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GLOBAL EXPERIENCE IN THE TRANSITION TO THE DIGITAL ECONOMY: CHALLENGES AND PROSPECTS

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Abstract

The article examines the impact of digital transformation on the labor market, including the reshaping of employment relations under technological change and the rapidly increasing demand for digital skills. It highlights the emergence of new digital professions, the structural shifts in the workforce caused by automation, and global adaptation strategies adopted by leading economies. The study substantiates the importance of reskilling systems, digital competency development and innovative employment platforms in the transition toward a digital economy.

Keyword

digital transformation, labor market, digital skills, employment, competencies.

INTRODUCTION

The transition to a digital economy has become one of the global development trends of the 21st century and has emerged as a strategic factor redefining the competitiveness of nations. Countries around the world are widely introducing digital technologies to increase economic growth rates, improve the quality of services, optimize organizational and economic processes, and rapidly develop innovative potential. This process brings about profound transformations not only in economic efficiency but also in social systems, public administration, education, logistics, and manufacturing sectors.

LITERATURE REVIEW

Issues related to the formation of the digital economy and its application in global practice have been at the center of attention of economists, innovation researchers, and political scientists since the late 20th and early 21st centuries. The theoretical foundations of this field have been extensively elaborated in the scientific works of scholars such as D. Tapscott, E. Brynjolfsson, A. McAfee, K. Schwab, R. Bukht, and R. Heeks. Their research provides a scientific basis for understanding the essence of the digital economy, its mechanisms of influence on economic systems, the role of information technologies in innovative development, and the transformational impact of big data and artificial intelligence on economic processes.

International organizations have also conducted large-scale studies to assess the level of development of the digital economy. In particular, annual reports such as the ICT Development Index, Digital Economy Outlook, Digital Transformation Report, and Digital Readiness Index published by the ITU (International Telecommunication Union), OECD, UNCTAD, and the World Bank provide scientific and statistical information on digital infrastructure, the expansion of digital services, e-government, digital trade, and the level of digital competencies. These

materials contribute to an in-depth analysis of global challenges and prospects of the digital economy.

In global practice, South Korea, Singapore, Estonia, Japan, the USA, and the United Kingdom are recognized as leading models of digital economy development. Their experience has been widely studied in the areas of digital infrastructure, data management, information security, innovation ecosystems, and digital public services. Estonia's e-government model, South Korea's ICT strategy, Singapore's Smart Nation initiative, and the technological startup ecosystem in the USA are highlighted in numerous studies and considered valuable examples for developing countries.

Research conducted in CIS countries has examined the socio-economic consequences of transitioning to the digital economy, issues of digital inequality, the pace of digitalization, and challenges related to digital competencies. Russian economists such as A. Aptekar, V. Inozemtsev, D. Belov, and others have carried out scientific studies on digital infrastructure models, the internet economy, and the impact of digital platforms on market rules.

In Uzbekistan, theoretical and applied research on the transition to the digital economy is also expanding. Local scholars such as Nazarov Q., Usmonov B., Yusupov M., Mamashev A., and others have investigated the development of digital infrastructure, the implementation of information and communication technologies, digital public services, digital trade, and the impact of digital transformation on economic growth. Additionally, the "Digital Uzbekistan 2030" strategy and regulatory documents concerning economic reforms serve as key methodological sources for shaping the national model of the digital economy.

At the same time, several scientific gaps remain in existing research. In particular, the comprehensive assessment of the impact of the digital economy on the quality of economic growth, measurement of the macroeconomic efficiency of digital infrastructure, and institutional barriers to implementing digital technologies in transition economies are insufficiently studied. This underscores the need for deepening scientific research in this field and developing new models, indicators, and strategic approaches.

RESEARCH METHODOLOGY

The research methodology is based on open data sets from international organization reports, labor market statistics, and digital transformation indicators to assess the transition to a digital economy. The collected data were processed and analyzed using comparative analysis, trend evaluation, and descriptive-analytical methods that determine the dynamics of increasing demand for digital skills.

ANALYSIS AND RESULTS

Global experience shows that the key to successful implementation of the digital economy lies in infrastructure readiness, the widespread adoption of digital services, the level of human capital, and the establishment of a well-functioning institutional environment. For example, the United States and European Union countries are recognized as leaders in implementing digital economic platforms, artificial intelligence, digital finance, and e-government services. South Korea and Singapore, in turn, occupy leading positions in digital transformation by prioritizing technology-oriented education, investments in research centers, and the development of innovation ecosystems.

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The transition to the digital economy is creating new opportunities for countries while requiring important methodological approaches. In developing economies, the gradual improvement of digital infrastructure, enhancement of digital literacy, and strengthening of information security open broader possibilities for achieving sustainable growth. Regional disparities in internet coverage form the basis for introducing comprehensive programs aimed at ensuring regional digital equality. In this context, modernizing telecommunications infrastructure and expanding access to digital services further stimulate economic activity.

The transformation of professions in the labor market is also shaping new growth points. While traditional job types are declining, modern digital professions are emerging, directing economies toward more technologically advanced structures. This highlights the methodological necessity of expanding systematic programs for upskilling, reskilling, and developing digital competencies. As a result, the digital economy provides strategic opportunities for countries to build a flexible, innovative, and highly efficient labor market model.

Current global experience indicates that the prospects for transitioning to the digital economy are extremely broad. According to forecasts, by 2030 more than 60 percent of global GDP will be formed through digital services, e-commerce, online financial operations, and intelligent technologies. Artificial intelligence, digital payments, cyber-physical systems, and smart manufacturing sectors are expected to become new pillars of economic growth. Therefore, based on global experience, it can be concluded that transitioning to the digital economy is a strategic priority for countries and serves as a decisive factor in achieving economic stability, innovative development, and global competitiveness. International practice demonstrates that the development of the digital economy contributes to economic growth and improves the quality of economic development.

The necessity of transitioning to the digital economy is evident from the positions occupied by leading countries. Today, in economically developed states, the share of the digital economy accounts for 60–70 percent, with two-thirds of all financial resources and labor engaged in this sphere. All developed countries of the world are making strategic investments in information technologies, the development of information infrastructure, the creation of information resources, and the study of economic and social characteristics of the new economic system (Table 1).

Table 1

Level of Digital Economy Development in World Countries

Country	Digital Infrastructure (%)	Digital Services (%)	AI Implementation	E-Government Index
USA	91	78	Very High	0.88
South Korea	96	82	Very High	0.92
Singapore	94	85	High	0.95
Germany	89	74	Medium	0.84
Uzbekistan	63	41	Initial	0.67

The data in the table clearly show that the leading countries of the world are progressing at different speeds and levels in the development of the digital economy. Countries such as the United States, South Korea, and Singapore have digital infrastructure and digital services levels exceeding 90 percent, indicating that the digital economy in these states is firmly established, their innovation ecosystems are strong, and digital technologies have become the main drivers of

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economic growth. In particular, South Korea's 96 percent infrastructure level and its e-government index of 0.92 demonstrate an advanced model of digital transformation.

In one of Europe's major economies—Germany—despite having 89 percent digital infrastructure, the share of digital services is 74 percent. This indicates that although the country has a strong technological base, reforms in the digital services segment need to be accelerated. Additionally, Germany's "medium" level of AI implementation shows that AI technologies remain mostly concentrated within industrial clusters and large corporations.

Uzbekistan's indicators, compared to developed countries, remain lower, indicating that digital infrastructure (63%) and digital services (41%) are still in a gradual development stage. The e-government index of 0.67 reflects that digital reforms are being implemented in the country, yet there is a significant need for broader development in infrastructure and human capital.

This, the table highlights that for Uzbekistan, modernizing digital infrastructure, introducing AI technologies, and expanding the share of digital services are essential strategic priorities for achieving competitiveness in the global arena (Table 2).

Table 2

Promising Directions of the Digital Economy

Direction	Development Speed	Description
Artificial Intelligence	Very Fast	Automation, intelligent systems
Big Data	Very Fast	Analytics-based management
FinTech	Fast	Digital payments, crypto-technologies
Industry 4.0	Fast	IoT, robotics, smart manufacturing
E-government	Medium	Digitalization of public services

The table examining the promising directions of the digital economy shows how the global economic system is rapidly transforming due to certain technological factors. Particularly, the very rapid development of Artificial Intelligence (AI) and Big Data has turned these areas into the main technological drivers of the 21st century. AI-based automation, intelligent forecasting, machine learning, and robotics technologies are significantly reducing the human factor in production, service delivery, and logistics processes. Meanwhile, Big Data is fundamentally changing decision-making systems, forming precise, real-time data-driven intelligent decisions in areas like government administration, business strategy, and marketing.

Another important direction is FinTech, whose rapid development is explained by the widespread adoption of digital payments, mobile banking, cryptocurrencies, and blockchain technologies. This direction transforms traditional banking services in the financial sector, offering financial operations that are affordable, fast, and secure for the population and businesses. Moreover, Industry 4.0, consisting of IoT, smart sensors, autonomous robots, and

intelligent logistics systems, fully digitizes production processes. This model enhances resource efficiency in enterprises, potentially increasing production efficiency by 30–40%.

The direction of e-government is associated with the digitalization of state services. Although its development rate is moderate, it plays a crucial role in enhancing convenience, transparency, and reducing the risk of corruption for the public. Electronic government systems optimize the relationship between the state and citizens, improving the overall efficiency of public administration.

The formation of the digital economy has become one of the main directions of extensive research and strategic programs over the past twenty years at national, regional, and global levels. It emerges as a comprehensive direction aimed at reaping maximum benefits from the transition to an updated economic structure based on digital technologies, fully realizing innovative potential, and mitigating potential risks during the digitalization process. Countries worldwide are leveraging information technologies as a strategic resource to enhance economic efficiency, optimize production processes, and strengthen competitiveness through digital transformation.

The strategic advantage of the digital economy is defined by the capacity to provide the necessary material resources for the society's sustainable development and the opportunity to develop information and communication technologies. It is distinguished by high productivity, social interactivity, resource-efficient utilization, rapid integration into global markets, and increased innovative activity. In this regard, the digital economy creates significant opportunities in production, service provision, and management processes, forming the most efficient mechanisms for reallocating and utilizing resources.

However, the transition to a digital economy is a complex and multifaceted phenomenon. This process is intricately linked with changes in the structure of productive forces, transformation of the labor market, reshaping of the innovative ecosystem, and the formation of new rules in the system of social relations. On one hand, there is a certain diminishing trend in the innovative benefit effect in the field of information technology, with the life cycle of technological innovations shortening in a competitive environment. On the other hand, the direct digital researches, AI, telecommunication infrastructure, and intellectual service sectors are taking a leading role in global development.

CONCLUSIONS AND RECOMMENDATIONS

Analyses demonstrate that the formation of the digital economy is a complex process requiring a comprehensive review of entire economic structures, productive forces, and the system of social relations. Global experience confirms that when digital infrastructure, human capital, innovative potential, and technological platforms develop harmoniously, digital transformation yields high efficiency. This process progresses rapidly in some countries, while in other regions, it proceeds slowly due to digital inequality, limited access to technologies, and insufficient workforce training.

Moreover, the inherent complexity of transitioning to a digital economy relates to its simultaneous development in two directions. On one side, digital technologies (AI, IoT, telecommunications, Big Data) exert a positive influence; on the other side, the shortening life cycle of technological innovations, increased competition, and rising transformation costs present strategic risks for countries. Thus, scientific research on the digital economy demands a scientific-practical approach that accurately assesses not only opportunities but also risks and systemic limitations.

The final results imply that developing the digital economy effectively in the long run requires not just implementing technologies but also fostering an innovative environment, enhancing workforce qualifications, modernizing digital infrastructure, and deepening institutional reforms. Therefore, the digital economy is a robust driver of future economic growth, where a correct strategic approach determines national competitiveness and social progress.

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