



**ECONOMETRIC MODEL OF PUBLIC UTILITIES BASED ON
MODERNIZATION AND UNIFICATION OF THE ECONOMY-STATISTICAL
ANALYSIS**

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ABSTRACT

this article reveals the improvement of housing and communal services based on econometric models and its economic and statistical analysis and features. Practical suggestions and recommendations for improving the activities of housing and communal services based on econometric models are also provided.

Keywords

econometric model, housing and communal services, services, social sphere, economic and statistical analysis, method of statistical observation, sample observation, unit of observation, sample collection, general collection, statistics.

Introduction. The service sector is an integral part of the modern economy and occupies a key place in the development of its component. It ensures the employment of representatives of various sectors of the economy, helps to increase their free time, provides opportunities for more complete satisfaction and development of the needs of Man and society, serves as an important part of the formation of the quality level of modern life.

The adoption of Decree of the president of the Republic of Uzbekistan -82 "on comprehensive measures to provide quality social service and assistance to the population and establish its effective control system" of June 1, 2023 serves as the basis for the comprehensive development of this area[2].

Therefore, of course, in the development of the field of services in our republic, it is important that the housing and communal services also function effectively. Because, the introduction of new mechanisms into the industry will serve to improve the standard of living of citizens. It is worth saying that today consistent efforts are being made in our country towards the formation of a modern



market for utilities. A number of laws passed in the past period are becoming the legal basis for the progressive discovery of the industry. However, the period of rapid transition dictates the further-improvement and development of the housing and communal sphere.

The issues of consistent development of the utility sector are also expressed in the development strategy" Uzbekistan-2030", i.e."....to build 1 (one) million households in the regions, to supply the number of new Uzbekistan massifs to 100, to build houses for an additional 200,000 families, to build social houses for at least 140,000 families in the Republic. Introduction of the practice of development of general and master plans of districts (cities)into zones of 3 categories (renovation, reconstruction and canning), taking into account the simplified procedure and the proposals of residents and entrepreneurs. Development of the general scheme of population placement. Introduction of new standards on the basis of building safety standards of developed countries on building-structures. Formation of legal grounds governing the construction of multi-apartment houses and other real estate objects on the basis of share entry. The introduction of financial mechanisms for the guaranteed provision of all settlements with clean drinking water and effluent services and etc... "[1], such important tasks are defined. The successful solution of these priorities requires the development of specific measures for the provision of Housing and quality utilities to the population of our republic, improvement of the system of statistical indicators and statistical forecasting of prospects due to increasing the economic efficiency of Housing and communal services.

Review of thematic literature. The place, importance, trends in its development in the field of utility services are being studied on a scientific basis by many leading economic scientists of foreign countries. In Particular, (D.R.Mamashev Alt.state Tech.univercity, BTI. – Biysk: Publishing House of Alt. Tech. university, 2008. – 105 c) the pace and size of the development of communal services, on the one hand, are not independent, but consumers (industry, population, cultural and domestic institutions, etc.) is the magnitude produced by. For example, the development of industry is an urban-forming factor that determines the increase in population in a city. In turn, the pace of housing, cultural and domestic construction also increases. On the second hand, the production sector argues that its dynamics depend more on the development of municipal utilities that provide normal conditions for the labor, marriage and recreation of the population [5].

In his textbook, the state creates a competitive environment in the field of property management, attracts private operators on a competitive basis, remaining the main owners of Housing and communal services to provide consumers with



heat, water and electricity. That is, in this group, state bodies believe that the infrastructure of Housing and communal services can be managed, for example, through a special structure of municipal authorities or through specialized enterprises that are legally subordinate to the authorities[6].

Aksenov P.N. "Improvement of the management system for the development of housing and communal services in Moscow in the context of the transition to market-based management methods" in the monograph, rents in this context are partnerships, that is, contracts aimed at solving problems together. The purpose of utility lease agreements is to improve the quality of services provided. The tenant receives the management and repair of utilities for a period of up to 15 years. The tenant is responsible not only for the management of the system, but also for collecting payments for the services provided. The tariff for services covers not only operational costs, but also rental fees. It believes that the leased facilities will remain the property of the municipality, which is developing an infrastructure development program[4].

Ernazarov G.B. "Effective use of the Municipal Utility System in the context of institutional and structural changes" (Economics and education, 2014, No. 4. – B.36-39) in which the businesses legally subordinate to the municipal government are not only municipal enterprises, but also enterprises in the form of Joint-Stock Companies controlled by Joint-Stock Companies. Enterprises in the form of Joint-Stock Companies form tariffs for services that cover the cost of updating fixed assets, independently determine the program of production and investment. The municipality controls the development strategy of the enterprise as the main owner of the shares in this case[8].

Ernazarov G.B. "The use of advanced approaches to reform of the utility system" (Economics and education, 2017, No. 5. – B.111-114) article is widely used as a contracting work for excellent equipment repair, consumer accounting, etc. For example, in Santiago, the capital of Chile, there are contracts for water supply and network maintenance and computer repair. He argues that competitive relations are formed because each type of contract has at least two contractors[9].

Research methodology. This article examines the issues of economics-statistical analysis, analytical analysis, comparative analysis, usullardan has atrophied. Analyzing the data, he compared utilities with sectoral development, the economy of Uzbekistan, the conditions for planning the economy of Uzbekistan, utilities with the development of sectoral development. Design and implementation of innovative and digital technologies in the Isimizd municipal sphere.

Relevance of the topic. Within the framework of the large-scale reforms carried out in all areas of Uzbekistan, special attention is paid to the development of the social sphere, the provision of housing for the population. The fact that the



population is not fully provided with housing, there is no provision of quality utilities in the future creates the need for further development of this area. In this regard, in the new Uzbekistan development strategy for 2022-2026 "...Development of the general scheme of population placement. Under the renovation and housing programs, more than 19 million square meters of modern housing will be built in cities instead of dilapidated houses, creating conditions for the migration of more than 275 thousand families to New massifs ... "[3], such important tasks are defined. The successful solution of these priorities requires the development of specific measures for the provision of Housing and quality utilities to the population of our republic, improvement of the system of statistical indicators and statistical forecasting of prospects due to the increase in the economic efficiency of Housing and communal services.

Main part (analysis and results). The development of scientific-based proposals and practical recommendations aimed at improving the activities of Housing and communal services in our republic on the basis of econometric models and conducting economic-statistical analysis, comprehensive statistical assessment of factors affecting the activities of the industry and improving its economic efficiency is one of the pressing issues of today.

Despite the fact that small networks of Housing and communal services differ among themselves, they are characterized by a number of distinctive features: a large territorial distribution and a large number of system-forming elements; continuous development by territory and time; a multi-dimensional composition of managed and managing systems and the direct presence of a subject in the control contour; time continuity of management processes; slowness of management processes.

The management of Housing and communal services is carried out by changing the composition and parameters of its individual sub-networks.

The continuous development of the city and its small systems, manifested in the change in the number and quality of products of consumers of Housing and communal services, as well as their parameters, leads to a continuous change in the requirements for them, in turn, operating and management regimes. Thus, the task of managing the housing and communal services is to compensate for the change in the composition and parameters of consumers of the products and services of the housing and communal services by changing the composition and parameters of the small systems of the housing and communal services management.

The task of the decision-making entities or individual is to assess the state of Housing and communal services, to express the goal of management if this goal does not satisfy it, and to make a decision on the influence of the manager U^* . To assess the urban environment of the housing and communal services, it receives

information $J=(X, \tilde{Y}, \tilde{Z})$, which describes the situation that occurred and lies on the basis of the management process. Since information is incomplete and complex for complex systems such as housing and communal services, decision-making entities or individuals cannot represent a single criterion, which creates the need for Vector optimization.

Therefore, the criterion $J(S, \beta_c)$ is a vector. In automated systems of municipal management, it is different from the vector that the vector management system* develops, since at the time of decision-making, the decision-making entities or the individual have the opportunity to take into account all the additional information. In accordance with the principles of systematic analysis, we offer the following schematic view of the housing and communal services model (Figure 1):

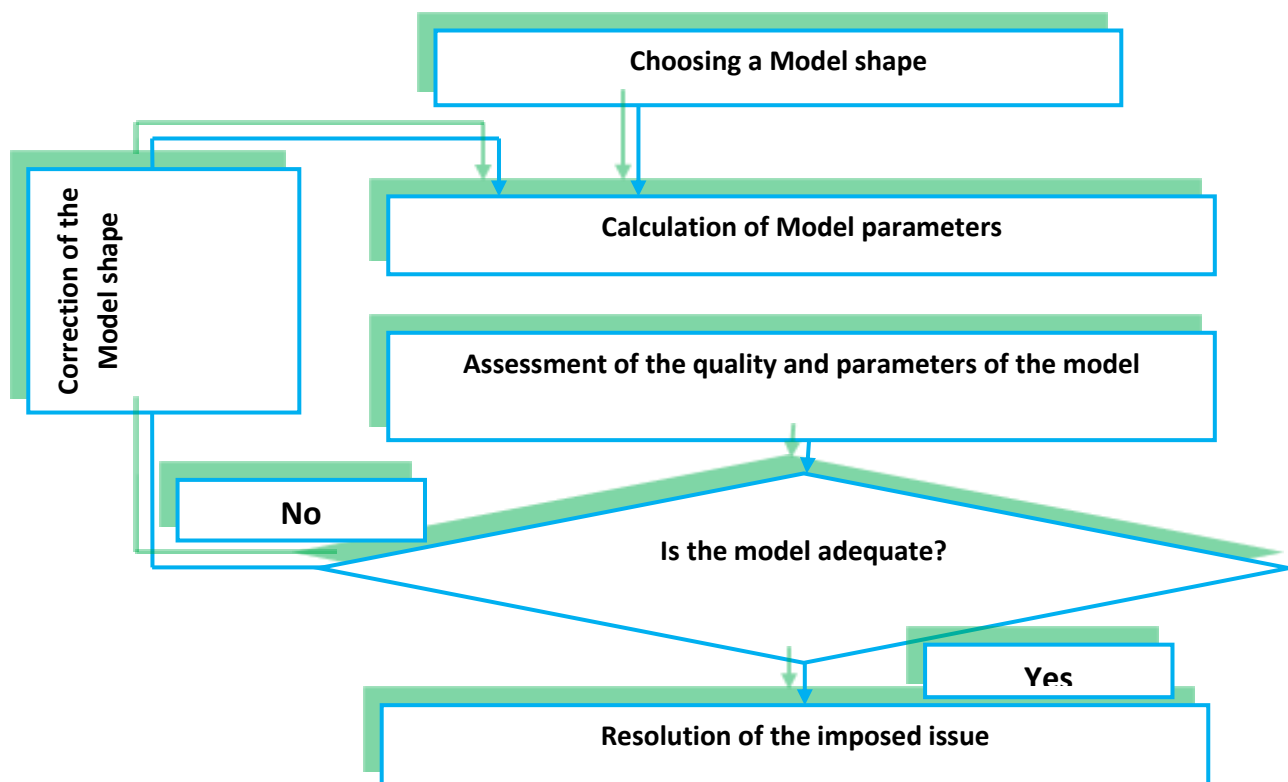


Figure 1. Algorithm for constructing econometric modeling of housing and communal services

Building econometric models:

1. Important factors are distinguished that are included in the econometric models of Housing and communal services.
2. In order for econometric models of Housing and communal services to be adequate (correct), their appropriate form is selected.
3. Econometric models of Housing and communal services the method of Least Squares is used to assess parameters and its quality is checked.



4. Checking the suitability of the econometric model of Housing and communal services makes it possible to determine the possible defects of adaptation and their causes. If such defects are not detected, the econometric model of Housing and communal services is prepared for use. If certain inconsistencies have been identified, the iterative cycles of match homogenization, evaluation, and verification are repeated until a suitable manifestation of the housing and communal economy econometric model is found.

In conclusion, methods of a programmatic-targeted approach are used in the successful solution of complex tasks related to the development of Housing and communal services of the Republic. During the program-targeted approach, problems are solved in a complex way, and not in terms of individual small networks, organizations, or multiple units of management. Such an approach implies the study of the problem on the basis of systematic analysis.

The final product, which is capable of meeting certain needs of the national economy or society as a whole, and not parts of the product that are built within separate sectors in a targeted manner, is the starting point. Thus, the main task of software-targeted regulation is to achieve the specified final goal. Long-term targeted regulation of the economy is a creative process.

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