance is calculated for each indicator[28].

$$K_i = \frac{|Ni - Ri|}{Ni},$$

where Ni is the target indicator, Ri is performance.

It is proposed to estimate the general relative deviation by the weighted average arithmetic mean of the absolute values of deviations by the following formula:

$$K_{com} = \frac{\sum_{i=0}^{n} K_i \, Ai}{\sum Ai}$$

where,

$K_i$ is the deviation of i in the index,

Ai's i indicator is significant in the public management system, which can be calculated with different approaches. The experimental method commonly used is often used in the absence of information or incompleteness of the information. The greater accuracy can be achieved by using the methods based on mathematical statistics tools techniques.

According to this approach, the cumulative correlation coefficients between the X indicators and the GDP or the individual general economic indices are calculated. The latter will evaluate the significance of the X values based on which the coefficients will be calculated. Elasticity coefficients can also be taken as the basis. The coefficients can be determined by the correlation coefficient or the ratio of elasticity coefficients.

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[28] In the described method, the indicators of Groups 3 and 4 are presented in Table 1.

Table 1

Key Performance Indicators for Public Administration Quality Assessment:

| Public Administration System Components and Outcomes | Quality Assessment Indicators |
|---|---|
| 1. Legislative bases of public administration (with expert score) | 1.1. The relevance of the Constitution<br>1.2. The existence of a law on local self-governance<br>1.3. The independence of the judiciary |
| 2. Legislative prerequisites for the establishment of civil society institutions and their enforcement; | 2.1. Availability of the legislative field (score of expertise)<br>2.2. Freedom of Speech Factor:<br>2.3. Freedom of Press Freedom: |
| 3. Justification of Country Development Strategy and Outcome Control | 3.1. The actual and planned GDP growth rates<br>3.2. The relevance of the state budget revenues and expenditure inventory and program indicators |
| 4. Living standards and social services of the population | 4.1. Dividend per capita income of the population<br>4.2. Population employment<br>4.3. Poverty level:<br>4.4. The volume of social expenditure per capita (trade, health, education) |

So we will have a qualitative and quantitative assessment. In addition, it is necessary to adjust the allowable amount of deviations by expert assessment, for example,

$$0.03 \le K_{com} \le 0.1$$

By the way, the deviation beyond the range is negative because it proves the baseless forecasts, inaccurate evaluations of external and internal environment, and insufficient organizational efforts.

The methodologically described principles are applicable to evaluating the quality of public administration and management of organizations. For the micro level, there will be some adjustments in the indicators.

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