

A.M. Imanbekova^{1*}, H.M. Fyliuk², E.A. Stavbunik³

^{1,3} Karaganda University of Kazpotreboysuz, Karaganda, Kazakhstan;

²Taras Shevchenko National University of Kyiv, Ukraine;

¹imanbekova2006@mail.ru, ²gfiluk@ukr.net, ³sea826@yandex.kz

¹<https://orcid.org/0000-0002-9712-408X>; ²<https://orcid.org/0000-0001-8671-5709>

³<https://orcid.org/0000-0001-8030-9857>

²Scopus ID: 57202011000, ³Scopus ID: 57190222571

Some aspects of digitalization on public administration

Abstract

Object: Public administration's digital transformation is examined in this paper.

The study's goal is to better understand how public administration organizations are changing in order to streamline administrative decision-making procedures.

Methods: This study examines the effects of digitization on public administration systems through an interdisciplinary approach that offers an evaluation of socio-economic processes. The organizational features of Kazakhstan's public administration's digitization are the study's focus.

Findings: The writers of the suggested scientific work provide the primary directions of public administration's digital transformation while concentrating on the key components of the concept of “digitalization of public administration” and analyzing the key indicators of this process in Kazakhstan.

Conclusions: In the contemporary digital era, the delivery of public services should remain centered on meeting the requirements of citizens and businesses. Simultaneously, digitalization introduces novel tools and procedures that streamline and enhance the convenience, accessibility, comprehensibility, and safety of traditional approaches.

Keywords: Public administration's digital transformation, the number of fixed Internet subscribers, the population's degree of digital literacy, electronic public services.

Introduction

In the modern conditions of economic development of the Republic of Kazakhstan, one of the fundamental points is the awareness and construction of such new information and digital foundations, thanks to which it would be possible to reach the leading international positions. The information and digital breakthrough and accelerated economic development of Kazakhstan will allow for painless and compatible integration with the unified international information and digital economic space. In addition, the importance of laws and initiatives related to informatization, such as “Information Kazakhstan 2020” and “Digital 2025” become clear in this perspective (Sadykov, 2022). These laws and government initiatives represent the process for creating, utilizing, and safeguarding digital resources and information systems, as well as state regulation in the digitalization space.

Digital technologies are becoming necessary tools for performing everyday routine actions that allow a person to be freed to perform creative work, conduct consultations, create a new information product to improve the economic, political and cultural life of society (Tovma, 2021).

There is a number of options for transforming government structures to reduce administrative decision-making time and deliver public services while taking information security into account (Economy Profile, 2019):

1. E-Government capable of ensuring cybersecurity at both national and international levels;
2. E-Government that is able to take timely measures to prevent and address negative consequences;
3. E-Government able to integrate its functions with different sectors of society to bridge the digital divide.

In the new reality, countries face problems from the expansion of the digital economy and the digitalization of public administration.

* Corresponding authors E-mail: imanbekova2006@mail.ru

Interaction between citizens and government agencies is increasingly moving to electronic platforms. Many functions related to information, advisory, creative and managerial nature in manufacturing and trading enterprises are carried out using electronic document management and digital signature.

The progression of a nation is increasingly reliant on information and communication technologies, driven by the scale-related benefits in generating, processing, utilizing, and transmitting extensive data. Additionally, the network effect plays a crucial role, leading to a compounding enhancement in the utility of the network as its user base expands, creating an exponential impact.

Novel business models emerge as a result of the ubiquitous integration of information and communication technology across various spheres of life and the commercial operations of market participants. These models contribute to the integration of offline and online communications between different participants in economic relations, which requires the development of completely new management methods in enterprises, public organizations and government institutions.

The issue of this study is the process of digital transformation of public administration, as the global problems associated with the development of digital technologies are getting worse.

Literature Review

Despite being a relatively new area of study in economics, the idea of “digitalization” has been extensively studied by researchers from both domestic and international universities.

Prominent foreign scholars, including Margherio, L., Brynjolfsson, E., Kahin, B., and others, have extensively addressed the matters pertaining to the digitization of public administration in their foundational works. Reviewing materials and publications on this subject leads to the observation that current theories are focused on the identification and description of digitalization within the realm of public administration.

The contributions of Kazakhstani and Russian scholars to this issue are well-recognized, including the works of Sadykov T.U., Tovma N.A., Kostina N.B., Chizhov A.A., and others.

Although numerous publications exist on digitalization issues in both foreign and domestic economic literature, it is important to highlight that there are numerous new mechanisms requiring further exploration. The need for this research is further highlighted by the fact that the components of the digitization of public administration in the economy and the differentiation of its primary purposes at this time are still not fully investigated.

Methods

The research methodologies draw upon the collective advancements of neoclassical, institutional, and neo-institutional theories, as well as insights from the scholarly contributions of both domestic and foreign researchers in the realm of digitalization. The study employs abstract-logical, analytical, and economic-statistical methods.

This study intends to offer a thorough examination of how digitalization affects public administration, backed by empirical data from official sources and reports as well as a theoretical foundation.

The theoretical foundations of the study increase and enhance domestic expertise in the area of digital public administration. The recommendations discussed within this study are applicable on a national scale for the execution of digitalization programs.

Results

One of the factors fostering the country's socioeconomic progress and effective governmental administration in the contemporary era is the growth of a digital economy. Both the general public and the academic community are giving the terms “digital economy” and “digitalization of public administration” a lot of attention.

L. Margherio examines four primary factors that foster the advancement of the digital economy: the proliferation of the Internet, business-to-business electronic commerce, the digital provision of goods and services, and the retail sale of physical products (Margherio, 1999).

According to Brynjolfsson & Kahin (2000), the term “digital economy” specifically refers to the ongoing, largely unstudied shift that results from the computer-enabled digitization of information in every sector of the economy (Brynjolfsson, E. & Kahin, B, 2000).

The percentage of overall economic production derived from various comprehensive “digital” components is known as the “digital economy”, according to Knickrehm et al. (2016). In addition to the skills and tools (hardware, software, and communication tools), these digital components also comprise the intermedi-

ate digital goods and services employed in the production process. These extensive measures constitute the fundamental elements of the digital economy (Skog, Wimelius, & Sandberg, 2018).

Simultaneously, scholars such as Ida Lindgrena, Sara Hofmann, and Ulf Melina, focusing on the influence of digitalization on the state-citizen relationship, propose an understanding of digitalization as a “sociotechnical process involving the application of digital technologies within a comprehensive social and institutional framework” (Lindgrena et al., 2019).

Digitization is the transformation of physical, analog information (such as documents, photos, reports, invoices, contracts, etc.) into a format that can be stored and accessed from a computer, phone, tablet, USB stick, smart watch and other similar devices. Digitalization is the conversion of processes from manual to automatic. Digitalization takes many different shapes in practice, but basically it involves building databases with several files containing different documents, based on the typology, to which access can be controlled. Digital transformation is the process by which the content, form, and mode of processing and transmission of data and documents are changing in order to save time and material resources and thus increase efficiency (Balcerzak et al., 2022).

These could lead to significant and necessary adjustments that improve the transparency of government agencies, the governance process, and the content and caliber of programs and services can bring about the required and important changes that greatly enhance the services and content offered, as well as the governance, openness, and accessibility of government institutions (Kafel et al., 2021).

In public administration practice, the goal of digitalization is to give every citizen the same access to services, information, and knowledge (Larsson, 2021). This access will be provided through digital technologies. The proliferation of digital technology has enhanced the cost and quality of the tasks performed by individuals, governments, and communities. It has also increased their efficacy and efficiency.

The management of the interactions that take place between the state, regions, and localities, as well as the communication that takes place between public administration authorities and citizens, increasingly makes use of these technological advancements (Androniceanu et al., 2022).

Use of digital technology inspires consumer involvement in the creation of works of public value and raises public interest in such works (Cordella & Paletti, 2018; Luna-Reyes, 2017).

Digitalization in public administration, according to studies by A.V. Mehrentsev, E.N. Starikov, and E.S. Mezentsev, refers to the potential for enhancing administrative outcomes via the application of new digital technologies. This means fostering the growth and efficient functioning of state information systems in addition to developing digital platforms and infrastructures that permit sophisticated control over the operations of government institutions (Mehrentsev et al., 2018).

Digitalization areas include efficient decision-making, e-government advancement, enhanced information-based communication between the public and the government, electronic delivery of state and local services, electronic document management implementation, decreased corruption, and increased competitiveness in the international market (Sidorenko et al., 2019).

The digital revolution has a considerable impact on the efficiency and accessibility of public service. It also affects the way other tasks of public administration, such as policy making, legislation implementation, and enforcement, are carried out. At this early stage, the adoption of government-as-a- platform solutions is highly prioritized (O’Reilly, 2011).

The process of analyzing the digitalization of public administration can be guided by three aspects:

modernization of the process of providing public services based on technology automation, which reduces the human and material costs of routine operations;

implementing technologies, mobile applications, and online trading platforms entails a rise in the trade of goods and services, consequently boosting the income of enterprises. Additionally, this will result in efficient oversight of enterprise activities by governmental bodies.

the transfer of the maximum number of business operations and relationships into the digital space, into the digital transformation of the interaction of manufacturing enterprises, government agencies and the population.

So far, preliminary studies have been conducted regarding the social and economic factors that determine the distinctive features of digitalization within a certain region. The effects of regional digitalization are interrelated with both technological and socio-economic factors (Shaposhnik, 2017). However, access to the Internet is definitely a primary factor. Table 1 illustrates the count of fixed Internet subscribers across various regions in Kazakhstan.

Table 1 indicates that there was an overall gain in fixed Internet users in 2022, with a 5.3% increase over 2021 data and a total of 2,899.8 thousand units. A significant increase in subscribers was seen in Astana (by 8.4%), Shymkent (by 8.8%), and the West Kazakhstan areas (by 9.8%). The regions with the smallest increases were Turkestan (by 0.3%), and Aktobe (by 0.7%). 1.8% is the Akmola region.

However, several regions — Karaganda by 10.4%, East Kazakhstan by 30.6%, and Almaty by 33.7% — are seeing a decrease in fixed Internet subscribers. The expansive geography of Kazakhstan makes extending network coverage to rural areas potentially costly. This challenge is exacerbated by lower levels of prosperity in these regions, resulting in diminished revenue potential for operators aiming to broaden their coverage.

Table 1. The number of fixed Internet subscribers in the regions of Kazakhstan

Regions	2019 y.	2020 y.	2021 y.	2022 y.	2022/2021 yy., %
Republic of Kazakhstan	2 511,6	2 620,5	2 753,6	2 899,8	105,3
Abai Region	-	-	-	83,4	-
Akmola	112,7	122,4	127,1	129,4	101,8
Aktobe	115,7	127,2	132,2	146,3	110,7
Almaty	178,9	209,7	217,9	144,4	66,3
Atyrau	94,2	95,9	99,0	102,0	103,0
West Kazakhstan	72,8	75,1	78,1	85,7	109,8
Zhambylskaya	85,5	89,5	92,2	96,1	104,2
The area of Zhetisu	-	-	-	80,6	-
Karaganda	265,0	262,2	276,3	247,6	89,6
Kostanay	166,2	168,8	173,7	181,6	104,5
Kyzylorda	62,2	69,6	73,6	76,2	103,5
Mangystau	86,3	96,0	102,4	116,1	113,4
Pavlodar	155,6	158,7	161,9	172,5	106,5
North Kazakhstan	109,8	111,5	112,9	115,5	102,3
Turkestan	61,5	66,7	69,5	69,7	100,3
Ulytau region	-	-	-	21,3	-
East Kazakhstan	206,5	218,3	228,1	158,2	69,4
Astana	261,4	266,8	293,7	318,3	108,4
Almaty	401,6	403,0	430,3	462,3	107,4
Shymkent	75,8	79,1	85,1	92,6	108,8

Note – compiled by the author based on (Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan, 2023)

However, residents' proficiency with information and communication technologies varies, even within the same region. In the Karaganda area in 2022, 86.2% of people aged 6–74 possessed them, according to the Bureau of National Statistics of the Republic of Kazakhstan. This is 2.1% less people than in the entire country (Table 2).

Among individuals aged 6 years and older, the percentage of users possessing skills in utilizing personal computers, smartphones, tablets, and laptops, along with proficiency in standard programs and accessing services through the Internet, stands at 82.7%. This figure is 3.6% lower than the national average. In 2022, the overall digital literacy rate of the country's population was 88.3%, which is 1% higher compared to 2021.

The term “digital divide” refers to these disparities in the socio-economic impacts of the population's degree of digital literacy, which are mostly social in character and result in insufficient opportunities to use ICT. In addition, it is of a social nature, it manifests itself in differences in the status positions of subjects, which adds economic consequences, constituting a “digital inequality” (Kostina, Chizhov, 2022).

In Kazakhstan, it is noted that a significant part of users are engaged in various online activities. For example, 74.8% of people use the Internet to spread information and send instant messages. 59.5% view or download movies, images, music, as well as watching videos, listening to music, playing games or downloading movies. In addition, 28.1% of users use the Internet for emailing and receiving, while 33.5% use it to research products and services.

When examining the regions of Kazakhstan, the Akmola region accounts for the highest percentage of users who use the Internet for social networking, instant messaging, and information dissemination (95.5%

and 94.6%, respectively); users from the Karaganda region also receive the highest percentage of information about products and services (83.1%); users from the Karaganda region also send and receive the highest percentage of emails (45.9%).

Ensuring the protection of digital rights fosters trust and a willingness to embrace further advancements in implementing the digital governance model and transitioning to digital public administration. Conversely, challenges related to safeguarding citizens' personal data and the digital sovereignty of the state evoke apprehension and resistance.

Table 2. The level of digital literacy of the population of Kazakhstan

Regions	2020 y.		2021 y.		2022 y.	
	at the age of 6 years and older	aged 6-74	at the age of 6 years and older	aged 6-74	at the age of 6 years and older	aged 6-74
Republic of Kazakhstan	82,0	84,1	85,3	87,3	86,3	88,3
Abai Region					77,6	79,9
Akmola	72,3	74,9	78,9	81,5	80,7	83,1
Aktobe	79,1	81,0	85,3	86,8	88,2	89,6
Almaty					92,1	91,9
Atyrau	81,7	83,1	84,1	85,2	84,2	85,4
West Kazakhstan	76,1	78,8	76,8	79,2	80,0	82,0
Zhambylskaya	79,5	80,9	84,3	85,8	84,2	85,8
The area of Zhetisu					82,7	85,3
Karaganda					82,7	86,2
Kostanay	82,2	85,8	88,0	90,8	86,8	90,9
Kyzylorda	82,4	83,0	88,1	89,3	87,8	89,4
Mangystau	78,5	79,6	83,7	84,9	84,7	86,0
Pavlodar	80,5	83,5	81,7	85,1	81,5	85,1
North Kazakhstan	75,3	78,8	76,5	80,2	78,5	82,1
Turkestan	80,7	82,1	86,2	87,2	88,3	89,9
Ulytau region					91,3	91,8
East Kazakhstan					82,2	84,8
Astana	90,4	91,3	94,6	94,7	93,7	95,2
Almaty	88,7	91,4	88,9	91,5	91,0	93,8
Shymkent	80,9	82,3	86,1	87,5	86,1	87,5

Note – compiled by the author based on (Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan, 2023)

In a context where internet platforms and social networks are seamlessly integrated into daily life, a growing array of human rights is now considered digital in nature. According to K. Becker, these include the freedom of expression, the right to privacy, and the ability to interact and express one's thoughts online. They also include the right to access an electronic network. These rights are increasingly championed by numerous organizations and movements globally (Becker, 2012).

Overall, the evaluation of the fundamental knowledge and skills of the population of Kazakhstan was conducted in the following categories:

- 1) Proficiency in utilizing personal computers, smartphones, tablets, and laptops;
- 2) Competence in using standard programs such as text and table editors;
- 3) Capability to access services and receive information through the Internet (Kireeva & Abylkair, 2021).

Discussions

Citizens increased desire to participate in government decision-making is one of the digitalization of public administration's most notable social effects. Technical opportunities for this are provided by specialized portals, which organize public discussions and, of course, social networks, where in 2022 — 70.1% of residents used to disseminate information.

With regard to the digitalization of public administration, there is a stratification of the population according to the criteria of accessibility of information about the activities of government agencies and access

to electronic public services. The system, which implies the possibility for citizens to receive public services and information about government activities through Internet technologies, is known as e-government.

The count of public services autonomously accessed by citizens through e-government in the self-service areas known as “Connection Point” witnessed a 9% increase in 2022 compared to the figures from 2021, reaching a total of 16,406,489 services in 2022. However, the electronic provision constituted only 0.4% of the overall public services delivered. The total quantity of services rendered is lower than it was in 2021 — a decrease of 894,275 units, or 5.1%. All regions have less public services, with the exception of branches in Almaty (+16.5 % because of special services) and the Turkestan region (+0.83% because of EDS issuance).

The most sought-after government servants in 2022, provided through front offices, were:

- Issuance and revocation of the registration certificate of the National Certifying Center of the Republic of Kazakhstan services through the Ministry of Internal Affairs of the Republic of Kazakhstan (state registration of vehicles, issuance of a driver's license, issuance of passports and identity cards to citizens of the Republic of Kazakhstan, registration of citizens of the Republic of Kazakhstan at the place of residence, issuance and extension of permits to labor immigrants).

- Registration of immovable property rights with the state.

- Generation and distribution of certificates for a parcel of land.

- Provision of a technical passport for a real estate entity.

- Issuance of duplicate certificates or certificates for the registration of civil status acts (NJSC “State Corporation “Government for Citizens”, 2022).

The proportion of goods sold through information and communication technologies has increased. Table 3 shows that the overall value of the domestic retail e-commerce business, including marketplaces, was 1963.5 billion tenge in 2022.

Table 3 indicates a growth in the volume of online retail trade. So, if in 2018 the volume of retail trade amounted to 144.6 billion tenge, then in 2022 there was an increase of 1818.9 billion tenge, which amounted to 1963.5 billion tenge. Simultaneously, electronic commerce accounted for 12.5% of the overall volume of retail trade.

Additionally, it's noteworthy that the turnover of retail trade conducted via electronic commercial platforms, or marketplaces, reached 1117.9 billion tenge, constituting 56.9% of the overall volume. Retailers who operated through their own online channels achieved a volume of 845.6 million tenge, representing 43.1%. Importantly, the proportion of e-commerce within retail, excluding marketplaces, stood at 5.4% in 2022. The total volume of e-commerce services in 2022, inclusive of marketplaces, reached 1186.5 billion tenge. Within this, services provided through proprietary internet resources amounted to 254.7 million tenge (21.5%), while services offered through e-commerce platforms (marketplaces) accounted for 931.8 million tenge (78.5%).

Table 3. Main indicators of e-commerce in the Republic of Kazakhstan for 2018–2022 yy.

Indicator	2018 y.	2019 y.	2020 y.	2021 y.	2022 y.
The volume of e-commerce (retail), million tenge	144606,0	206253,9	476651,5	481978,7	1963493,2
The share of e-commerce in the total volume of retail trade, as a percentage	1,4	1,8	4,1	3,6	12,5
The volume of e-commerce (services) million tenge	136123,0	121153,7	209164,7	349933,7	1186536,7
<i>Note – compiled by the author based on (Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan, 2023)</i>					

Raising the bar for public services rendered to citizens and legal entities is the ultimate goal of digitizing public administration, which aims to create a work environment that supports a mobile, flexible, and efficient workflow. This entails delivering services in ample quantity, promptly, and in the most user-friendly manner possible. Leveraging artificial intelligence, conclusions are drawn from extensive data, current statistics, and real-time system comparisons. The data obtained on outcomes remains unaltered due to the characteristics of the distributed ledger, explaining the positive impacts of digitalization on the state. The

social repercussions are significant not only for citizens who are recipients of public services but also for professionals within the public administration system, encompassing local and regional civil servants.

One aspect of the country's ongoing development of its digital economy is the adoption of contemporary tools for economic entity interaction. This digital transformation has an impact not only on the daily lives of individuals but also on the operations of public authorities across all levels of government.

Conclusions

In general, Kazakhstan has made great strides toward becoming a digital state, but there is still much work to be done before the country reaches the maturity level of the ideal smart state. Taking this into consideration, the government has developed the Digital Transformation Concept, which lays out the growth path for ICTs and the cybersecurity sector through 2022. Based on this idea, the government presents the main paths for Kazakhstan's public administration to go digital by 2029, as shown in Figure.

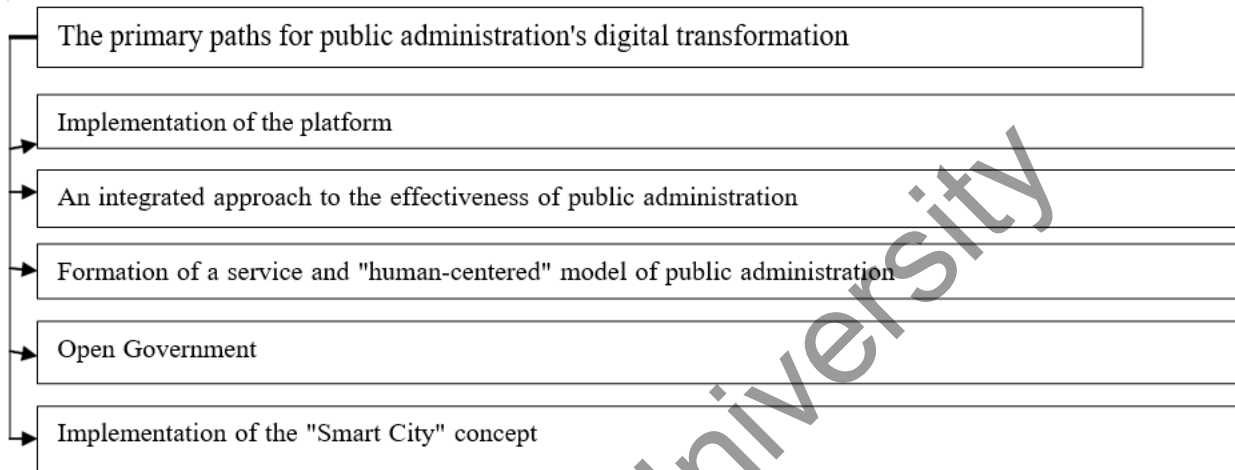


Figure. The primary paths for public administration's digital transformation

Note – compiled by the author based on (The concept of digital transformation, development of the information and communication technologies and cybersecurity industry for 2023–2029)

It is strongly wanted to improve the quality of public administration, which includes prompt and excellent strategic decision-making, as well as the satisfaction of businesses and citizens with public services. Furthermore, the focus lies on safeguarding the country's human and technological capital while adapting to the challenges presented by a new era of technology and changing business environments.

The goal is to increase the country's competitiveness in global markets. Since they receive both governmental protection and benefits, Kazakhstani citizens are eager to broaden and improve the scope of public services. Reducing subjectivity in service delivery, lowering general administration and public service costs, reducing the amount of time spent engaging with the government, and enhancing the stability and security of the business and residential environments are all necessary to achieve this.

One of the key responsibilities in determining the direction of the nation's economic reforms and the execution of management structure operations is the development of digital infrastructure.

The following are some examples of how operating systems are being digitally transformed:

- Creation of “smart” technology-based production cycle management and control phases, where maintenance services are tracked and offered;
- Performance in compliance with a specified specification of principles for the operational, administrative, and organizational functioning of the public sector;
- Creating a social strategy for the digitization of civic and urban services tailored to the target audience, incorporating public assessments, and overseeing the monitoring and evaluation of the efficiency of digital technologies;
- Development of digital platforms for social and economic management based on the integration of several key data centers, including business services, electronic communications, information and analytics (Parviainen, 2017).

Reevaluating and reforming governmental organizations' responsibility to help entities in the economic sector should prioritize the transition of control and supervisory functions to digital engagement.

- 1) This entails digitizing risk assessments at the outset of a firm and during process monitoring utilizing digital data provided by companies;
- 2) creating both monetary and non-monetary rewards to promote the adoption of new ideas and technology.

Adopting the framework for data-driven government is the crucial adjustment. To do this, decisions made at the state level need to be supported by verified data, analyses, and educated projections. This method facilitates the implementation of evidence-based policies, encourages a comprehensive comprehension of the possible outcomes of novel undertakings, and supports informed decision-making.

The central emphasis on reshaping how services are provided and the connection between the government and citizens and businesses will revolve around adopting the principles of open architecture, particularly through Open API. This change aims to foster a much higher degree of cooperation with the private sector. It is anticipated that this shift will optimize resource utilization effectively, concentrating on digital infrastructure and extending the reach of public services to non-governmental organizations and the business sector, bridging the “last mile”. Concurrently, external information resources from non-governmental entities will act as interfaces, integrating public services into their own systems. This enables citizens and entrepreneurs to effortlessly initiate and receive public services.

The Smart Cities Initiative aims to raise overall competitiveness, enhance the quality of life, and boost the efficiency of urban operations and services through the use of information and communication technologies (ICT) and other tools. In terms of economic, social, environmental, and cultural factors, it also seeks to be in line with the demands of present and future generations. Digital technology will be incorporated into many aspects of urban life, such as social services, city administration, healthcare, education, housing and utilities, economic growth, tourism, and environmental initiatives.

As a result, the adoption of digitization in the economy needs to be done carefully, taking into account the resources at hand, the population's and enterprises' readiness for the change, and a well-defined plan for the region's economic growth.

References

- Androniceanu A. The Impact of Digitalization on Public Administration, Economic Development, and Well-Being in the EU Countries / A. Androniceanu, I. Georgescu, O.-M. Sabie // *Central European Public Administration Review*. — 2022. — No. 20 (2). — P. 9–31.
- Balcerzak A.P. Blockchain Technology and Smart Contracts in Decentralized Governance Systems / A.P. Balcerzak et al. // *Administrative Sciences*. — 2022. — No. 12(3). — P. 96–103.
- Brynjolfsson E. Understanding the Digital Economy: Data, Tools, and Research / E. Brynjolfsson, B. Kahin. (Eds.) — Cambridge: MIT Press, MA, 2000.
- Cordella A. ICTs and value creation in public sector: Manufacturing logic vs service logic / A. Cordella, A. Paletti // *Information Polity*. — 2018. — Vol. 23. — No. 2. — P. 125–141. <https://doi.org/10.3233/IP-170061>.
- Economy Profile of Kazakhstan. Doing Business 2019 Indicators. — [Electronic resource]. — Access mode: <http://www.doingbusiness.org/content/dam/doingBusiness/country/k/kazakhstan/KAZ.pdf>.
- Kafel T. Multidimensional public sector organizations' digital maturity model / T. Kafel, A. Wodecka-Hyjek, R. Kusa // *Administratie si Management Public*. — 2021. — No. 37. — P. 27–40. Doi: 10.24818/amp/2021.37-02.
- Larsson K.K. Digitization of equality: When government automation covers some, but not all citizens / K.K. Larsson // *Government Information Quarterly*. — 2021. — No. 38 (1). — P. 101–147.
- Lindgren I. Close encounters of the digital kind: A research agenda for the digitalization of public services / I. Lindgren, S. Hofmann, U. Melina // *Government Information Quarterly*. — 2019. — Vol. 36. — No. 3. — P. 427–436.
- Margherio L. The Emerging Digital Economy [Electronic resource] / L. Margherio. — Washington: Department of Commerce, DC, 1999. — Access mode: http://www.esa.doc.gov/sites/default/files/emergingdig_0.pdf.
- O'Reilly T. Government as a Platform / T. O'Reilly // *Innovations: Technology, Governance, Globalization*. — 2011. — No. 6(1). — P. 13–40 (https://doi.org/10.1162/INOV_a_00056).
- Parviainen P. Tackling the digitalization challenge: how to benefit from digitalization in practice / P. Parviainen, M. Tihinen, J. Kääriäinen, S. Teppola // *IJISPM*. — 2017. — No. 5(1). — P. 63–77.
- Skog D.A. Digital Disruption [Electronic resource] / D.A. Skog, H. Wimelius, J. Sandberg // *Business & Information Systems Engineering*. — 2018. — 60. — P. 431–437. — Access mode: https://www.researchgate.net/publication/326424765_Digital_Disruption.
- Беккер К. Словарь тактической реальности. Культурная интеллигенция и социальный контроль [Электронный ресурс] / К. Беккер. — Режим доступа: <https://itexts.net/avtorkonrad-bekker/154158-slovartakticheskoy-realnosti-kulturnaya-intelligenciyai-socialnyy-kontrol-konradbekker/read/page-8.html>.

- Годовой отчет НАО «Государственная корпорация «Правительство для граждан» за 2022 год. — [Электронный ресурс]. — Режим доступа: <https://gov4c.kz/upload/iblock/d38/p1im8f8sqvzvxcw9m9i0dqhnzdh7zoe.pdf>.
- Киреева А.А. К Цифровизация экономики регионов Казахстана: понятия, перспективы и механизмы реализации [Текст] / А.А. Киреева, Н.Ә. Әбілқайыр; под ред. акад. НАН РК, проф., д-ра экон. наук А.А. Сатыбалдина. — Алматы: Ин-т экон. КН МОН РК, 2021. — 292 с.
- Костина Н.Б. К вопросу о разграничении понятий «цифровой раскол», «цифровое неравенство» и «цифровой разрыв» [Текст] / Н.Б. Костина, А.А. Чижов // Уфим. гуманитар. науч. форум. — 2022. — № 1(9). — С. 56–63.
- Мехренцев А.В. Роль государства в цифровизации экономики [Текст] / А.В. Мехренцев, Е.Н. Стариков, Е.С. Мезенцева // Россия: тенденции и перспективы развития. — 2018. — № 13. — С. 134–136.
- Садыков Т.У. Цифровая экономика: моногр. [Текст] / Т.У. Садыков. — Алматы: Эверо, 2022. — 168 с.
- Сидоренко Э.Л. Эффективность цифрового государственного управления: теоретические и прикладные аспекты [Текст] / Э.Л. Сидоренко, И.Н. Барциц, З.И. Хисамова // Вопросы государственного и муниципального управления. — 2019. — № 2. — С. 98–110.
- Товма Н.А. Цифровая экономика: зарубежный опыт и казахстанская практика: моногр. [Текст] / Н.А. Товма. — Алматы: Қазақ университеті, 2021. — 124 с.
- Шапошник С.Б. Цифровая трансформация в регионах России: роль человеческого капитала [Текст] / С.Б. Шапошник // Информационное общество. — 2017. — № 6. — С. 25–30.

А.М. Иманбекова, Г.М. Филюк, А.Е. Ставбуник

Мемлекеттік басқаруды цифрландырудың кейбір аспектілері

Аңдатпа:

Мақсаты: Зерттеуде мемлекеттік басқаруды цифрландыру қарастырылған және әкімшілік шешімдер қабылдау процестерін оңтайландыру мақсатында мемлекеттік басқару ұйымдарының трансформациясы зерделенген.

Әдісі: Мақалада цифрландырудың мемлекеттік басқару жүйелеріне әсерін зерттеу үшін әлеуметтік-экономикалық процестерді бағалауды қамтамасыз ететін пәнаралық тәсіл қолданылған. Зерттеу пәні Қазақстандағы мемлекеттік басқаруды цифрландырудың ұйымдастырушылық аспектілері.

Қорытынды: Ұсынылған жұмыста авторлар «мемлекеттік басқаруды цифрландыру» ұғымының мәніне назар аударған, Қазақстандағы мемлекеттік басқаруды цифрландырудың негізгі көрсеткіштерін талдаған және мемлекеттік басқаруды цифрлық трансформациялаудың негізгі бағыттарын ұсынады.

Тұжырымдама: Қазіргі цифрлық дәуірде мемлекеттік қызметтерді ұсыну бірінші кезекте азаматтар мен бизнестің қажеттіліктеріне бағытталуы керек. Сонымен қатар, цифрландыру дәстүрлі тәсілдерді қолдануды жеңілдететін және оларды ыңғайлы, қолжетімді, түсінікті және қауіпсіз ететін жаңа құралдар мен процедуралардың көзі болып табылады.

Кілт сөздер: мемлекеттік басқаруды цифрландыру, тіркелген Интернет абоненттерінің саны, халықтың цифрлық сауаттылық деңгейі, электрондық мемлекеттік қызметтер.

А.М. Иманбекова, Г.М. Филюк, А.Е. Ставбуник

Некоторые аспекты цифровизации государственного управления

Аннотация:

Цель: Настоящее исследование рассматривает цифровизацию государственного управления и изучает трансформацию организаций государственного управления с целью оптимизации процессов принятия административных решений.

Методы: В статье используется междисциплинарный подход, который обеспечивает оценку социально-экономических процессов для изучения влияния цифровизации на системы государственного управления. Предметом исследования являются организационные аспекты цифровизации государственного управления в Казахстане.

Результаты: В представленной работе авторы обращают внимание на сущность понятия «цифровизация государственного управления», анализируют основные показатели цифровизации государственного управления в Казахстане и предлагают основные направления цифровой трансформации государственного управления.

Выводы: В современную цифровую эпоху предоставление государственных услуг должно быть сосредоточено, в первую очередь, на потребностях граждан и бизнеса. Кроме того, оцифровка является источником новых инструментов и процедур, которые упрощают использование традиционных подходов и делают их более удобными, доступными, понятными и безопасными.

Ключевые слова: цифровизация государственного управления, количество зарегистрированных абонентов Интернета, уровень цифровой грамотности населения, электронные государственные услуги.

References

- Androniceanu, A., Georgescu, I., & Sabie, O.-M. (2022). The Impact of Digitalization on Public Administration, Economic Development, and Well-Being in the EU Countries. *Central European Public Administration Review*, 20(2), 9–31.
- Balcerzak, A.P. et al. (2022). Blockchain Technology and Smart Contracts in Decentralized Governance Systems. *Administrative Sciences*, 12(3), 96–103.
- Becker, K. Slovar takticheskoi realnosti. Kulturnaia intelligentsiia i sotsialnyi kontrol [Dictionary of tactical reality. Cultural intelligentsia and social control]. *itexts.net*. Retrieved from <https://itexts.net/avtorkonrad-bekker/154158-slovartakticheskoy-realnosti-kulturnaya-intelligenciiai-socialnyy-kontrol-konradbekker/read/page-8.html> [in Russian].
- Brynjolfsson, E. & Kahin, B. (Eds.) (2000). *Understanding the Digital Economy: Data, Tools, and Research*. MIT Press, Cambridge, MA.
- Cordella, A. & Paletti, A. (2018). ICTs and value creation in public sector : Manufacturing logic vs service logic. *In Information Polity*, 23(2), 125–141. <https://doi.org/10.3233/IP-170061>
- Economy Profile of Kazakhstan. Doing Business 2019 Indicators. *doingbusiness.org*. Retrieved from <http://www.doingbusiness.org/content/dam/doingBusiness/country/k/kazakhstan/KAZ.pdf>
- Kafel, T., Wodecka-Hyjek, A., & Kusa, R. (2021). Multidimensional public sector organizations' digital maturity model. *Administratie si Management Public*, 37, 27–40. Doi: 10.24818/amp/2021.37-02
- Kireeva, A.A. & Abylkair, N.A. (2021). *K tsifrovizatsii ekonomiki regionov Kazakhstana: pontatie, perspektivy i mekhanizmy realizatsii [Towards Digitalization of the economy of the regions of Kazakhstan: concepts, prospects and implementation mechanisms]*. Almaty: Institut ekonomiki KN MON RK [in Russian].
- Kostina, N.B. & Chizhov, A.A. (2022). K voprosy o razgranichenii ponytii “tsifrovoy raskol”, “tsifrovoe neravenstvo” i “tsifrovoy razryv” [On the issue of the differentiation of concepts “The digital divide”, “digital inequality”, “digital gap”]. *Ufimskii gumanitarnyi nauchnyi forum — Ufa Humanitarian Scientific Forum*, 1(9), 56–63 [in Russian].
- Larsson, K.K. (2021). Digitization or equality: When government automation covers some, but not all citizens. *Government Information Quarterly*, 38(1), 101–147.
- Lindgren, I., Hofmann, S., & Melina, U. (2019). Close encounters of the digital kind: A research agenda for the digitalization of public services. *Government Information Quarterly*, 36(3), 427–436.
- Margherio, L. (1999). The Emerging Digital Economy. Department of Commerce, Washington, DC. *esa.doc.gov*. Retrieved from http://www.esa.doc.gov/sites/default/files/emergingdig_0.pdf
- Mehrentsev, A.V., Starikov, E.N., & Mezentseva, E.S. (2018). Rol gosudarstva v tsifrovizatsii ekonomiki [The role of the state in the digitalization of the economy]. *Rossia: tendentsii i perspektivy razvitiia — Russia: trends and development prospects*, 13, 134–136 [in Russian].
- Godovoi otchet NAO “Gosudarstvennaia korporatsiia «Pravitelstvo dlia grazhdan» za 2022 god [NJSC “State Corporation “Government for Citizens” for 2022]. *gov4c.kz*. Retrieved from <https://gov4c.kz/upload/iblock/d38/p1im8f8sqvzvxxw9m9i0dqhnzdh7zoe.pdf> [in Russian].
- O’Reilly, T. (2011). Government as a Platform. *Innovations: Technology, Governance, Globalization*, 6(1), 13–40. Retrieved from https://doi.org/10.1162/INOV_a_00056
- Parviainen, P., Tihinen, M., Kääriäinen, J. & Teppola, S. (2017). Tackling the digitalization challenge: how to benefit from digitalization in practice. *IJISPM*, 5(1), 63–77.
- Sadykov, T.U. (2022). *Tsifrovaia ekonomika [The digital economy]*. Almaty: Evero [in Russian].
- Shaposhnik, S.B. (2017). Tsifrovaia transformatsiia v regionakh Rossii: rol chelovecheskogo kapitala [Digital transformation in the regions of Russia: the role of human capital]. *Informatsionnoe obshchestvo — Information Society*, 6, 25–30 [in Russian].
- Sidorenko, E.L., Bartsits, I.N., & Khisamova, Z.I. (2019). Effektivnost tsifrovogo gosudarstvennogo upravleniia: teoreticheskie i prikladnye aspekty [The effectiveness of digital public administration: theoretical and applied aspects]. *Voprosy gosudarstvennogo i munitsipalnogo upravleniia — Issues of state and municipal management*, 2, 98–110 [in Russian].
- Skog, D.A., Wimelius, H., & Sandberg, J. (2018). Digital Disruption. *Business & Information Systems Engineering*, 60, 431–437. Retrieved from https://www.researchgate.net/publication/326424765_Digital_Disruption.
- Tovma, N.A. (2021). *Tsifrovaia ekonomika: zarubezhnyi opyt i kazakhstanskaia praktika [Digital economy: foreign experience and Kazakhstani practice]*. Almaty: Qazaq universiteti [in Russian].