



WAYS TO IMPLEMENT AN ELECTRONIC BUSINESS INFORMATION DATABASE IN THE MANAGEMENT OF PUBLIC UTILITIES

Khujakulova Maftuna Kurbonaliyevna

Master's Student at the University of Economics and Pedagogy

Abstract: *The study involves developing scientific proposals and practical recommendations for creating a cluster-based information system for housing and communal services in the context of digital transformation during the comprehensive reform of the economy.*

Keywords: *Information and communication technologies, Electronic business, Information database, Communal services.*

Introduction: In the current development of the global economy, one of the key sectors of service provision is communal services. Enhancing the quality of communal services necessitates the use of information and communication technologies (ICT). In the context of digital transformation, the relevance of this topic is underscored by the need to develop a cluster-based information system for housing and communal services, as well as by the level of application of modern forms of ICT in settlements. Considering the insufficient quality of service provided by communal enterprises, improving service quality through the use of ICT highlights the importance of this issue.

Introduction: In the current development of the global economy, one of the key sectors of service provision is communal services. Enhancing the quality of communal services necessitates the use of information and communication technologies (ICT). In the context of digital transformation, the relevance of this topic is underscored by the need to develop a cluster-based information system for housing and communal services, as well as by the level of application of modern forms of ICT in settlements. Considering the insufficient quality of service provided by communal enterprises, improving service quality through the use of ICT highlights the importance of this issue.

In the context of digital transformation, significant attention is being paid to scientific research on improving the theoretical and methodological foundations of digitizing the management system for communal services, as well as enhancing the quality of communal services through innovative approaches that utilize ICT, taking into account the processes of digital transformation and improving methods of managing communal services.

According to the World Bank, 60% of the world's population does not use the Internet, either due to lack of access or insufficient financial resources. Only 15% of the global population has access to broadband Internet services. In



developed countries, mobile phones are the primary means of Internet access, covering 80% of the world's population; however, nearly 2 billion people still do not use mobile phones.

The development of communal services in regions is closely linked to the advancement of ICT, which in turn contributes to the digitalization of all economic systems and the emergence of a new type of system: electronic (digital) payment systems. Examining the research of foreign scholars on the development of control mechanisms for electronic payment systems, the institutional aspects of financial market activities that directly influence the formation of payment systems are analyzed in the study by Russian scientist YE.G. Khomenko. He emphasizes that the efficiency of processing information about communal payment systems, the speed of payment operations, and the continuity of communal payment settlements are among the essential characteristics of any payment system.

The American scholar M. Drabenstott identified five critical issues in the socio-economic development of rural areas in the United States, one of the most developed countries in the world, although these issues are also applicable in many other contexts:

1. Transition to digital technologies.
2. Encouraging entrepreneurship.
3. Utilization of new agro-industrial complexes.
4. Improvement of human capital.
5. Support for the rural environment.

In the works of Y. Benkler on the "Digital Economy" and D. Tapscott's research on the so-called "digital economy," we can observe the concepts advanced in these areas. For example, in the studies of foreign economist N. P. Grozdanovich, the sustainable development features of "Smart Villages" are described, including efficient land use, purposeful use of residential areas, creation of walking and cycling paths, preservation and development of recreational areas, transport engineering, increasing the accessibility and economic efficiency of governance for citizens, the application of smart solutions for sustainable development, and other related directions.

In his Address to the Oliy Majlis on January 25, 2020, the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, emphasized: "Active transition to a digital economy will be one of our most important tasks for the next five years. Although our country rose to 8th place in the 'International ICT Development Index' in 2019, we are still far behind. Most ministries, agencies, and enterprises are completely detached from digital technologies, and this is indeed true."



For this reason, it is crucial to thoroughly study information systems and technologies to achieve high levels of development. This provides us with the opportunity to achieve progress in a short period. Indeed, digital technologies are rapidly penetrating numerous sectors across the globe today.

In order to further develop the digital economy in the future, the Government of Uzbekistan has set the task of developing the “Digital Uzbekistan–2030” program. The program defines the main principles and procedures for developing the digital economy, as well as the levels, networks, and functions of various sectors and regions.

In particular, facilities providing communal services are considered an integral part of any advanced economic system. One of the strategic objectives outlined in Uzbekistan’s long-term socio-economic development program until 2035 is the need to digitalize the economy to establish market relations and ensure the socio-economic balance of society.

Digitizing the management system of communal services is crucial for improving the efficiency of the sector in the regions. Digitization of communal service management helps prevent unnecessary costs and time expenditures, reduces the level of the shadow economy, and enhances the quality of the services provided. Digitalization allows communal services to be produced at very low cost and sold with great ease.

Moreover, the concept of the “New Service Economy” can now be characterized by services that are no longer tied to a specific economic sector or large-scale operations. It is increasingly difficult to distinctly analyze or understand the boundary between industry and services. Additionally, digitizing communal services reduces or eliminates their dependence on physical location, making service provision more flexible and accessible.

The global rankings and indices reflecting an economy’s readiness for digitalization include the following (Figure 1): Ease of Doing Business Ranking; Digital Competitiveness Ranking; ICT Development Index; Networked Readiness Index; Global Innovation Index; Global Cybersecurity Index; Digital Development Index; E-Government Development Index; Global Competitiveness Index; and the Human Development Index (UNDP).

Uzbekistan’s relatively lower performance in these digitalization indicators can be explained by the slow development of the information infrastructure, limited investments, underdeveloped regulatory and legal frameworks, the inconsistent participation of the country and businesses in the application of information systems and technologies, insufficient knowledge in the use of Internet systems and technologies, low functionality of Internet resources in regions, and limited public trust.



The digitalization of communal services in the regions requires the search for promising methodological tools for organizational, economic, and management relations using ICT. In our view, if key communal services—such as electricity, gas, water, and heat supply, as well as waste management—are digitalized, it will enable these services to better meet the needs and demands of the population.

There are several interpretations of the term “communal services.” It is defined as “communal services are services aimed at improving living conditions in residential areas for citizens, including electricity, cold water supply, hot water supply, sewage, waste management, gas supply, and heating.”

Digital communal services are expanded communal services that utilize modern digital technologies at the macro level, based on the development of models for evaluating the effectiveness of digital platform usage. Digital communal services have a distinctive internal structure and represent a methodological apparatus for providing services efficiently through digital platforms.

The transition of communal service management to a digital platform represents a business model for communal services, providing well-coordinated and efficient service delivery. The platform enables consumers and service providers to establish trust ratings, identify counterparties, conclude agreements, and carry out transactions, thereby accelerating interactions.

To monitor the digital economy, support management decision-making, and make adjustments to strategies and roadmaps, a comprehensive program called the “National Index for Digital Economy Development” has been developed for EU countries and Turkey.

CONCLUSION

1. Although many scientific studies have been conducted by foreign and Uzbek economists on the innovative development of the housing and communal services sector, its theoretical foundations have not yet been fully developed.

2. In defining the concept of innovative communal services, attention has been paid to the components of innovative services based on current requirements, with particular emphasis on their key functions.

3. In the context of the digital economy, the development of the housing and communal services sector is closely linked to innovative technologies, leading to the formation of new services that meet contemporary demands.

4. To provide the population with high-quality communal services, extensive work is needed to modernize communal services, introduce new approaches, and establish innovative service enterprises.



5. The modern requirements of communal services emphasize the structural components of innovative indicators. Differences between urban and rural communal service provision have been identified, with particular attention given to their main functions. The economic and legal foundations for the innovative development of the housing and communal services sector have been developed.

6. Taking into account the specific characteristics of housing and communal service enterprises, an improved model for the innovative development of communal services in the country's regions has been developed. This model is based on theories of effective use of communal resources and prompt, positive decision-making.

REFERENCES:

1. Speech by the President of the Republic of Uzbekistan Shavkat Mirziyoyev at the videoconference on the development of the service and domestic tourism sectors, June 16, 2020.

2. Speech by the President of the Republic of Uzbekistan Shavkat Mirziyoyev in the Address to the Oliy Majlis, January 25, 2020.

3. Decree No. PK-4351 of the President of the Republic of Uzbekistan, June 4, 2019, “On additional measures to improve the efficiency of work in the field of settlement development.”

4. Рахимов, А. Н., Махматкулов, Г. К., и Рахимов, А. М. (2021). Построение эконометрических моделей развития сферы услуг для населения региона и их прогнозирование. Американский журнал прикладных наук , 3 (02), 21–48.

5. Равшанова Мухайё Махманазаровна (2025). Навыки, необходимые для выполнения двухфакторного эконометрического анализа. Европейский международный журнал педагогики , 5 (01), 50–53.

6. Rakhimov A.N. & Jo'raev F.D. (2022). A Systematic Approach To The Methodology Of Agricultural Development And The Strategy Of Econometric Modeling. *resmilitaris*, 12(4), 2164-2174.

7. Juraev F.D.S. (2021). Problems Of Informatization Of Management Of Agricultural Industry And Modeling Of Agriconomic System In A Market Economy. *The American Journal of Applied sciences*, 3(02), 49-54.