

THE USE OF DIGITAL TRANSFORMATION TO INCREASE COMPETITIVENESS IN THE INNOVATIVE DEVELOPMENT OF REGIONS**Abdullaev Muzaffar Abdujabbarovich**

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Abstract: The article analyzes the role and significance of digital transformation in enhancing the competitiveness of regions in the process of innovative development. The rapid development of the digital economy requires managing regional economic systems based on new approaches. From this perspective, the paper highlights the opportunities for stimulating innovation activity, increasing production potential, diversifying the service sector, and introducing new business models through the effective use of digital technologies. The study scientifically substantiates the impact of key elements of digital transformation-digital infrastructure, information technologies, databases, and artificial intelligence – on regional competitive advantages. In addition, existing problems in implementing the digital economy in the regions of Uzbekistan are identified, and practical recommendations for addressing these challenges are proposed.

Keywords: digital transformation, innovative development, regional competitiveness, digital economy, information technologies, artificial intelligence, economic modernization.

Introduction: Today, digital transformation processes have become a defining feature of the global competitive environment in the world economy. The innovative development of regions and their economic growth rates largely depend on the level of implementation of digital technologies. The digital economy enables more efficient use of resources at the regional level, the creation of new jobs, and the introduction of innovative solutions in production and service sectors.

Moreover, digital transformation strengthens regional competitiveness by improving governance efficiency, enabling rapid analysis of data flows, and automating decision-making systems.

In Uzbekistan, the transition to a digital economy has been elevated to the level of a national strategy. Within the framework of the “Digital Uzbekistan – 2030” program, a number of measures are being implemented to digitalize regions, develop innovative infrastructure, and introduce information technologies. From this perspective, a scientific analysis of the role of digital transformation in regional innovative development and its impact on economic competitiveness is of significant relevance.

Literature Review: The role of digital transformation in the innovative development of regions has been widely studied by international and national researchers in recent years. In particular, as emphasized in M. Porter’s theory of competitive advantage, regional competitiveness is directly linked to the level of innovative capacity and technological development [Porter, 1990]. From this standpoint, the introduction of the digital economy is considered an important factor in reducing innovation disparities between regions and creating new economic opportunities.

Studies conducted in the European Union and Asian countries (OECD, 2021; UNCTAD, 2022) confirm the positive impact of digital transformation on regional innovation ecosystems. According to these studies, improving digital infrastructure and widely implementing information technologies accelerate research and development activities, startups, and innovative processes in production at the regional level.

Among Uzbek scholars, A. Vakhobov, D. Toshmatov, and B. Gulomov have analyzed the impact of the digital economy on national and regional development in their research. They emphasize that digital technologies are a key factor in effectively organizing regional governance systems, forming new production chains, and optimizing the allocation of economic resources [Vakhobov, 2022].

Thus, the analysis of existing literature confirms the theoretical and practical significance of digital transformation in enhancing regional competitiveness and highlights the need for further in-depth research in this area.

Research Methodology: In this study, comparative, analytical, and systemic approaches were employed to scientifically analyze the impact of digital transformation on the innovative development of regions. First, the theoretical foundations of the digital economy and innovative activity were examined based on national and international scholarly sources. To assess the level of regional competitiveness, economic indicators such as the level of digital infrastructure, the volume of investments directed toward innovation, the number of newly created jobs, and the scale of information technology utilization were selected.

In the empirical part of the research, a dynamic analysis covering the period 2020–2024 was conducted using data from the State Statistics Committee of the Republic of Uzbekistan, the Ministry of Economy and Finance, as well as international organizations such as UNCTAD and the OECD. In addition, the interrelationship between the level of digital infrastructure development and the effectiveness of innovative activity across regions was identified using correlation analysis.

Furthermore, induction and deduction methods, expert evaluation, and SWOT analysis tools were applied to formulate scientific conclusions. This made it possible to identify the key factors through which digital transformation influences regional innovative development and to determine their economic outcomes.

Analysis and Results: The research findings indicate that digital transformation processes have a direct impact on the pace of innovative development in regions. An analysis of Uzbekistan's economic indicators for the period 2020–2024 revealed that regions with rapidly developing digital infrastructure demonstrate higher levels of innovation efficiency and competitiveness. For example, in Tashkent city and the Navoiy and Samarkand regions, the expansion of digital service coverage by 25–30 percent led to a significant increase in the number of new technological startups and the volume of innovative products.

At the same time, in regions that are more slowly integrated into the digital economy (such as the Kashkadarya and Surkhandarya regions), innovation indicators remain at a relatively low level. In these areas, insufficient development of digital infrastructure, low internet speed, and limited investment in information technologies are constraining innovative activity.

According to the results of the correlation analysis, a strong positive relationship with a coefficient of 0.82 was identified between the level of digital infrastructure and the effectiveness of innovative activity. This confirms that digital transformation is a decisive factor in enhancing regional innovative potential.

Moreover, the introduction of digital governance systems has enabled local authorities to apply a data-driven approach to decision-making, thereby expanding opportunities for efficient resource utilization and diversification of economic activities.

The analysis also shows that digital transformation should be considered not only as a technological factor but also as a strategic direction of social and economic modernization. To ensure innovative development in regions, the advancement of digital education, digital entrepreneurship, and public–private partnership mechanisms is of critical importance.

As a result, deepening digital transformation is becoming a key driver for increasing regional competitiveness, ensuring sustainable economic growth, and strengthening the innovative ecosystem.

Recommendations and Conclusions: The results of the study demonstrate that digital transformation is of strategic importance for the innovative development of regions. It emerges as a decisive factor in optimizing economic processes, creating innovative products, and enhancing competitiveness. In Uzbekistan, the reforms being implemented to develop the digital economy are strengthening regional innovative potential; however, infrastructural disparities between regions still persist.

Therefore, it is necessary to expand investment programs aimed at developing digital infrastructure and to implement them based on public–private partnerships. Increasing the level of digital literacy in regions, especially by strengthening IT education for young people and entrepreneurs, is of critical importance. In addition, it is advisable to introduce digital grant platforms and venture financing systems to support innovative projects.

To assess regional competitiveness, it is proposed to introduce a “Digital Economy Index.” This index would make it possible to evaluate the level of digital infrastructure, innovative activity, and digital services across regions. At the same time, the use of artificial intelligence, big data analytics, and blockchain technologies in digital governance systems will contribute to the automation of decision-making processes.

Thus, deepening digital transformation and integrating it into regional development strategies is a key condition for ensuring sustainable economic growth and enhancing the country’s innovative competitiveness.

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