# "THE DEVELOPMENT OF THE DIGITAL ECONOMY AND ITS IMPACT ON ECONOMIC PROCESSES: GOVERNMENT INITIATIVES, DIGITAL LITERACY, AND THE ROLE OF SCIENTIFIC AND TECHNOLOGICAL CENTERS"

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**Abstract:** Currently, the growth of the digital economy is a priority for every nation. The level of digital literacy in our nation is being researched and developed with the aid of government initiatives, digitalization, security, and legal guidelines. By integrating the digital economy into the actual economy, technical and technological capabilities are developed, necessitating the formation of centers with specialized assistance for scientific research and development as well as their commercialization. As a result, the practice of creating the "Digital Economy" demonstrates that its influence on economic processes is varied, stable, and permeates all aspects of society, the state, and population life[1].

**Key words:** digital economy, economic processes, digitalization, digital revolution, multi-sectorial innovation, industrial restructuring, digitalized technologies, digital-financial services, e-commerce.

## INTRODUCTION

The Republic of Uzbekistan's population is expanding, which in turn encourages population economic activity and steps to support the operations of industrial businesses, as well as the growth of the sector and the nation's overall economic activity. The digital revolution has begun a phase of increasing narrowing of the field of global competition and is emerging as a new stage of economic and technological development while swiftly changing human life and

opening up enormous options. The decision of the state to promote the digital economy opens up new avenues for information technology and, more broadly, for the exchange of electronic documents. The global Internet network and the advancement of effective communication are what gave rise to "digital technologies"[2]. Although the digital economy in Uzbekistan is still in its infancy, there are many bright prospects for expansion. Many important legal frameworks have been put in place as a result of widespread reforms in recent years, but not all.

The increase in the share of innovative activity has led to the fact that innovations are considered the wealth of the country, like minerals, production capacity and intellectual potential. For the benefit of our country and each of its citizens, the effective use of innovative and scientific and technical potential, the formation of a multi-sectorial innovation policy in our country and for its implementation - there is no possibility without creating legal bases. The head of our state said that although our country rose by 8 points in the international information and communication technology development index in 2019, it is still far behind. Most ministries and agencies, enterprises are digital.

It is also true if we say that it is completely far from technology. Of course, we know very well that the formation of the digital economy requires the necessary infrastructure, a lot of money and labor resources. However, no matter how difficult it is, if we don't get started today, when will we get started? Tomorrow will be too late.

*Therefore, an active transition to the digital economy:*

- will be one of our most important tasks in the next 5 years. Digital technologies not only increase the quality of products and services, but also reduce excess costs. At the same time, it is the worst disease that worries and bothers me a lot

- they are also an effective tool in eliminating the scourge of corruption. We all need to understand this deeply. It is possible to widely introduce digital technologies in state and community management, social sphere, increase

productivity, in a word, dramatically improve people's lives."[3].

At the same time, the social and economic challenges of COVID-19 deepened the Government's commitment to using digital technologies in its own operations and integrating digital technologies across economic sectors while also accelerating the pace of digital adoption among the general public. To help guide the country through the next decade of changes, the Government adopted the Digital Uzbekistan 2030 Strategy (Digital Uzbekistan Strategy) in October 2020. The Digital Uzbekistan Strategy sets out fie priority areas for development: Digital infrastructure; e-Government; Digital economy. (figure 1).


**Figure 1. The Digital Uzbekistan Strategy**

The digital economy has been recognized as a powerful catalyst for accelerating industrial restructuring and achieving sustainable and high-quality economic growth, according to earlier studies on the effect of the digital economy on industrial development [4]. But from a national or specific industry perspective, this section of the study examines the effects of digital technology on structural industrial change and economic growth from various angles. The impact's mechanisms and procedures are not thoroughly examined. According to Gault (2019), the introduction of technological advances, production, business models, and industrial integration can help the upgrading of the industrial structure [5].

Digital industrialization is the cornerstone and prerequisite of modernizing industrial structure, according to Hosan et al. (2022) [6]. Numerous academics have come to a similar conclusion, which is that the digital economy helps to modernize the industrial structure [7,8]. On the basis of rationalization and

progress of industrial structure, the development of the digital economy has been clearly beneficial [9]. Other people, despite the digital economy's positive impact on improvements to the industrial structure, have questioned its heterogeneity.

They contended that the reliance effects of digital technologies, digital monopoly, compound digital-technological talent deficit, and an absence of a digital public service system might mitigate such a beneficial influence [10,12]. The investigation of the digital economy's drivers, its effects on high-quality economic growth, and its effects on industrial development are the main topics of quantitative research on the subject [9]. The growth of the digital economy can lower resource consumption and environmental degradation, ease pressure on established economic models, boost market vitality, and speed up the digital building of cities to enhance the quality of life for citizens [7]. (2022) observed that industrial digitalization stimulates innovation and industrial integration, advancing industrial transformation [8]. (2021) noted that industrial digitalization increases industrial productivity and product usage values, resulting in the supererogation of the industrial structure [10,11]. By pushing the frontiers of company innovation, lowering transaction costs, and raising the level of cooperative innovation, the use of digital technology fosters the green technology innovation of resource-based enterprises [12]. Integrated industry growth, industrial structure optimization and modernization, industry modernization, and green technology innovation are all beneficial to the region's development in a high-quality and environmentally friendly manner. However, excessive use of digital technology may result in excessive industrial digitization, which will put businesses in a condition of "information overload" and have a negative influence on their ability to make decisions [9].

## RESULT AND DISCUSSION

The ability for regional innovation is significantly increased by the digital economy, according to researchers [11]. Based on advances in digital technology, the digital economy expands and fosters local innovation. Digitalized technologies,

which have changed traditional production methods, organizational structures, business models, and innovation theories due to technological growth, are crucial for preserving and enhancing core competitiveness. The entire effectiveness of the industrial chain is significantly increased by automation, intelligence, and digitalization [12]. Growth in the digital economy contributes to innovation and R&D in a good way. Due to its high rates of adoption and replacement, which raise the amount of technology used in the manufacturing process, it aids in industrial restructuring. (2021) saw the digital economy as a new means of accelerating industrial restructuring, with the heterogeneous technological innovation acting as a mediating factor. (2018) noted that when the digital economy delivers the dividend of industrial restructuring, green technological innovation is a key transmission mechanism.

According to pertinent research, the following empirical model is created to confirm the impact of the digital economy on manufacturing technological innovation:

$$Innov_{pey} = \alpha + \beta Digt_{py} + \gamma CVs + \varepsilon$$

The subscripts p, e, and y represent provinces, enterprises, and years, respectively. The variable *Innov* is the technological innovation of enterprises, and the quantity and quality of innovation output of enterprises are selected as its proxy variables. The variable *Digt* is the provincial development index of the digital economy. The control variables *CVs* include enterprise scale, equity concentration, long-term capital-liability ratio, net profit growth rate, enterprise age, economic development level, government technology support, and industrial structure level. The parameter α is a constant term and ε is the disturbance term. Manufacturing technological innovation (*Innov*) is the explained variable in the above model. Drawing on Peng and Zhang, enterprise technological innovation is measured from the quantity (Apl) and quality (Lic) of manufacturing innovation output. The

variables Apl and Lic are, respectively, measured by the number of patent applications and authorizations to enterprises.

## CONCLUSION

The results demonstrate a strong twofold influence of four factors, including infrastructure, digital industrialization, industrial digitization, and digital governance, on fostering manufacturing technology innovation. Additionally, it is supported by the data's endogenous processing and the outcomes of the robustness tests.

The idea of the digital economy is somewhat intricate. The digital economy indicator system has room for further improvement. Additionally, patent data is used to gauge technological advancement, although the data extracted is insufficient. To study the variety of enterprise technological innovation and generate more precise policy recommendations, it can be further categorised.

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