PROSPECTS FOR THE FORMATION AND DEVELOPMENT OF ARTIFICIAL INTELLIGENCE POLICY IN UZBEKISTAN

Author: Amirova Shohista

ABSTRACT

Artificial intelligence (AI) is becoming a key driver of global technological and socio-economic transformation. This article examines the prospects for the formation and development of artificial intelligence policy in Uzbekistan. The study analyzes national digital transformation strategies, institutional frameworks, and international experience in AI governance. Particular attention is given to the role of education, infrastructure, and innovation ecosystems in shaping sustainable AI policy. The research identifies key challenges, including limited research capacity, insufficient funding, and the need for regulatory improvements. The findings suggest that strengthening digital infrastructure, investing in human capital, and expanding international cooperation are essential for the effective implementation of AI policy in Uzbekistan.

KEYWORDS

Artificial intelligence, digital transformation, innovation policy, Uzbekistan, digital economy, technology governance, public administration

INTRODUCTION

Artificial intelligence has rapidly evolved into a strategic technology influencing economic development, governance systems, and social processes worldwide. According to international studies, AI technologies are expected to contribute trillions of dollars to the global economy in the coming decades. Governments are increasingly adopting national AI strategies to ensure technological competitiveness and sustainable development.

Uzbekistan has initiated a series of reforms aimed at digital transformation and the modernization of public administration. National programs related to digital economy development, e-government systems, and innovation infrastructure indicate growing recognition of the importance of artificial intelligence.

However, the formation of a comprehensive AI policy requires systematic analysis of institutional capacity, technological readiness, and human capital development.

Recent academic literature emphasizes that artificial intelligence policy must integrate technological innovation, ethical standards, and regulatory frameworks. Russell and Norvig (2021) highlight the transformative potential of AI across multiple industries. Brynjolfsson and McAfee (2018) argue that digital technologies are reshaping labor markets and productivity patterns globally.

OECD reports (2022) underline the importance of national strategies, public-private partnerships, and education reforms in successful AI implementation. The World Bank (2023) stresses the role of digital infrastructure and data governance in developing economies.

These studies provide a theoretical foundation for analyzing AI policy development in Uzbekistan.

This research is based on qualitative and analytical methods, including:

analysis of national policy documents and strategic programs

comparative analysis of international AI strategies

review of statistical and analytical reports from international organizations

synthesis of academic literature related to digital transformation and innovation policy

The methodological approach allows identifying key trends, opportunities, and challenges in the development of artificial intelligence policy.

Uzbekistan has made progress in digital governance and innovation policy. The establishment of IT Park Uzbekistan and the expansion of digital services have contributed to the development of the national IT ecosystem. Government initiatives aimed at increasing internet accessibility and digital literacy also create favorable conditions for AI development.

One of the most critical factors in AI policy development is the availability of qualified specialists. Universities in Uzbekistan have begun introducing programs in data science, artificial intelligence, and software engineering. However, the number of specialists remains insufficient compared to growing market demand.

Digital infrastructure plays a central role in enabling AI technologies. Improvements in broadband connectivity, cloud computing, and data storage systems are necessary for large-scale AI applications. Startups and innovation hubs are gradually emerging, especially in fintech and digital services.

The analysis shows that Uzbekistan has significant potential for AI development but faces structural challenges. Limited research funding, insufficient collaboration between academia and industry, and regulatory gaps remain key barriers.

International experience demonstrates that long-term investment in research and education is essential for sustainable AI development. Countries that have successfully implemented AI policies have established strong institutional frameworks and promoted interdisciplinary collaboration.

For Uzbekistan, adapting international best practices while considering national socio-economic conditions is crucial.

CONCLUSION

Artificial intelligence can become a powerful driver of economic growth and modernization in Uzbekistan. The country has already established the initial foundations for digital transformation, but further progress requires a comprehensive AI policy integrating education, infrastructure, research, and regulation.

Strengthening human capital, improving digital infrastructure, and expanding international cooperation will be essential for ensuring sustainable and inclusive technological development.

REFERENCES

Russell, S., Norvig, P. Artificial Intelligence: A Modern Approach. Pearson, 2021.

Brynjolfsson, E., McAfee, A. The Second Machine Age. Norton, 2018.

OECD. Artificial Intelligence Policy Observatory Report, 2022.

World Bank. Digital Development Overview, 2023.

European Commission. Artificial Intelligence Strategy, 2022.

IT Park Uzbekistan Annual Report, 2023.

Ministry of Digital Technologies of the Republic of Uzbekistan. Digital Transformation Reports, 2023