



# IMPROVEMENT OF MECHANIZMS OF MANAGEMENT OF ACTIVITIES OF HOUSHOLDING AND COMMUNAL SERVICES ENTERPRISES

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## ABSTRACT

*The article considers the author's approach to the problem of determining the efficiency of housholding and communal services based on various methodological approaches of foreign researchers. On the base of the Quinn-Rohrbach model "Competitive values and organizational efficiency" developed an econometric model of econometric relationships and studied the issues of improving the organizational efficiency of housholding and communal services.*

**KEYWORDS:** *housholding and communal services market, sphere of housholding and communal services, efficiency of the housholding and communal services, quality of services, Quin Rohrbach model, correlation and regression analysis.*

## DISCUSSION

The experience of developed countries in the world shows that in order to ensure the effectiveness of the activity of enterprises operating in the field of Housholding and communal services, as well as to ensure the satisfaction of the main consumers with the volume and quality of services provided by the enterprises of the sphere, it is necessary, first of all, to reduce the level of monopolization in the sphere and deepening market relations.

The sphere of housholding and communal services differs from other branches of the sphere of services by its distinctive features, as well as socio-economic relations with differencies of the participants. Because the sphere is engaged in the creation and delivery of vital services to consumers on the basis of market relations, on the one hand, on the other hand, the created services have the property of restoring their ability to work on the basis of satisfying the social needs of consumers.

As a result of the reforms carried out in the field of housholding and communal services in the country in recent years, enterprises of the sphere are united into a single whole system, the delivery of qualified services to the consumers by them is defined as the main goal of the reforms.

There are different methodological approaches to determining the effectiveness of the housholding and communal services sector. Some approaches see improvement in the efficiency of the sector with relatively low capital and rational use of available resources with relatively high service quality while fully satisfying the needs of consumers [1, c-18].

V.Chernyak determines the effectiveness of housholding and communal services not only by the volume of financing and the introduction of additional resources of the material and technical base, but also by saving costs while maintaining or increasing the quality of services [2, p. 18].

In Simionov's research, it is shown that the first of the main tasks of economic analysis of the activities of enterprises of housholding and communal services are the determination of the economic efficiency of labor resources, material resources and financial resources and, in turn, the determination of internal resources in increasing the efficiency of activity [3, p. 179].

It is understood by many researchers as the effectiveness of housholding and communal services the relationship between the cost of economically achieved results (volume of rendered services) and the various resources available in the society.



In our opinion, the effectiveness of providing housholding and communal services is determined by achieving maximum results with the least amount of production and labor force for the benefit of society. At the same time, the effectiveness of housholding and communal services can not only be attributed to the growth of the services provided and the decline in prices, it is also necessary to attach importance to social consequences in determining efficiency.

Taking into account the degree of interconnection of indicators in the form of statistical data related to the sphere of housholding and communal services, it is possible to bring the processes taking place in Uzbekistan in the sphere to the appearance of trends with the help of econometric models, and these trends allow to determine the directions and forecasts of the processes [4].

The analysis of the available statistical data on the area under consideration indicates that the following 6 indicators can be correlated with each other and that there is correlation in these links (Tab. 1).

For econometric analysis, obtained a time series of indicators for the period 2013-2018 years,

since in the system of official statistical indicators, the indicators of the analyzed data for this period of time are available in full.

We determine the link, which expresses the effect of investments on the change in the total area of the housing fund, by defining the factor affecting the volume of investments in real estate listed in the table as well as the indicator of the total area of the housing fund as a resultant factor. The indicator of the total area of the housing fund is determined as a factor affecting the change in the volume of consumption of the next 4 communal resources.

The construction of a trend model of one-dimensional rows of non-dimensional components of time series is carried out in several stages:

1. Aprior (not based on experience) analysis of time series.
2. To check the assumption (hypothesis) of the presence of trend in the time series.
3. Determination of the main characteristic and parameters of the change of the detected model.
4. Analysis of random variables (component).
5. Formation of a generalized model.

**Table 1**  
**Key indicators of housholding and communal services market activity <sup>1</sup>**

№	Indicators	Years					
		2013	2014	2015	2016	2017	2018
1	The volume of investments, billion. sum	211,1	268,1	204,6	416,1	1356,8	1132,8
2	Total area of the housholding fund, million m <sup>2</sup>	457,9	466,2	477,1	490,8	507,5	533,3
3	The volume of electricity transferred to the consumers, million. kWt/hour	12045,8	12222,5	12548,7	11195,7	12779,8	13593,8
4	The volume of natural gas transferred to the consumers, million m <sup>3</sup>	10469,4	11321,0	9572,1	8387,5	9427,1	9696,8
5	The volume of heat energy transferred to the consumers, thousand kcal	7234,2	8463,3	8641,9	7992,4	7718,5	7661,6
6	The volume of drinking water transferred to the consumers, million m <sup>3</sup>	953,2	953,0	940,9	893,2	882,6	835,3

<sup>1</sup> Official data of the State Statistics Committee of the Republic of Uzbekistan.



At the next stage of the trend analysis, the hypothesis of the presence of a trend is checked. There are many criteria that differ in the strength and complexity of the mathematical approach in order to verify the presence of a trend in the indicators of the observed time series. These criteria allow to determine the main trend in the development of the main indicators of the houtholding and communal services sector over time, as well as the trend in terms of species – the average and dispersion trend [5,6,7].

One of the methods that allows to determine the presence of a trend is the cumulative *T*-criterion. This method covers on its own basis the calculation and analysis of the statistical description of  $Y_t$  series levels, calculated by the cumulative sums of deviations from the average of  $Y$  and the ratio between these deviations. In the time series we are analyzing, the hypothesis is put forward that there may not be a trend that is checked based on the *T*-criterion. The hypothesis that there is no trend based on the data obtained on the time series of indicators of the houtholding and communal services sphere is

rejected, which means that there are main trends in the time series that we are studying [8].

In order to characterize the trend of indicators of the houtholding and communal services sphere, developed trend models on the fluctuations of the six main indicators, which used different degrees of multiphads through the analytical leveling method.

The choice of the connecting form of the models can be made on the basis of the criterion, which is taken as the sum of the squares of the deviations of factic values from the values calculated by the trend equation. Through a straight-line connecting set, selected the minimum value of the criterion, which corresponds to it.

To characterize the trend of indicators in the field of houtholding and communal services, developed trend models using various degrees of multiplicity through the analytical leveling method.

On the basis of trend models, the list of indicators of the prospects for the development of the sphere of houtholding and communal services in the Republic of Uzbekistan in 2019–2021, presented as well as the most convenient functions for their calculation (Tab. 2).

**Table 2****Regression models and Forecast indicators of development of the houtholding and communal services sphere in the Republic of Uzbekistan in 2019–2021**

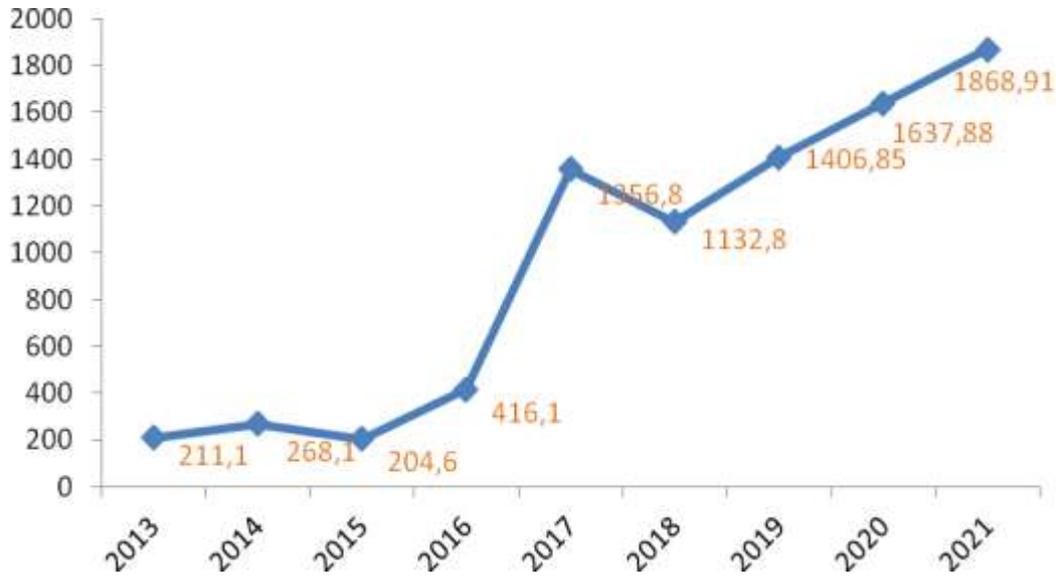
№	Display name	Fashion Model	Years		
			2019	2020	2021
1.	The volume of investment, billion. sum	$x_{vi} = 231,03 \cdot t - 210,36$	1406,85	1637,88	1868,91
2.	Total area of the housing fund, million m <sup>2</sup>	$x_{gf} = 460,611 + 0,047 \cdot x_{vi}$	526,73	537,59	548,45
3.	The volume of electricity transferred to the consumers, million kWt/hour	$y_{etc} = 18,04 \cdot x_{vi} + 3577,08$	13100,4	13275,2	13493,1
4.	The volume of natural gas transferred to the consumers, million m <sup>3</sup>	$y_{ngtc} = 18105,09 - 16,97 \cdot x_{vi}$	9166,5	8982,2	8797,9
5.	The volume of heat energy transferred to the consumers, thousand kcal	$y_{hetc} = 9771,84 - 3,72 \cdot x_{vi}$	7812,4	7772,0	7731,6
6.	The volume of drinking water transferred to the consumers, million m <sup>3</sup>	$y_{dwtc} = 1721,59 - 1,66 \cdot x_{vi}$	847,2	829,2	811,2

The prospect indicators analyzed through the method used in the study indicate that they can be used in practice.

The first three (2 indicators of the influencing factor and 1 aggregate indicator) predicted indicators (1,2,3-models) show that if they show growth in 2019-2021 years under the same norm, without large fluctuations, then the next three

aggregate indicators (2,3,4-models) will have a certain downward trend for the next three years.

Dynamics of changes in the period of 2013-2021 of the calculated indicators for the application of the volume indicator of investments in real estate, which affects the change in the total area of the housing fund for the purpose of practical use of the results of forecast indicators, is presented in Figure 1 the dynamics of changes in the period of 2013-2021



**Figure 1. The volume of investments in real estate in the field of Housing and communal services (billion. sum)**

It is seen from this picture, the volume of financial resources allocated from various sources for the construction and renovation of real estate (funds of enterprises and organizations, bank loans, other borrowed funds, funds of the population, foreign investments and loans, as well as funds of the state budget) is in reality growing year-on-year, on a regular basis. The analysis shows that, the volume of investments in real estate decreased in 2015, rose sharply in 2017 and the volume of investments made in 2018 decreased compared to the previous year. Based on the forecast indicators, the trend of regular growth in the volume of investments in real estate in 2019-2021 years is expected.

The organizational mechanism of management includes management functions, the organizational structure of management, personnel, management techniques and technology, management decisions, the scientific organization of

Labor, the legal basis of management and others. Organizational elements of management include management objectives, principles, functions, methods, techniques, technology and personnel, management structure and information[9, pp. 1-2].

The economic pillars of management rely on economic laws, principles, methods of management, as well as the purpose of economic activity, profit, property relations and other foundations. The economic mechanism of management is aimed at solving specific socio-economic, technological, socio-psychological problems that arise in the process of activity [10, pp. 103-106].

The management system of the sphere of housholding and communal services is made up of a single entity that performs functions interrelated with the functions of other elements by the management element (Figure 2).

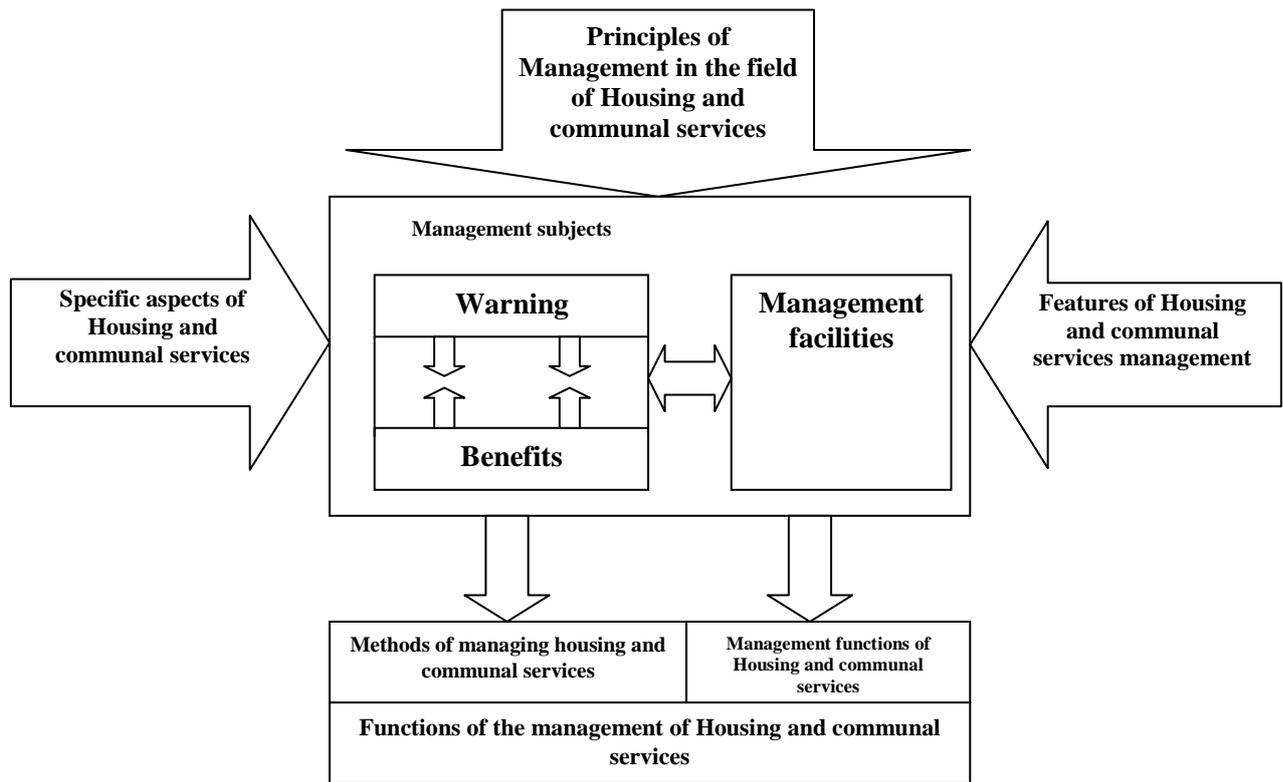


Figure 2. Mechanism of management of the sphere of housholding and communal services<sup>2</sup>

<sup>2</sup> Developed by the author.



The figure shows that, management methods are selected based on the principles of management of the industry, the specific features of services, the characteristics of management.

As a scientific innovation in the study, the Kwin-Rorbax model has been considered from the point of view of selling services in the housing and utilities sector and it shows the level of satisfaction of the interests of each participant of the system.

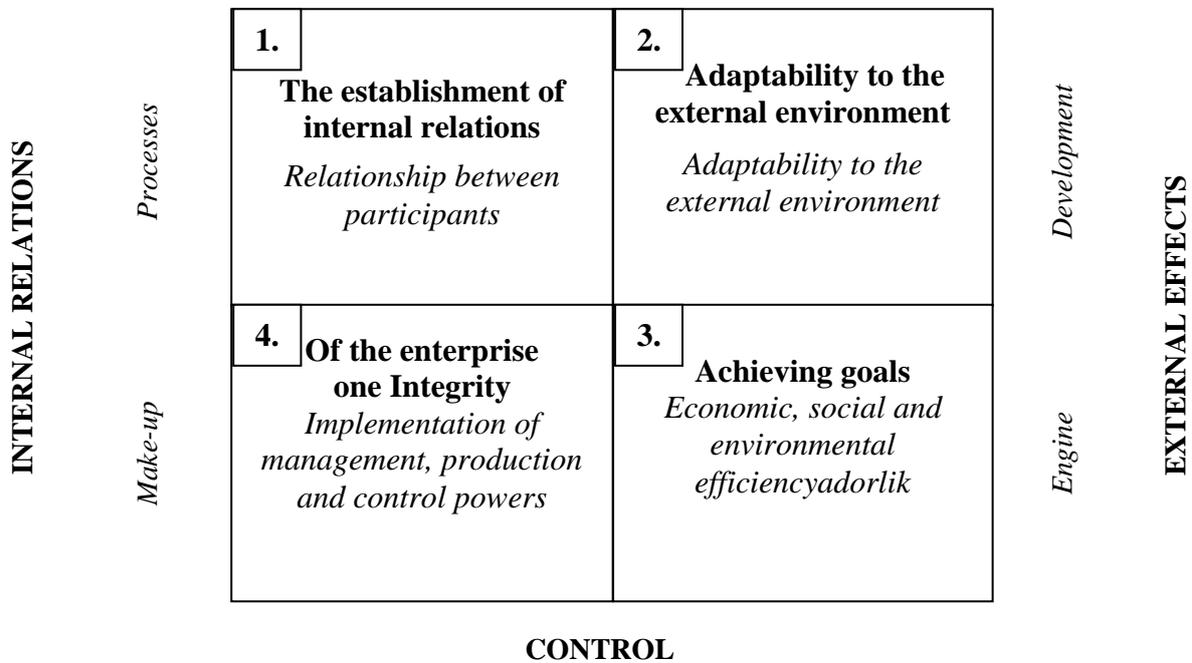
The “competitive values and organizational effectivenessadorlik” model, developed by R.Kwin and J.Rorbach consists of four quadrants consisting of four approaches to organizational effectiveness.

1-quadrant is the establishment of internal relations, which determines the interaction of the participants of the system. In general, the fact that the

sphere of housholding and communal services is composed of participants in large quantities and directions requires clarification of their mutual agreements and relations on the satisfaction of the interests of each of these participants.

2-quadrant is an adaptation approach to the external environment, which, taking into account the characteristics of the network, determines the conditions of competition in the whole system. Given the low investment attractiveness of the housing and communal services sector today, as well as the need to attract large amounts of investment for modernization and development, one can more accurately imagine the importance of this part of the model [11, p. 87].

**FLEXIBILITY**



**Figure 3. Application of the model of “Competitive values and organizational efficiency” of Kwin-Rorbach in the field of housholding and communal services<sup>3</sup>**

<sup>3</sup> Developed by the author.



3-quadrant is an approach to achieving goals, which allows to determine the highest possible results that can be achieved based on the set goals. In the process of creating and providing services in the field of housholding and communal services, participation of a large number of subjects and directions, as well as their relations in economic, technological, social and environmental issues, the model ensures the development of qualified and effective decisions for optimal solution.

4-quadrant is the approach of an enterprise as a whole, reflecting the uniqueness of the management system in the stages of achieving the set goals.

Using a clear system of indicators in determining the effectiveness of organizational decisions in the sphere, the application of the Kwin-Rorbach model ensures an increase in the level of organizational efficiency at the enterprise and, in general, at the system level.

In general, based on the above points and the results of the research, the housholding and communal services sphere and the improvement of the management system in enterprises operating in this system, and in this way the application of modern management models and principles in improving the efficiency of the activities of enterprises and the quality of the services provided will lead.

During the carriage of this research, formulated the following suggestions and recommendations:

- on the basis of econometric analysis of the time series of statistical indicators reflecting the result of the processes in the housholding and communal services sphere in the country, determined trends of changes in the processes. These analyses lead to an increase in the consumption of electricity from communal resources and a decrease in the consumption of natural gas, thermal energy and drinking water, as well as an increase in the tendency of increasing the total area of the housing fund, which affects the change in utility resources ( $Y$ ) supplied to the population consumption [12,13];

- on the base of the analysis of the process of market relations in the housholding and communal services market, developed a model for the implementation of tasks for the formation of market relations in the sphere and recommended to introduce this model in the process of reforms carried out [14,15];

- recommended to use the "Competitive values and organizational efficiency" model of Kwin-Rorbach, which increases organizational efficiency in the sphere of housholding and communal services, in particular, enterprises operating in the field.

Using of the above method of assessing the state of this sphere in the process of reforms carried out in the field of housholding and communal

services in Uzbekistan today leads to the fact that structural changes are addressed to the regions in which they are targeted and where changes are required, and this, in turn, makes it possible to correctly specify the measures to improve the level of improvement of the managed areas.

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