Abstract of the Dissertation for the Degree of Doctor of Philosophy (PhD) in the specialty "8D04103 – Public and Local Administration" by Aruzhan Yeraliyeva on the topic: "Social Effectiveness of State Management of Digitalization in the Context of Sustainable Development"

Relevance of the Dissertation Research

The modern era is marked by the rapid advancement of digital technologies that profoundly influence all spheres of social life and transform traditional forms of public administration. Under these circumstances, the social effectiveness of public administration in the digitalization process gains particular significance. It reflects the state's ability not only to ensure economic growth but also to promote social justice, inclusiveness, citizens' trust in digital institutions, and their engagement in decision-making processes.

The social effectiveness of public administration in digitalization serves as a key indicator of progress toward the Sustainable Development Goals. Through digital tools, mechanisms of social integration, improved quality of life, and expanded opportunities for individual self-realization are being implemented. Digitalization thus becomes a driver for strengthening human potential and social cohesion, as well as a means of shaping a new model of interaction between the state and society–one grounded in transparency, openness, and accountability.

The aim of the dissertation is to develop a conceptual model for assessing the social effectiveness of public administration of digitalization in the context of sustainable development, based on the application of the methodological approach of social impact and social value creation, as well as to formulate practical recommendations for its implementation.

To achieve this aim, the following **objectives** were accomplished:

- conceptual approaches to the definition of public administration were analyzed, and the author's model of socially oriented and socially effective public administration of sustainable development of society was substantiated;
- a conceptual and categorical analysis of the process of societal digitalization was conducted, and a structural and functional model of public administration of digitalization in the context of sustainable development was developed;
- international experience in assessing the social effectiveness of public administration of digitalization was examined with the purpose of adapting it to the practice of public administration of digitalization in Kazakhstan;
- the features of the institutional and legal development of public administration of digitalization in the Republic of Kazakhstan were identified;
- an analysis of socio-economic indicators characterizing the social effectiveness of digital public administration was carried out;
- an assessment of the social effectiveness of public administration of digitalization was conducted in order to formulate practice-oriented recommendations;
- recommendations aimed at reducing the digital divide in order to achieve sustainable development were developed;

- proposals and practical recommendations for ensuring cybersecurity as a factor of social effectiveness were substantiated;
- directions for the application of AI technologies to enhance the social effectiveness of public administration of digitalization were identified.

The **object** of the research is the process of public administration of digitalization under the conditions of transition to sustainable development.

The **subject** of the research is the set of socio-economic relations, mechanisms, and instruments that ensure the social effectiveness of public administration of digitalization in the context of sustainable development.

The **methodological basis** of the research includes both general scientific methods of inquiry and specialized methods. Among the methods applied are data collection methods, statistical analysis methods, the case study method, and comparative analysis. The above-mentioned methods made it possible to collect the necessary information on the current state of digitalization in Kazakhstan, as well as to obtain data for analyzing and assessing the social effectiveness of public administration in this field.

Description of the main research results. The dissertation proves that the social effectiveness of public administration of digitalization represents the highest form of effectiveness of public activity, reflecting the degree of alignment between the interests of the state and society in the digital environment, as well as the ability of public institutions to ensure equal access of citizens to digital goods and services. The essential model of socially effective public administration of digitalization proposed by the author integrates the economic, institutional, and humanitarian dimensions of digitalization, linking them to the objectives of sustainable development. The substantiation of an approach to assessing the social effectiveness of public administration of digitalization based on the identification of social impact and social value made it possible to develop the author's conceptual model for assessing the social effectiveness of public administration of digitalization. A comparative analysis of international experience showed that the social effectiveness of digital public administration is a priority in countries with a high level of digital maturity, such as South Korea, Singapore, and Finland.

In the second chapter, a comprehensive analysis of the institutional and legal framework of digitalization and social development in the Republic of Kazakhstan was conducted. It was revealed that regulatory documents governing digitalization are mainly focused on technological aspects, while the social parameters of digitalization remain fragmented.

The analysis of the impact of public administration of digitalization on social welfare demonstrated a direct relationship between the level of public administration of digitalization and indicators of social well-being of the population. The assessment of the social effectiveness of public administration of digitalization made it possible to determine the degree of effectiveness of state policy in the field of digital transformation from the perspective of social impact and the public value created.

In the third chapter, it is noted that overcoming the digital divide is one of the key directions for enhancing social effectiveness. The dissertation proposes a set of

measures, including the development of broadband internet infrastructure, the implementation of digital literacy programs, support for digital entrepreneurship, and the stimulation of citizen participation in digital initiatives. The author emphasizes that reducing the digital divide is directly linked to the achievement of the United Nations Sustainable Development Goals. Cybersecurity is considered a fundamental condition for building public trust in the digital state. Special attention is paid to the social dimension of cybersecurity, namely the protection of citizens' rights to personal data, digital identity, and information security in the online environment. Maintaining a high level of cybersecurity contributes to strengthening public trust in digital government institutions and enhances social resilience. The role of artificial intelligence (AI) technologies in optimizing public administration processes is also substantiated, and directions for the use of AI to improve social effectiveness are proposed. It is noted that these tools should be implemented in compliance with ethical principles and transparency mechanisms.

The dissertation obtained the following results characterized by **scientific novelty**:

- The author's approach to defining the concept of "social effectiveness of public administration" as the highest resultant characteristic of public administration is substantiated, which made it possible to develop an essential model of socially oriented governance of sustainable development through the creation of social value;
- An approach to assessing the social effectiveness of public administration of digitalization based on the identification of social impact and social value is substantiated, which made it possible to develop the author's conceptual model for assessing the social effectiveness of public administration of digitalization and the digital transformation of society in the context of sustainable development;
- The Integral Index of Social Effectiveness of Digitalization (IISED) was developed, including four blocks: compliance with the goals of state programs, economy, social impact, and social value/sustainability;
- Institutional barriers limiting the implementation of social effectiveness of digital governance in Kazakhstan were identified, and directions for overcoming them through the development of digital competencies and reduction of the digital divide were determined;
- Proposals were formulated for ensuring cybersecurity, developing digital trust infrastructure, and applying artificial intelligence technologies to enhance the social effectiveness of public administration.

Provisions submitted for defense:

- The social effectiveness of public administration of digitalization is determined not only by the results of digital initiatives, but also by the ability of public institutions to ensure equal access of the population to digital goods, to build trust in the digital environment, and to develop human potential.
- Digital technologies are a key factor of societal transformation, determining the direction and pace of socio-economic change. The differentiation of the concepts of "digitization," "digitalization," and "digital transformation" reflects

successive stages of mastering digital technologies and the depth of their impact on the social sphere. A differentiated approach to management objects according to the stages of digital development ensures targeted regulation of digital transformations and increases the effectiveness of public administration in the interests of sustainable development of society.

- Despite high rates of digital technology adoption and technological achievements, the social effect and sustainable value of digital transformations remain limited, which requires targeted managerial decisions. This is confirmed by the results of an integrated assessment of the social impact of digitalization conducted using the Integral Index of Social Effectiveness of Digitalization (IISED) proposed by the author of the study.
- The social effectiveness of public administration of digitalization is determined by the need to reduce the digital divide in order to ensure sustainable development. The development of digital infrastructure reduces regional digital inequality, while improving digital literacy and competencies of the population forms an inclusive digital environment. Systematic monitoring of digital transformation progress makes it possible to assess results, while intersectoral interaction and international cooperation facilitate the transfer of best practices and the standardization of digitalization practices.
- The application of AI technologies in public administration increases the targeting and transparency of digital services, ensuring a more accurate alignment of provided services with the needs of different categories of citizens. This contributes to greater public trust in state institutions, reduces administrative barriers and accelerates service delivery, and also enhances social effectiveness of governance through more rational resource allocation and improved quality of interaction between the state and society.

The **theoretical significance** of the research results lies in the fact that the key provisions, conclusions, and recommendations presented in the study contribute to the systematization and expansion of scientific understanding of the conceptual nature of the social effectiveness of public administration of digitalization and the development of the digital economy. The study provides an opportunity to broaden the theoretical frameworks related to the interconnection between public administration, the digital economy, and sustainable development. By analyzing the experience of Kazakhstan, the research can introduce new aspects into the field of theory, enriching it with an understanding of the impact of public administration on the development of digital technologies and on sustainable development in a specific regional context. The research results can be used to develop the theoretical foundation in the field of public administration of digital economy formation. They may serve as a basis for future research in this area of knowledge.

The **practical significance** of the results obtained by the author lies in the possibility of applying the theoretical and methodological approach, as well as the methodological and organizational-economic tools aimed at developing public administration of digitalization and digital transformation for sustainable development while improving the institutional and legal system. The practical value of the conducted research consists in proposing a model for assessing the social

effectiveness of public administration of digitalization and digital transformation in Kazakhstan in the context of sustainable development. The research results may serve as a basis for improving public policy in the field of digitalization and the formation of the digital economy in Kazakhstan. They will help identify the strengths and weaknesses of current policy and substantiate recommendations for its improvement.

Publication of Research Results. A total of 13 scientific papers have been published on the topic of the dissertation, including: 1 article in a journal indexed in the Scopus database; 3 articles in publications recommended by the Committee for Quality Assurance in Science and Higher Education of the Ministry of Science and Higher Education of the Republic of Kazakhstan; and 9 articles in the proceedings of international conferences.

Structure of the Dissertation. The dissertation consists of an introduction, three chapters, a conclusion, and a list of references. Chapter 1 examines the theoretical and methodological aspects of the social effectiveness of public administration of digitalization in the context of sustainable development. Chapter 2 is devoted to the analysis and assessment of the social effectiveness of public administration of digitalization in the Republic of Kazakhstan. Chapter 3 presents ways to enhance the social effectiveness of public administration of digitalization in the Republic of Kazakhstan. The dissertation comprises 199 pages of text prepared in MS Word and includes 47 figures, 27 tables, and a list of 282 references.