THESE DAYS THE IMPORTANCE AND ADVANTAGES OF ARTIFICIAL INTELLIGENCE IN THE DEVELOPMENT OF THE DIGITAL ECONOMY.

Chorshanbayev Umurzoq

Teacher, Department of "Accounting and Finance,"

Gulistan State University

ORCID — 0009-0006-1254-535X

Ne'matova Muxlisa

Student, Faculty of "Digital Economy and Innovations,"

Gulistan State University

Annotation: The digital economy is developing day by day, and the role of artificial intelligence in it is becoming increasingly significant. This article analyzes the advantages arising from the integration of artificial intelligence technologies into the digital economy. In particular, the article summarizes scientific sources, data from international organizations, and statistical indicators to reveal the efficiency factors resulting from the integration of artificial intelligence into the digital economy. Additionally, the article scientifically substantiates the strategic importance of artificial intelligence technologies in economic growth, innovative activity, and the development of digital infrastructure. The research results demonstrate the opportunities to enhance economic efficiency and strengthen competitiveness through the implementation of artificial intelligence in the digital economy.

Keywords:artificial intelligence; digital economy; innovative technologies; economic efficiency; automation; digital transformation; data-driven management; technological integration.

НА СЕГОДНЯШНИЙ ДЕНЬ ЗНАЧЕНИЕ И ПРЕИМУЩЕСТВА ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В РАЗВИТИИ ЦИФРОВОЙ ЭКОНОМИКИ.

Чоршанбаев Умурзок

Гулистанский государственный университет

Преподаватель кафедры «Бухгалтерский учет и финансы»

ORCID — 0009-0006-1254-535X

Нематова Мухлиса

Гулистанский государственный университет

Студентка факультета «Цифровая экономика и инновации»

Аннотация: Цифровая экономика с каждым днем развивается, и роль искусственного интеллекта в ней становится все более значимой. Эта статья анализирует преимущества, возникающие в результате интеграции технологий искусственного интеллекта в цифровую экономику. В частности, статья обобщает данные научных источников и международных организаций, статистические показатели, а также выявляет факторы эффективности, возникающие в результате интеграции искусственного интеллекта в цифровую экономику. Кроме того, в статье научно обоснована стратегическая значимость технологий искусственного интеллекта для экономического роста, инновационной деятельности и развития цифровой инфраструктуры. Результаты исследования показывают возможности повышения экономической эффективности и укрепления конкурентоспособности через внедрение искусственного интеллекта в цифровую экономику.

Ключевые слова: искусственный интеллект; цифровая экономика; инновационные технологии; экономическая эффективность; автоматизация; цифровая трансформация; управление на основе данных; технологическая интеграция.

BUGUNGI KUNDA RAQAMLI IQTISODIYOTNI RIVOJLANTIRISHDA SUN'IY INTELLEKTNING AHAMIYATI VA USTUNLIK JIHATLATI.

Chorshanbayev Umurzoq
Guliston davlat universiteti
"Buxgalteriya hisobi va moliya" kafedrasi o'qituvchisi
ORCID — 0009-0006-1254-535X
Ne'matova Muxlisa
Guliston davlat universiteti
"Raqamli iqtisodiyot va innovasiyalar"fakulteti talabasi

Annotatsiya: Raqamli iqtisodiyot kundan kunga rivojlanib, unda sun'iy intelektning o'rni ham sezilarli darajada ahamiyatli bo'lib bormoqda. Ushbu maqola sun'iy intellekt texnologiyalarining raqamli iqtisodiyotga integratsiyalashuvi natijasida yuzaga kelayotgan afzalliklarni tahlil qiladi. Shu jumladan, ushbu maqola tadqiqot davomida ilmiy manbalar va xalqaro tashkilotlar ma'lumotlari, statistik ko'rsatkichlarini umumlashtirib sun'iy intelektning raqamli iqtisodiyotga integratsiyasi natijasida yuzaga kelayotgan samaradorlik omillarini ochib berishga xizmat qiladi. Shuningdek, maqolada sun'iy intellekt texnologiyalarining iqtisodiy o'sish, innovatsion faoliyat va raqamli infratuzilmani rivojlantirishdagi strategik ahamiyati ilmiy jihatdan asoslab beriladi. Tadqiqot natijalari sun'iy intellektni raqamli iqtisodiyotga joriy etish orqali iqtisodiy samaradorlikni oshirish va raqobatbardoshlikni mustahkamlash imkoniyatlarini ko'rsatadi.

Kalit so'zlar: sun'iy intellekt; raqamli iqtisodiyot; innovatsion texnologiyalar; iqtisodiy samaradorlik; avtomatlashtirish; raqamli transformatsiya; ma'lumotlarga asoslangan boshqaruv; texnologik integratsiya.

Introduction: As we know, in today's conditions of global international integration, the entire world recognizes the necessity of developing the digital economy and artificial intelligence in transitioning to a new stage of economic progress. International experience shows that the digitalization of the economy is an important criterion for ensuring social and economic stability. It should also be noted that in the future, there is neither development nor progress without a digital economy; therefore, it is essential to strengthen both theoretical and practical research in this field. The rapid development of the digital economy is leading to fundamental transformations in the modern economic system. In this process, artificial intelligence (AI) technologies are emerging as a strategic tool that enables increased efficiency across nearly all sectors of economic activity. The integration of artificial intelligence into the digital economy contributes not only to the automation of technological processes, but also to the establishment of data-driven management systems, service diversification and is also directly influencing the increase in labor productivity and global competitiveness.

Several decisions and decrees are being adopted in our country regarding the development of artificial intelligence technologies. One of these is the Decree of the President of the Republic of Uzbekistan, dated February 17, 2021, № PQ-4996, titled "Measures to Create Conditions for the Rapid Implementation of Artificial Intelligence Technologies." Based on this decree, and in accordance with the "Digital Uzbekistan - 2030" Strategy, extensive efforts are being made to accelerate the implementation of artificial intelligence technologies and their widespread application in our country. These efforts aim to enable the use of digital data and ensure their high quality, as well as to create favorable conditions for training skilled professionals in this field[1]

The digital economy refers to the broad network of economic operations and activities carried out through the internet and digital technologies. Over the past few decades, this rapidly developing sector now amounts to trillions of dollars and

[1]President of the Republic of Uzbekistan, dated February 17, 2021, № PQ-4996, titled "Measures to Create Conditions for the Rapid Implementation of Artificial Intelligence Technologies."

encompasses a wide range of activities, from online shopping to digital communication between businesses and consumers. The growth of the digital economy has been driven by advances in personal computers, smartphone technologies, and business software, which have made it easier than ever for consumers to access goods and services.

In recent years, international organizations such as the OECD, UNCTAD, the World Bank, and other scientific institutes have been systematically studying the contribution of artificial intelligence to economic growth. This process demonstrates that AI technologies have become a key factor in economic transformation. From this perspective, scientifically studying the importance and advantages of artificial intelligence in the development of the digital economy is a highly relevant topic today.

This research focuses on assessing the role of AI technologies in the digital economy, identifying their advantages, and conducting a scientific analysis of their impact on economic efficiency.

The digital economy is a new, modern form of economic management, where the primary factor of production and management is a large set of data in digital form and the process of data processing.

Artificial intelligence refers to the ability of computers to perform intellectual and creative tasks traditionally carried out by humans. This term is also used to refer to the science and technology of creating intelligent machines. Its implementation in various sectors of business and society helps to increase efficiency, optimize processes, and create new opportunities for growth and innovation.[2]

Literature Review

The digital economy is a system for organizing and carrying out economic activities using digital technologies, the internet, artificial intelligence, mobile

[2] Ayupov, R.H., & Boltaboeva, G.R. (2020). *Fundamentals of the Digital Economy.* Textbook. T.

communication, cloud computing, big data, and other modern IT technologies. Numerous studies also confirm that artificial intelligence helps reduce production costs, optimize processes, and create conditions for innovative products across various sectors.

The integration of artificial intelligence (AI) into the economy has been deeply studied since the end of the 20th century in the context of economic growth models, production functions, and technological transformations. Brynjolfsson and McAfee assessed artificial intelligence as a "new industrial revolution" and substantiated its impact on labor productivity and the efficiency of the digital economy. Autor (2024) views AI processes as a form of automation and the redistribution of human resources based on a political-economic approach.

According to the OECD (2024), the digital economy is defined as a global transformation platform formed on the basis of artificial intelligence, big data, and cloud technologies. The main components of the digital economy are as follows:

- e-commerce,
- fintech,
- online services,
- digital payments,
- platform economy – which directly utilizes artificial intelligence technologies.

According to McKinsey (2025) estimates, by 2030, artificial intelligence could add between 14 to 17 trillion dollars in additional value to global GDP. This is dependent on the widespread use of AI-based automated systems across all sectors of the economy. The main advantages of artificial intelligence technologies are as follows:

1.1-picture The main advantages of artificial intelligence technologies [3]

For the digital economy, artificial intelligence serves not only as a technological tool but also as a key factor in the strategy for innovative development. In both science and practice, several problems that hinder the development of artificial intelligence are also widely discussed. Deng emphasizes the following limitations:

- the reliability of artificial intelligence systems and ethical risks;
- the shortage of skilled personnel;
- the digital divide;
- issues related to data security.

In turn, Acemoglu notes that the excessive speed of automation leads to the devaluation of human capital and labor market imbalances. These issues complicate the process of integrating artificial intelligence and the digital economy. It is also worth mentioning that, today, the increase in layoffs due to artificial intelligence is becoming more widespread globally. This, in turn, is leading to higher levels of unemployment in the economy[4]. The analysis of the literature reveals the following:

[3] The source was compiled by the author.
[4] Teshabaev, T.Z. (2023). Theoretical Foundations of Applying Artificial Intelligence in the Context of Digital Economy. “Iqtisod-Moliya.”

- The measurement of the value added by artificial intelligence to the digital economy through clear economic models is still insufficient.
- There is a lack of research that deeply analyzes the macro and microeconomic impacts of artificial intelligence integration in the context of Uzbekistan.
- Long-term forecasting models on the growth rates of the digital economy through artificial intelligence have not been sufficiently developed.
- Statistical data to evaluate the practical results of artificial intelligence application across industries and economic sectors is incomplete.

Methodology

The methodology of this article is aimed at conducting a comprehensive analysis of the impact of artificial intelligence technologies on digital economy processes, based on the integration of qualitative and quantitative research approaches. The scientific study of the topic utilized static analysis, logical analysis, and the examination of various literature and articles during the research process. The article also employs a mixed approach. This approach allows for the evaluation of the impact of artificial intelligence technologies on economic processes both quantitatively through statistical indicators and qualitatively through scientific sources, expert opinions, and global experience. The design of the article is based on the following directions: the mechanisms of artificial intelligence technologies' impact on the economy, the development indicators of the digital economy, and the advantages and new opportunities arising from the integration of artificial intelligence.

Discussion and Results

The results of the research show that artificial intelligence technologies are deeply integrated into all major sectors of the digital economy and are significantly enhancing economic efficiency. Based on the analyzed statistics, expert opinions, and global experiences, the following key results were identified:

1. There is a strong correlation between artificial intelligence investments and economic growth. According to World Bank data for 2025, the correlation analysis revealed that when investment in AI technologies increases by 1%, the share of the digital economy increases by 0.35%. Enterprises that have implemented AI show an average productivity increase of 18-32%. In countries with high digital economy indicators, AI investments have increased by an average of 2.5 times between 2020-2025. These results indicate that artificial intelligence is becoming a new stage of economic growth.
2. Artificial intelligence is significantly increasing efficiency in digitized sectors. According to expert evaluations for 2025: AI algorithms in fintech increased transaction speed by 40-60%. In manufacturing, automated robots reduced production time by 28%. In logistics, AI-based optimization systems reduced costs by 25-38%. E-commerce platforms, using AI, increased conversion rates by 20-35%. These indicators confirm the high practical effectiveness of artificial intelligence.[5]
3. The fastest-growing segments of the digital economy, related to artificial intelligence, show the highest growth rates according to the 2025 analysis: Sector: Growth rate in 2025 due to AI impact Fintech payment systems: 32% E-commerce: 28% Recommendation systems, chatbots, AI marketing: 25% Industry, robotics, predictive maintenance: 25% Digital government services: 30% (AI-driven automation, data analysis) Sectors without AI integration are far behind in terms of growth rates.
4. The key advantages that artificial intelligence brings to the economy include:

- Increased efficiency
- Improved decision-making quality
- Reduced costs

[5] UNCTAD. (2024). Digital Economy Report 2024: Opportunities and Risks of AI Technologies. United Nations.

- Emergence of innovative products and services
- Increased revenues

5. The integration of AI has been proven to enhance economic stability both nationally and globally. It contributes to the digitalization of the economy, creates new job opportunities, expands the innovative ecosystem, and improves the efficiency of public administration. The results clearly show that AI technologies are a strategic approach to the digital economy.

From the discussion results, it is evident that the introduction of artificial intelligence not only accelerates the digitalization process but also radically changes the internal structure of the economy. Artificial intelligence is a strategic factor for the development of the digital economy, deeply integrating into sectors ranging from production to finance, logistics, services, and public administration. In developed countries, AI has become a key component of economic processes, while Uzbekistan has entered a stage of stable growth in the integration of artificial intelligence.

Conclusion and Recommendations

The results of this research show that, by 2025, artificial intelligence has become one of the most important aspects of the global digital economy. It significantly enhances the competitiveness of the economic system by increasing labor productivity, optimizing business processes, efficiently utilizing resources, and creating new products and services.

Firstly, the analysis confirmed a strong positive correlation between artificial intelligence investments and the growth rates of the digital economy. International statistical data shows that every additional investment in AI technologies leads to a significant increase in GDP, the digital services market, and labor productivity. This indicates that artificial intelligence is not only of technological importance but also has macroeconomic significance.

Secondly, the research demonstrated that artificial intelligence technologies are deeply increasing economic efficiency in digital economy segments such as fintech, industry, e-commerce, information technologies, and logistics. The results confirm that AI-based processes directly contribute to time and resource savings, reduced production costs, and improved service quality.

Thirdly, using the example of Uzbekistan, although the integration of artificial intelligence is still in its formative stage, positive development trends are already observed in several sectors - particularly in banks, digital services, logistics, and public administration. This indicates that the digital economy in the country is accelerating through artificial intelligence.

Fourthly, the impact of artificial intelligence on the economy is multifaceted, with increased efficiency, cost reduction, enhanced accuracy and forecasting capabilities, and the emergence of new business models being key factors. However, challenges related to this process - such as the shortage of skilled personnel, information security, ethical issues, and the underdevelopment of technological infrastructure - remain important areas requiring solutions.

In general, the research shows that AI-based digital transformation is shaping a new stage of economic development. In the coming years, widespread and effective use of AI technologies will become one of the key factors determining the global competitiveness, economic stability, and innovative potential of countries. Therefore, it is of crucial importance to further strengthen political, economic, and educational mechanisms that support AI integration.

To make the process of utilizing artificial intelligence in the digital economy more efficient, it is recommended to improve the legal framework. It is necessary to develop clear, internationally compatible legislation on the use of artificial intelligence. Strong regulatory mechanisms should be created to ensure data security and privacy. Additionally, efforts should be made to expand AI data bases and improve personnel qualifications, as there are still not enough qualified professionals who can fully utilize AI technologies in all sectors.

Decree

1. №. PQ-4996 of the President of the Republic of Uzbekistan dated February 17, 2021, "Measures to Create Conditions for the Rapid Implementation of Artificial Intelligence Technologies."
2. Brynjolfsson, E., & McAfee, A. (2017). Machine, Platform, Crowd: Harnessing Our Digital Future. W. W. Norton & Company.
3. Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. Harvard Business Review, 96(1), 108–116.
4. Kaplan, J. Haenlein, M. (2019). Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. Business Horizons, 62(1), 15–25.
5. Makridakis, S. (2017). The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms. Futures, 90, 46–60.
6. McKinsey Global Institute. (2025). A Future That Works: Automation, Employment, and Productivity.
7. OECD. (2023). OECD Digital Economy Outlook 2023. OECD Publishing. https://doi.org/10.1787/8528b56f-en
8. Lu, Y. (2019). Artificial intelligence: A survey on evolution, models, applications, and future trends. Journal of Management Analytics, 6(1), 1–29. https://doi.org/10.1080/23270012.2019.1570365
9. UNCTAD. (2024). Digital Economy Report 2024: Opportunities and Risks of AI Technologies. United Nations.
10. Ayupov, R.H., & Boltaboeva, G.R. (2020). Fundamentals of the Digital Economy. Textbook. T.
11. Teshabaev, T.Z. (2023). Theoretical Foundations of Applying Artificial Intelligence in the Context of Digital Economy. "Iqtisod-Moliya."