AMERICAN JOURNAL OF MULTIDISCIPLINARY BULLETIN
ISSN: 2996-511X (online) | ResearchBib (IF) = 9.512 IMPACT FACTOR
Volume-3| Issue-11| 2025 Published: |30-12-2025|

EFFECTIVE ORGANIZATION OF LOCAL GOVERNMENT IN DEVELOPING THE DIGITAL ECONOMY

https://doi.org/10.5281/zenodo.17988790

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Abstract

This article presents the essence of organising local self-government in the context of the digital economy's development, the nature of the local self-government system, the connection between the digital economy and local self-government, global trends in the digital economy, the restructuring of local self-government in accordance with the requirements of the digital economy, a comparative analysis of traditional and digital governance systems, a model of interaction between the digital economy and local self-government, as well as the scientific and economic content of the digital economy.

Keywords

digital economy, local self-government, traditional government, digital government, system, trend, reform, comparative analysis, e-government, information flows, platform, database, efficiency, institutional approach, econometric approach, transformation.

INTRODUCTION

In the 21st century, the digital economy is considered one of the key drivers of global economic growth. According to the World Economic Forum (WEF) [1], "by 2024, the digital economy accounted for more than 17% of global gross domestic product, and this figure is expected to reach 25% by 2030." Digital technologies are penetrating deeply into all spheres of economic activity—namely, production, services, finance, education, and public administration. Studies by international organisations (OECD, UNCTAD, World Bank) [1–5] identify the following as the principal advantages of the digital economy:

- increasing production efficiency through the freedom and speed of information flows;
- creating new markets and types of services via digital platforms;
- improving the quality of decision-making by using data as a strategic resource.

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The OECD's Digital Government Framework emphasises that the digital economy is not merely a technological shift, but a process of reshaping societal relations. These changes compel the public sector - especially local governance - to operate in a new format. At the same time, the growth of the digital economy has intensified competition among national economies. Data-driven economic models, artificial intelligence, and automated decision-making systems have now become integral to economic policy. This, in turn, requires a renewed functional approach at the local level of public administration as well.

The local governance system is a key connecting link in ensuring a country's socio-economic stability, meeting public needs, and implementing regional development policy. This system reflects the "human face" of the state at the grassroots and serves as the practical point of economic activity. Under modern conditions, the importance of local governance is increasing in two main respects:

First, under the influence of the global digital economy, state functions are increasingly shifting from the centre to the regions (decentralisation). This process requires local bodies to have the capacity for independent decision-making, digital service delivery, and data management.

Second, as the digital culture of the population and businesses continues to grow, local governance must operate on the basis of electronic engagement with the public and digital accountability.

In Uzbekistan, local governance bodies (khokimiyats, the mahalla system, and district/city councils) serve as a crucial platform for the development of the digital economy. They should be seen not only as administrative authorities, but also as actors that create a digital services ecosystem. To achieve this, the organisational, legal, and economic mechanisms of local governance must be reviewed and redesigned in line with the requirements of the digital economy.

The link between the digital economy and local governance can be described as a two-stage process:

- organisational and infrastructural linkage, i.e., digital infrastructures (internet, electronic document management, databases, information systems) determine the effectiveness of local governance. For example, an integrated data platform can enable automated economic analysis across districts and regions;
- economic and institutional linkage, i.e., the digital economy redistributes local governance functions. For instance, through e-government services, processes such as tax payments, land resource management, or registration of entrepreneurial activity can be conducted fully online.

Together, these two factors form a "digital governance ecosystem." Data lies at its core, and local governance makes decisions on that basis. This approach is

commonly referred to as data-driven governance or evidence-based management, and it is currently used in many countries as a central model for shaping regional policy. In this regard, the digital economy leads not only to technological change in local governance, but also to its institutional modernisation. Governance processes are restructured into a systematic format where decision-making speed, transparency, and results orientation take priority.

Global trends in the digital economy demand profound change within local governance systems. Modern models of digital governance make it possible to accelerate regional economic development, establish effective dialogue with the public, and deliver public services in an open format. Today, the traditional hierarchical model of public administration is undergoing rapid transformation. This calls for new mechanisms such as data-based decision-making, the adoption of artificial intelligence, and stronger citizen participation. Many countries - such as South Korea, Estonia, Finland, Singapore, the United Kingdom, and others - have significantly improved service delivery efficiency by digitising local governance systems. In particular, "as a result of Estonia's 'e-Governance' model, 99% of local services are delivered online, which has strengthened mutual trust between the population and the state."

Modern digital governance models enable faster regional economic development, effective public engagement, and the delivery of public services in an open format. Among such models, approaches such as smart governance, open government data, digital-by-default, and citizen-centric management are of particular importance. These approaches ensure remote service delivery through interactive platforms while taking citizens' needs into account. In this way, the relationship between the state and society is shifting from "one-way administrative control" to a relationship of "mutual partnership."

LITERATURE REVIEW

In global economic literature, the concept of the digital economy is interpreted simultaneously as an economic category and as an economic system in practice. The term was first introduced into academic discourse in 1995 by D. Tapscott [6] in *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*, where he emphasised "that digital technologies fundamentally change the nature and structure of economic relations." Subsequently, this concept developed across different schools of economic analysis - namely institutional, innovation-based, and econometric approaches.

The scientific and methodological foundations related to the digital economy and the formation of an information society - its types and influencing factors - occupy an important place in global economic thought. In this direction, in-depth

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studies have been conducted by a number of foreign scholars, including D. Bell [7], B. Gates [8], P. Drucker [9], R. Jensen [10], M. Castells [11], K. Schwab [12], N. Negroponte [13], H. Lane [14], and others. They define the digital economy as a hallmark of a new industrial civilization - namely, a post-industrial economic system built on intellectual resources and data. Within these approaches, the digital economy is not merely the "digitalisation" of economic activity; rather, it implies the fundamental transformation of all institutions of society - production, consumption, governance, and social relations (Table 1).

N	Author	Definition
1	Negroponte, N.	The absence of physical weight in products exchanged through volume of information; the low cost of resources required to uce electronic products; the substantially smaller physical rint of such products; and the fact that goods can be moved st instantaneously via the Internet.
2	Lane, H.	The digital economy is a flow of information and technologies through the convergence of computing and communication ologies on the Internet and the development of e-commerce, ulates major organisational changes.
3	Ivanov, V. V.	The digital economy is a virtual environment that complements ness reality.
4	Boyko, I. P. vich, M. A. hkin, A. V.	We understand the digital economy as a set of activities based igital technologies, as well as the infrastructure that enables the ioning of digital technologies. In this context, digital ologies should be understood as technologies associated with ing, collecting, processing, storing, and transmitting information gh digital systems.
5	Bondarenko, V. M.	The digital economy is a holistic, systemic, and complex enge of identifying a model of relations between people that sponds to the technologies of the Fourth Industrial Revolution; is, it requires designing, developing, and implementing gements in which digital technologies and other advanced 21st-ry technologies enable actors to achieve defined objectives.
6	Bukht, R. s, R.	The digital economy is the share of total output produced ly or predominantly through digital means by firms whose ness models are based on digital products or services.
7	Gasanov, G. A. nov, T. A.	The digital economy is a system of institutional categories eptual constructs) in the economy, grounded in advanced tific achievements and advanced technologies - first and host, digital information and communication technologies - se functioning is aimed at increasing the efficiency of social uction, maintaining sustainable economic stability, and oving citizens' welfare and quality of life.
8	Tkach, V. I.	The digital economy is a structured world of people,

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N	Author	Definition
		nesses, and things, oriented towards the use of intellectual al and towards the sustainable economic development of erty and gross domestic product at global, macro-, meso-, and o-levels.
9	Gulyamov, S. S. ov, R. Kh. baeva, G. R.	The digital (electronic) economy is an economy distinguished e use of information, including personal information, to satisfy eeds of all participants to the maximum extent possible.
10	Golovenchik, G. G.	The digital economy is a system of technologies operating n the global information space that, through extensive use of al networks, creates digital forms and mechanisms for ucing products and services and delivering them for umption, while driving continuous innovative changes in gement methods and technologies in order to increase the ency of social, cultural, economic, and technological interactions een the state, the business community, and citizens, as well as der socio-economic processes.
11	Abdullaev, O. M. khov, A. A. medov, K.	The digital (electronic) economy is a set of relations arising in rocesses of production, exchange, and consumption that is d on online technologies and aimed at meeting needs for tial goods and services; this, in turn, implies the formation of methods of economic management and requires practical uments of state regulation.

Table 1 compares how different scholars conceptualise the term "digital economy." For instance, N. Negroponte explains the digital economy through the absence of physical materiality that distinguishes it from the traditional economy, and through a data-driven low-cost production model. In contrast, H. Lane interprets it as the convergence of computing and communication technologies - namely, a process of e-commerce and organisational change within the Internet environment. V.V. Ivanov [16] views the digital economy as a "virtual environment that complements real life," implying the relocation of economic activity from the real sector into the digital space.

METHODOLOGY

At the first stage of the study, a theoretical and analytical method was applied. The essence of the local governance system, its traditional forms, and the transformation processes under conditions of the digital economy were analysed on the basis of scholarly sources. In this stage, the interrelationship between local governance and the digital economy, as well as their institutional and functional dimensions, were examined in depth.

At the second stage, a comparative analysis method was used to compare the advantages and limitations of the traditional governance system and the digital

governance system. This analysis provided a scholarly rationale for the necessity of adapting the local governance system to the requirements of the digital economy.The study also employed a systems approach, viewing local governance as an important structural component of the digital economy. Through this approach, the mechanism of interaction between the digital economy and local governance was analysed, including the impact of information and communication technologies on governance efficiency and the digitalisation of decision-making processes.

In addition, inductive and deductive methods were used to generalise cases of implementing digital technologies in specific regions and within local governance practice, and to formulate overarching scholarly conclusions. Moreover, a comparative method was applied to examine global trends in the development of the digital economy.

DISCUSSION AND RESULTS

Reshaping the local governance system in line with the requirements of the digital economy is not merely a technological reform; it represents an обновление of governance culture and philosophy. A modern digital governance system overcomes the ограниченные capacities of traditional administrative methods, accelerates decision-making processes, and enhances the transparency of services for citizens. Therefore, during the transition from traditional governance models to digital governance models, it is crucial to undertake a scholarly comparison of their organisational and economic differences.

To provide a rigorous analysis of the interaction between the digital economy and the local governance system, it is necessary to present their structural linkages and functional relationships in a systematic form. The digital economy is not only a macroeconomic phenomenon; it is increasingly becoming a new foundation for economic governance at regional and local levels. Consequently, its infrastructural, technological, and data-driven mechanisms exert a profound influence on the organisational functioning of local governance.

Within the institutional approach, the digital economy is viewed as a set of new institutions that reshape relationships among economic actors. Here, the primary focus is on reducing transaction costs and eliminating information asymmetry through digital institutions (online markets, platforms, data centres). As the OECD emphasises, “the institutional value of the digital economy lies in enabling interaction between the state, business, and society through digital mechanisms. This forms a ‘government–business–citizen’ (G2B2C) model, transforming traditional vertical governance into a horizontal, interactive system.”

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The econometric approach, by contrast, assesses the impact of the digital economy on economic growth using precise quantitative indicators and correlation–regression models. According to McKinsey Global Institute estimates, "a 1% increase in the digital economy leads to approximately a 0.4–0.6% rise in a country's gross domestic product." In other words, digital capital and data flows are emerging as a new factor of production driving economic growth. This aligns with the "resource-based view" in institutional economics: data and digital infrastructure are now increasingly regarded as strategic resources alongside physical capital.

A comparative analysis of these two systems across key criteria is presented in the table below (Table 2).

Table 2

Comparative analysis of traditional and digital governance systems

Organisational and economic criteria	Traditional governance system	Digital governance system
Data repositories and circulation	Based on paper documents, statistical reports, and manually maintained records.	Through electronic databases and real-time data collection and analytics systems.
Decision-making approach	Relies on intuition, experience, or reports that are delayed in time.	Relies on a data-driven approach supported by artificial intelligence and analytics.
Inter-agency coordination	Vertical governance; information exchange is slow and bureaucratic.	Rapid information exchange through platform integration and application programming interfaces (APIs).
Citizen communication channels	Applications are submitted on paper; reception days and physical presence are required.	Interactive engagement via e-portals, chatbots, mobile applications, and social media.
Accountability	Reports are	Open data and online

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and transparency	prepared manually; information is open to a limited audience.	monitoring systems are implemented.
Performance assessment	Subjective approach; outcomes are not tied to clear metrics.	Assessed using key performance indicators (KPIs) and results-oriented evaluation systems.
Resource efficiency	High consumption of paper, time, and human labour.	Resources are saved through automation and electronic workflows.
Level of innovation	Innovations depend on administrative initiatives and are introduced manually.	Continuous improvement based on "smart" solutions and artificial intelligence.
Organisational structure	Hierarchical and centralised.	Decentralised, networked, and interactive.
Social impact and public participation	Citizens' input is largely passive, limited to consultation.	Co-created solutions and e-participation enable active citizen involvement in public decision-making.

A structured chain of interaction links the digital economy - driven by technologies, data, and innovations - to digital infrastructure and platforms (e-government, data hubs, AI systems, and IoT), which in turn strengthen the local governance system (mahalla, and city/district councils). This foundation enables a digital decision-making process based on economic analysis, public participation, and efficiency, ultimately improving regional development performance through greater innovation, stronger openness, and higher citizen satisfaction.

The core drivers of the digital economy - data, innovation, and technology - influence local governance and, through it, directly shape the process of economic decision-making. This influence operates through both enabling infrastructure and institutional change, ultimately affecting regional development outcomes.

It is evident that the key factors of the digital economy - data, innovations, and technologies - directly affect the economic decision-making process through the

local governance system. This impact is manifested in two directions: first, infrastructural impact**,** i.e., automating data flows through e-government systems and data centres; second, organisational and institutional impact, i.e., introducing open governance models that ensure citizen participation.

At the same time, the interaction between the digital economy and the local governance system is two-sided. On the one hand, digital technologies increase the efficiency of local governance processes; on the other hand, the local governance system determines how the digital economy is implemented in practice. For example, developing information infrastructure at the regional level, introducing an electronic document management system, and providing interactive services to citizens depend on the initiative and organisational capacity of local authorities. Therefore, for the digital economy to develop effectively, local governance actors should operate not only as service providers, but also as initiators of digital innovation.

As a result, the local governance system performs not only an administrative control function, but also serves as a driver of economic development. In this process, data-driven governance and open data policy are increasingly becoming key criteria that determine the effectiveness of regional development.

In recent years, the international community has recognised the digital economy as one of the main factors of sustainable development. In this area, international organisations such as the OECD, UNCTAD, the World Bank, and research centres such as the McKinsey Global Institute, together with national governments, have conducted fundamental analyses of the digital economy and digital governance. Their reports and strategic documents provide academically grounded explanations of the essence of the digital economy and its impact on public administration, local development, and social institutions.

The OECD's *Digital Government Index* report emphasises that the digital economy represents a new stage in public administration. It states that "digital transformation is not only about technology; it involves rethinking the role of government in delivering public value through data, openness, and collaboration." From this perspective, the digital economy does not simply mean equipping governance with electronic tools; it requires the introduction of new governance norms based on data and transparency.

UNCTAD's *Digital Economy Report* interprets the digital economy as "a new form of global economic integration through data flows and digital trade." According to the report, by 2025, data-related activities will account for more than 20% of global GDP. This indicator suggests that the digital economy has become

one of today's key growth drivers, alongside traditional manufacturing and the financial sector.

The World Bank evaluates the digital economy as a strategic direction for economic stability and inclusive growth. The report notes that "digital government platforms contribute to regional development by increasing efficiency, accountability, and service quality at the local level." This is particularly relevant from the perspective of local governance, as it shows that digital platforms form a core infrastructure for regional development.

Uzbekistan's "Digital Uzbekistan – 2030" strategy also defines this direction as a national priority. The strategy clearly outlines four pillars of digital economy development: digital infrastructure, digital public services, digital administration, and digital citizen culture. These elements can be viewed as a national adaptation of the internationally recognised "digital government ecosystem" model.

Although the concepts of the "digital economy," "digital governance," and "e-government" are used in academic literature as interrelated, they differ in content and function:

Digital economy refers to a system of economic processes that relies on digital technologies, data flows, and digital platforms. Its foundation is activities related to creating, processing, and transmitting data. According to the OECD, the digital economy is the part of the economy that depends on digital data, infrastructure, and digital services.

Digital governance implies organising the activities of the state and public sector effectively on the basis of digital technologies. Unlike e-government, it covers not only electronic services, but also data-driven governance, open data policy, and citizens' electronic participation. Thus, digital governance is the practical expression of the digital economy within the public sector.

E-government is a system for delivering public services in digital form. It primarily focuses on the technological side of governance by providing user-friendly interfaces, online services, and data exchange for citizens and businesses. E-government is the first stage of transition toward digital governance and later forms a broader digital governance model.

These three concepts form an integrated system: e-government is the technological basis of digital governance; digital governance is the institutional mechanism of the digital economy; and the digital economy is the broader macroeconomic environment and the foundation of innovation-driven development.

CONCLUSION

The scientific and economic content of the digital economy shows that it is not merely a sphere of economic activity, but a new governance model built on institutions, technologies, and data. The digital economy represents a new resource system grounded in data, and its effective functioning directly depends on the level of digital transformation within the local governance system. Therefore, many studies provide detailed academic analysis of the essence of digital transformation and its influence on structural changes in local governance.

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