

## The Impact of Digitalization on the Efficiency of Public Administration

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### *Abstract*

*In the modern world, economics and management are rapidly changing and transforming from traditional forms to digital ones. The digital economy is associated with the emergence of completely new products (including on online platforms) and the emergence of economic practices that are not similar to those that existed before. Among the key changes associated with information technology are completely new opportunities for accumulating, processing and analyzing data.*

**Keywords:** *digital economy, artificial intelligence, public administration, public services.*

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**Introduction.**

Promising technologies that will most strongly influence the digitalization of the economy include: “big data” analytics; artificial intelligence technologies and robotics; machine learning; cloud computing and cloud storage of information; internet of things.

However, digital technologies will most likely not replace existing types of economic transactions, but will help them become more efficient, due to the existing untapped potential.

In parallel with the introduction of new digital technologies into the economy, the process of digitalization of public administration is taking place all over the world. This process occurs unevenly and in each country the level of digitalization of public administration is at a different level. Public administration has several transformational prospects that will allow minimizing the time for providing public services and making management decisions, not forgetting about information security:

- e-government capable of ensuring cybersecurity, both at the domestic and international levels;
- e-government, capable of predicting natural disasters in advance for the timely implementation of preventive measures, as well as measures to minimize the consequences;
- e-government, capable of integrating its functions towards various sectors of society, with the aim of minimizing digital development among the population.

The development of the digital economy, as well as the digitalization of public administration, poses challenges for states to manage the new reality.

**Literature review.**

The development of the digital economy has led to active study of its various aspects and analysis of this concept. For example, the digitalization of the economy is defined by T. N. Yudina and I. M. Tushanov in the narrow and broad senses of the word: – in the narrow sense: creation at different levels of the economy (global, mega, macro-, meso-, micro-, nano-) information and digital platforms and operators that allow solving various economic problems, including strategic ones: the development of medicine, science, education, transport, new industrialization, state regulation of the economy and planning, etc.; – in a broad sense: a change in the nature of production or economic relations, a change in their subject-object orientation. With the help of algorithms, machine-to-machine (M2M) relationships appear, where a person may no longer act as a subject. The productive forces of society and/or production factors also change [4].

K. S. Leonova means by digital economy a system of social relations that are aimed at optimizing reproduction processes and stimulating the socio-economic development of countries [5].

According to I.V. Sudarushkin and N.A. Stefanov, the digital economy is the transformation of general-purpose technologies in the information and communication field, which has an impact on the economy and social sphere. With this definition, the authors show that information and communication technologies affect not only economic, but also social activities [6].

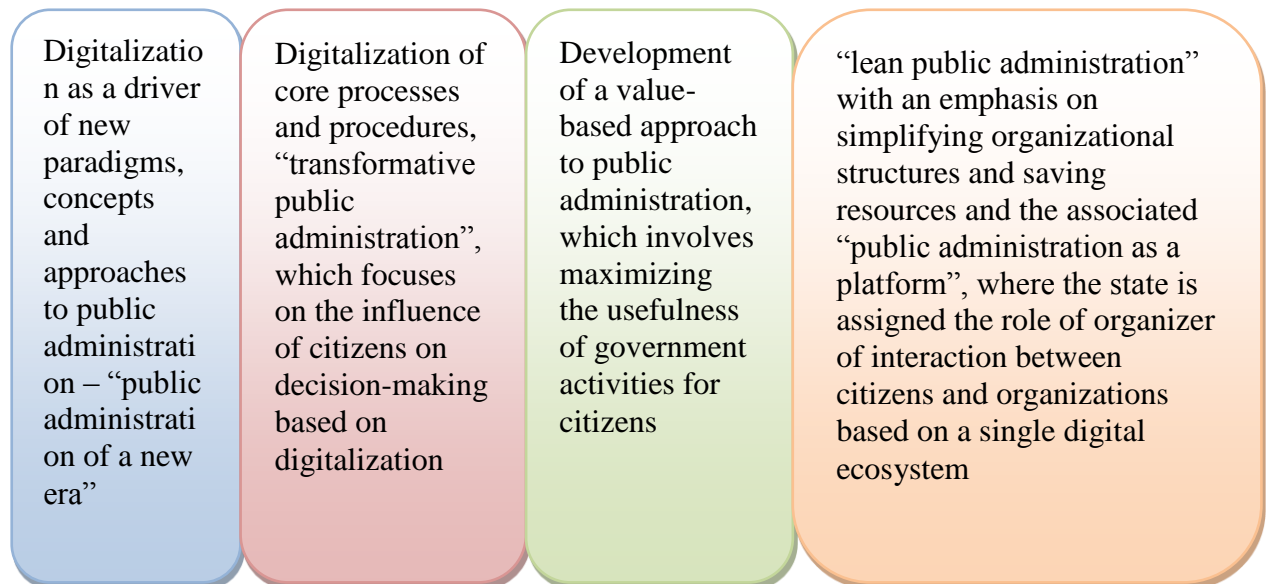
According to A. N. Biychuk, the main factors of the digital economy are: the Internet of things, including industrial ones, cloud computing, artificial intelligence; big data and additive

technologies 3D; blockchain technologies, cyber-physical systems, digital design and modeling and more [7].

Digital technologies have already penetrated into the “fabric” of the state so widely that, along with the “digital economy,” the phenomenon of a “digital state” is emerging, which is increasingly becoming a reality. In the field of public administration, digitalization will facilitate, simplify and speed up the actions of federal bodies, as well as expand opportunities for diverse thinking of civil servants and analysis of ongoing processes in a broader socio-economic context.

The digital state involves not only the digitalization of the public administration process and the creation of electronic government. We are talking about the formation of an all-encompassing digital legal environment, within which the very image of law, its regulatory role, the boundaries and limits of the law can change.

Digital technologies are being introduced into the sphere of public administration in order to make a qualitative breakthrough in the management process, which in turn will lead to strong economic growth of the country (Figure 1).



**Figure 1. Directions of the digitalization process of public administration**

Experts from the Organization for Economic Cooperation and Development identify three main stages of digital transformation:

Stage 1: digitization of processes;

Stage 2: e-government;

Stage 3: digital government.

Digital technologies are currently a determining factor in determining the directions of changes in public administration. Digital technologies are a tool for implementing the strategy of digital transformation of public administration.

Digitalization of public administration is a process, the main goal of which is initially to optimize management processes, introduce new solutions, approaches and technologies in the implementation of the functions of public authority and, accordingly, improve the quality of

public administration in general.

At the same time, the quality of public administration is a very multifaceted category, which is not limited solely to the speed of performing the functions of public authority and the amount of budgetary funds spent. This category includes: the quality of services provided to the population (including the ease of obtaining them, the speed of their provision, and so on), the effectiveness of the activities of public authorities in the implementation of the powers entrusted to them, the level of costs (both material and organizational), which are borne by public and private actors, and so on.

In such conditions of multidirectionality of the category “efficiency of public administration,” it seems advisable to turn to the analysis of the influence of digital technologies on certain types of functions of government in the context of the currently existing needs for improving public administration in specific areas.

The development of public policy is the sphere of activity of public authorities, within which methods and technologies for analyzing the current socio-economic state of society, predicting the effect of the regulatory impact of political decisions, as well as assessing the results of the implemented public policy and the reaction to it from the target population groups.

Accordingly, the introduction of new, more accurate, economical and efficient forecasting and analysis tools and technologies can have a significant positive impact on the quality of public policy development.

At the same time, digital technologies provide precisely these opportunities for public administration.

Thus, in particular, for the purposes of analyzing and predicting regulatory impact, modern machine methods for analyzing “big data” in combination with artificial intelligence technologies (for example, in the form of artificial neural networks), which allow not only to identify the degree of demand for a particular management decision, are well suited, but also to carry out a preliminary calculation of its effectiveness based on a huge amount of statistical information that cannot be processed using traditional methods. Collectively, such technologies can be referred to as predictive analytics tools.

In addition, behavioral policy, based on the analysis of social network data in order to test certain areas of government policy and monitor public reaction to individual government initiatives, also has a fairly high potential in the field of developing public policy. This type of policy is also based on the use of “big data” and artificial intelligence.

Thus, the use of “big data” and artificial intelligence within the framework of the public policy development function can potentially have a positive impact on its quality and efficiency.

### **Conclusion.**

An analysis of the development of the digital economy of countries has shown that today a fairly extensive apparatus has been formed that makes it possible to analyze the development of the digital economy using various international composite indices. Based on the analysis of various ratings, we can conclude that the United States of America occupies a leading position in terms of the degree of development of the digital economy. Countries with the most mature digital economies also include the UK, Denmark, Switzerland, Sweden and South Korea.

Modern development of society cannot fully function without information technology and the

technical component of public administration. The work determines that the digitalization of public services is a natural process, and the formation of a unified system of government data is the most important direction for increasing the efficiency of the public administration system. The leaders in digitalization of public services are Denmark, Australia, South Korea, Great Britain and Sweden.

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