

The Role Of Digital Transformation in the Economic Development of Uzbekistan

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ABSTRACT

Digital transformation has emerged as a crucial catalyst for economic modernisation and sustainable development in numerous emerging economies. This report analyses the impact of digital transformation on Uzbekistan's economic development, focusing specifically on the national strategy "Digital Uzbekistan – 2030." The study examines essential metrics of digital advancement, encompassing Internet prevalence, digital payment systems, fintech proliferation, and the evolution of the IT Park Uzbekistan ecosystem. The methodology relies on qualitative study of policy papers and statistical data sourced from national institutions and international organisations, including the WorldBank UNDP, and ITU.

The findings indicate substantial advancement in the establishment of digital infrastructure and services. Internet penetration significantly grown during the past decade, accompanied by the rapid expansion of digital payment systems and mobile banking services. The quantity of IT enterprises functioning in IT Park Uzbekistan has increased markedly, facilitating employment creation and the growth of IT service exports.

Notwithstanding these accomplishments, other obstacles persist, including regional differences in internet access, cybersecurity threats, and a deficiency of competent ICT professionals. The report indicates that ongoing investment in digital infrastructure, human capital development, and innovation ecosystems is crucial for enhancing Uzbekistan's standing in the global digital economy and fostering long-term economic competitiveness.

1. Introduction

Digital transformation, defined as the incorporation of digital technologies into governmental operations, business procedures, and societal frameworks, has emerged as a pivotal catalyst for global economic modernisation. In rising economies, digitalisation is crucial for augmenting

production, strengthening governance efficiency, and broadening access to financial and governmental services.

Uzbekistan has recognised digital transformation as a strategic objective for national growth in recent years. Since 2019–2020, the government has augmented initiatives to modernise digital infrastructure, enhance broadband connectivity, and foster the advancement of the digital economy. The national policy "Digital Uzbekistan - 2030" delineates extensive objectives focused on enhancing digital public services, fostering technological entrepreneurship, and bolstering human resources within the ICT industry.

International organisations, such as the World Bank and the United Nations Development Programme (UNDP), actively endorse these reforms by funding digital inclusion projects and programs aimed at enhancing employment in the IT sector. Consequently, Uzbekistan has been exhibiting substantial advancements in domains such as digital payments, e-government services, and the establishment of technological clusters.

2. Literature Review

Digital transformation has become a central theme in the economic development strategies of emerging economies, particularly those aiming to enhance productivity, governance efficiency, and global competitiveness. Existing literature broadly defines digital transformation as the integration of digital technologies into economic, institutional, and social processes, reshaping value creation and service delivery. According to the World Bank, digitalization plays a critical role in accelerating inclusive growth by improving access to markets, financial services, and public infrastructure, especially in developing countries¹.

Several studies emphasize the importance of national digital strategies in guiding structural reforms. Uzbekistan's "Digital Uzbekistan 2030"² strategy reflects global best practices by prioritizing e-government, digital infrastructure, fintech development, and human capital formation. Research by the UNDP highlights that digital government platforms contribute to transparency, reduced administrative costs, and improved service accessibility, particularly for small and medium-sized enterprises (SMEs).

¹ World Bank (2023). World Bank to support Uzbekistan in developing the digital economy, <https://www.worldbank.org/en/news/press-release/2023/11/30/world-bank-to-support-uzbekistan-in-developing-the-digital-economy-and-creating-new-jobs-in-the-it-sector>

² Government portal: Digital technologies and strategy (Digital Uzbekistan - 2030), https://www.gov.uz/en/activity_page/digital_technology

The fintech and digital payments sector has received significant attention in recent literature due to its impact on financial inclusion. Reports from the Central Bank of Uzbekistan indicate rapid growth in cashless transactions, supporting findings by Visa (2023) and KPMG (2024)³ that digital payments enhance transaction efficiency and reduce informal economic activity. Similarly, the expansion of the IT Park Uzbekistan aligns with global evidence that technology clusters stimulate innovation, employment, and export-oriented growth.

Despite these advances, scholars identify persistent challenges, including the digital divide between urban and rural regions, cybersecurity vulnerabilities, and shortages of skilled IT professionals. The OECD and ITU argue that without targeted investment in digital skills and cybersecurity frameworks, the long-term benefits of digital transformation may remain uneven. Overall, the literature suggests that while Uzbekistan has made substantial progress, sustained policy coordination and investment are essential to fully realize the economic potential of digital transformation.

3. Methodology

The paper employs qualitative analytical techniques, encompassing literature examination, policy analysis, and comparative evaluation of ICT development patterns. The study utilises secondary data sourced from official reports, international organisations, and industry publications.

The paper evaluates critical indicators of digital transformation in Uzbekistan, encompassing Internet penetration, digital payments, fintech advancement, and the growth of IT Park Uzbekistan. Data sources comprise reports from the World Bank, UNDP, IT Park Uzbekistan, the Central Bank of Uzbekistan and DataReportal.

A comparative analysis is conducted to assess Uzbekistan's digital progress in relation to other Central Asian nations, specifically Kazakhstan and Kyrgyzstan. This method facilitates the identification of regional trends and Uzbekistan's standing within the regional digital economy⁴.

“Digital Uzbekistan - 2030” strategy provides a roadmap for digital transformation across sectors. Main pillars include: digital public services (e-government), digital infrastructure (broadband, data centers), digital economy (support for startups, IT Park incentives), and human

³ KPMG (2024). Fintech: Payments in Uzbekistan, https://assets.kpmg.com/content/dam/kpmg/uz/pdf/2024/Fintech%20UZ_Payments_POS%20Financing_BNPL-final.pdf

⁴ International Telecommunication Union (ITU). (2023). *Measuring Digital Development: ICT Indicators*.

capital (education and retraining). The strategy emphasizes interoperability of systems and regional cooperation in Central Asia (OECD, 2025; Ministry of Digital Technologies, 2024).

Fintech and Payments: scale and trends. Uzbekistan's fintech and payments sector has expanded rapidly: payment organizations processed about 116 trillion UZS in 2022, more than double the 2021 volume, demonstrating fast adoption of digital payments (Central Bank of Uzbekistan, 2023⁵). Industry sources report a rise in users of digital payment services from approximately 5.4 million in 2017 to over 12 million by early 2023, with continued growth in e-wallets and card payments (DataReportal, industry reports)⁶.

E- government and Public Services. E-government platforms such as my.gov.uz provide numerous public services online which reduces administrative costs and increases transparency. Official portals report processing millions of digital requests annually and improving service delivery times (Government portal; UNDP, 2025). These reforms enhance ease of doing business and reduce informal barriers for SMEs.

IT Park and the Startup Ecosystem. IT Park Uzbekistan has become the country's central hub for technology companies. As of 2023–2024, official statistics show over 1,600–1,800 resident companies, with growth continuing into 2024–2025 (IT Park, 2024; Startup Genome, 2025). The Park hosts service, product and educational companies, attracts foreign investment, and facilitates exports of IT services. Collaborative initiatives with global accelerators help startups access international markets⁷.

4. Results

The findings demonstrate a notable acceleration of digital change in Uzbekistan during the past decade.

Internet penetration surged significantly from 25% in 2015 to over 77% in 2024, with the number of Internet users escalating from 7.5 million to over 31 million. This expansion signifies enhanced internet infrastructure and increased accessibility to digital services.

The fintech sector has undergone swift advancement. Digital payment volumes surged from 30 trillion UZS in 2015 to about 116 trillion UZS in 2022, signifying extensive adoption of cashless payment systems and mobile banking technology.

⁵ Central Bank of Uzbekistan. Annual Report 2023 (payment system indicators), <https://cbu.uz/upload/medialibrary/ed6/1535r5kvq4spx2n1gijh7jvdia0t9o0g/Annual-Report-2023.pdf>

⁶ DataReportal (2023): Uzbekistan, <https://datareportal.com/reports/digital-2023-uzbekistan>

⁷ IT Park Uzbekistan. (2024). *IT Park Uzbekistan: Results of 2023 and development plans*, <https://it-park.uz>

A significant indicator is the evolution of the IT Park Uzbekistan environment. The quantity of resident enterprises rose from nearly zero in 2015 to over 1,650 organisations in 2024, illustrating the expanding significance of technology clusters in fostering innovation and employment within the ICT sector.

Regional analysis indicates that Uzbekistan is progressively establishing itself as a pivotal digital economy in Central Asia. Kazakhstan retains its position as the regional leader in IT exports and digital infrastructure, while Uzbekistan surpasses Kyrgyzstan and exhibits considerable development potential.

Table 1: Key digital indicators for Uzbekistan (selected years)⁸

Indicator	2015	2020	2024
Internet users (millions)	7.5	22	31
Internet penetration (%)	25%	65%	77%
Mobile subscribers (millions)	19	25	27
IT Park residents	0	400	1652
Fintech users (millions)	0.8	5.4	12+
Payment volume (trillion UZS)	30	55	116

Regional Comparison: Selected indicators

Table 2: Regional comparison (selected indicators)⁹

Country	Internet penetration (%) 2023	IT exports (USD million) 2023	IT Park / Startup hubs
Uzbekistan	76.6%	300+	IT Park (1652 residents)
Kazakhstan	83%	1200+	Astana HUB & local accelerators
Kyrgyzstan	62%	50+	Developing hubs

⁸ ITU, DataReportal, IT Park Uzbekistan, Central Bank of Uzbekistan.

⁹ DataReportal, Startup Genome, national statistics.

Economic Impact on SMEs and Employment. Digital tools have helped SMEs reach wider markets via e-commerce platforms and reduce transaction costs. Surveys and industry reports show SMEs that adopt digital payments typically see increases in turnover and customer reach¹⁰. Furthermore, the IT sector has become an important employer: estimates suggest tens of thousands of new tech jobs have been created or supported through IT Park activities and private sector growth.

Challenges: Digital Divide, Cybersecurity and Skills. Despite progress, Uzbekistan faces notable challenges. Internet access is uneven: national penetration is high, but rural areas are underserved, impacting access to services and opportunities. Cybersecurity capabilities require strengthening; Uzbekistan's performance in some global cybersecurity indices indicates room for improvement. Finally, workforce development is critical: the country needs a significant increase in qualified IT professionals by 2030 to sustain advanced digitalization (World Bank, 2023).

5. Discussion

The findings underscore the significant importance of digital transformation in the economic modernisation of Uzbekistan. The proliferation of Internet connectivity, advancement of digital payment systems, and expansion of the IT industry enhance productivity and facilitate enhanced access to services.

Nonetheless, numerous obstacles persist. A primary concern is the digital gap between urban and rural areas, characterised by restricted access to high-speed Internet. The proliferation of digital services is escalating cybersecurity concerns, necessitating enhanced legal frameworks and technical capabilities.

A significant concern is the deficiency of competent ICT professionals. Uzbekistan must enhance education and training initiatives in programming, data analytics, and cybersecurity to facilitate future digital transformation.

6. Conclusion

Digital transformation offers Uzbekistan a strategic opportunity to improve economic competitiveness and achieve deeper integration into the global digital economy. The swift expansion of Internet accessibility, digital transactions, and the IT Park framework indicates that the nation is significantly advancing in the development of a contemporary digital infrastructure.

¹⁰ KPMG (2024). Fintech: Payments in Uzbekistan, https://assets.kpmg.com/content/dam/kpmg/uz/pdf/2024/Fintech%20UZ_Payments_POS%20Financing_BNPL-final.pdf

Simultaneously, ongoing investment in digital competencies, cybersecurity frameworks, and infrastructure will be crucial for maintaining long-term growth. Should these issues be effectively resolved, Uzbekistan possesses the potential to emerge as a significant digital hub in Central Asia.

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