

REFERENCES:

1. «Cifrlıq Qazaqstan» memlekettik baǵdarlamasın bekitw twralı. <https://adilet.zan.kz/kaz/docs/P1700000827>
2. Smaǵulova R.S. Cifrlıq ekonomika: teoriiyası jáne damw baǵıttarı: oqıw quralı. - Almatı: Ekonomika, 2021. - 216 b.
3. Kenjebaeva A.Q. Qazaqstanńıń bank júyesinde cifrlıq texnologiyalardı qoldanw erekselikleri // Qarjı máseleleri. - 2020. - №3(145). - B. 45-52.
4. Gazızov B.T. Qazaqstandaǵı cifrlıq bankıngti damıtw joldarı // Ekonomikalıq šolw. - 2023. - №1. - B. 33-38.
5. Awbákirov J.T. Cifrlandırw jáne onıń bank salasına áseri: ekonomikalıq tal daw // Ekonomika jáne statistika. - 2021. - №4. - B. 60-66.
6. Nurutdinov A.A., Bagram A.A., Basenko D.V., Chernenko V.O., Yermolenko D.O. Vliyaniye tsifrovizatsii na proizvoditel'nost' truda v razvitykh i razvivayushchikhsya ekonomikakh // Human Progress. - 2024. - Tom 10, №4. - S. 7-14.
7. Andreyeva ZH.V., Asaliyev A.M. Issledovaniye dinamiki po-kazateley effektivnosti truda pod vliyaniyem faktora tsifrovoy transformatsii // Liderstvo i menedzhment. - 2023. - T. 10, №1. - C. 343-356.

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PROSPECTS FOR THE DEVELOPMENT OF ARTIFICIAL INTELLIGENCE IN THE ECONOMY

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ABSTRACT. This article examines the theoretical foundations and development trends of artificial intelligence (AI) in economics. It explores the various directions of AI, its impact on efficiency, and the associated risks. Important considerations include government regulation and the prospects for AI development. The relevance of this article is determined by the widespread digitalisation of the global economy and the active implementation of artificial intelligence. In a context of growing competition, AI is becoming a strategic factor in economic growth and enhancing national competitiveness. The purpose of this article is to explore the current state and prospects of the impact of artificial intelligence in the economy and to identify its impact on key aspects of economic activity in the context of digitalisation development. The main objectives of the study are to examine the theoretical aspects of artificial intelligence use based on an assessment of economic development, government regulation, and an analysis of its impact, taking into account emerging risks. The primary research methods were assessment and analysis, synthesis, and comparative methods.

KEYWORDS: artificial intelligence, digital economy, government regulation, labour market efficiency, digital ecosystems.

Перспективы развития искусственного интеллекта в экономике

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АННОТАЦИЯ. В статье рассматриваются теоретические основы и тенденции развития искусственного интеллекта (ИИ) в экономике. Исследуются направления ИИ и его влияние на повышение эффективности и сопутствующие риски. Важным являются вопросы государственного регулирования, а также будущие перспективы развития ИИ. Актуальность статьи определена широкой цифровизацией мировой экономики и активным внедрением искусственного интеллекта. В условиях развития конкуренции ИИ становится стратегическим фактором экономического роста и повышения национальной конкурентоспособности. Целью статьи исследовать текущее состояние и перспективы влияния искусственного интеллекта в экономике и выявить влияние на ключевые аспекты экономической деятельности в условиях развития цифровизации. Основные задачи исследования заключаются в изучении теоретических аспектов использования искусственного интеллекта на основе оценки развития экономики, государственного регулирования и анализа его влияния с учетом появляющихся рисков. Основными методами исследования стали оценка и анализ, синтез и метод сравнений.

КЛЮЧЕВЫЕ СЛОВА: искусственный интеллект, цифровая экономика, государственное регулирование, эффективность, рынок труда, цифровые экосистемы.

Экономикадағы жасанды интеллекттің даму перспективалары

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АНДАТПА. Бұл мақалада экономикадағы жасанды интеллекттің (АІ) теориялық негіздері мен даму тенденциялары қарастырылады. АІ бағыттары және оның тиімділікті арттыруға әсері және онымен байланысты тәуекелдер зерттеледі. Маңызды мәселелерге мемлекеттік реттеу және АІ дамуының болашақ перспективалары кіреді. Мақаланың өзектілігі жаһандық экономиканы кеңінен цифрландырумен және жасанды интеллектті белсенді енгізумен анықталады. Бәсекеге қабілетті ортада АІ экономикалық өсудің және ұлттық бәсекеге қабілеттілікті арттырудың стратегиялық факторына айналууда. Бұл мақаланың мақсаты – жасанды интеллекттің экономикаға ықпалының қазіргі жағдайы мен келешегін зерттеу және цифрландыруды дамыту жағдайында экономикалық қызметтің негізгі аспектілеріне әсерін анықтау. Зерттеудің негізгі міндеттері экономикалық дамуды, мемлекеттік реттеуді бағалау және пайда болған тәуекелдерді ескере отырып, оның әсерін талдау негізінде жасанды интеллектті қолданудың теориялық аспектілерін зерттеу болып табылады. Негізгі зерттеу әдістері бағалау және талдау, синтез және салыстыру әдісі болды.

ТҮЙІН СӨЗДЕР: жасанды интеллект, цифрлық экономика, мемлекеттік реттеу, еңбек нарығының тиімділігі, цифрлық экожүйелер.

INTRODUCTION. Artificial intelligence (AI) is a major challenge of the 21st century, impacting various areas of society. Artificial intelligence (AI) is a key part of the modern economic landscape, influencing industries and economic processes. AI has come a long way from theoretical aspects to practical applications that are changing the way we conduct business, manage resources, and make decisions.

This study examines the fundamentals of AI development in economics, including its definition, classification, research methodology, results, and discussion.

The economy, as the foundation of any nation's development as a multifaceted system, is embedded in transformation processes. Currently, AI is being actively implemented in economic processes, leading to the optimisation of business processes, increased management efficiency, and the creation of new business models.

The impact of artificial intelligence on society has never been more pronounced or developed at such a rapid pace as in the last five years. AI technologies have been rapidly developing over the past decade. Currently, the US and China lead the way, driven by major companies such as Google, Facebook, Microsoft, Alibaba, Baidu, and Tencent, as well as significant investments in AI research and implementation.

The Republic of Kazakhstan has implemented the Digital Kazakhstan program, which aims to effectively develop the economy and improve quality of life with the goal of creating a digital economy. Digitalisation of the economy is a means of transforming traditional sectors of the Kazakh economy by leveraging breakthrough technologies and capabilities to increase labour productivity and drive capital growth. Kazakhstan is actively working to develop digitalisation. President Kassym-Jomart Tokayev emphasised the importance of artificial intelligence for the country's economic growth at the Digital Bridge 2023 International Technology Forum in Astana.

The Republic has developed a "Concept for the Development of Artificial Intelligence for 2024–2029," which is aimed at developing AI technologies and their effective implementation in the economy and developing digital infrastructure.

MATERIALS AND METHODS OF RESEARCH. To achieve this goal, the following methods were used: a

study of scientific papers and articles by foreign and domestic authors on AI development, a synthesis and analysis of AI implementation in economic processes, comparative analysis methods, and an assessment of AI's impact on economic development in the context of ongoing changes.

The essence of artificial intelligence lies in the ability of computers and software to perform functions that require human intelligence, such as perception, reasoning, learning, and decision-making. There are many interpretations of AI in the scientific literature. Professor Norbert Wiener, one of the founders of AI, considers AI to be "the science of control and communication in animals and machines." [1]

Several scientists, such as Stuart Russell and Peter Norvig, in their book Artificial Intelligence: A Modern Approach, view AI as "the science and technology of creating intelligent machines" [2].

There are various classifications of AI in the scientific literature:

- by level of intelligence: low AI (systems for performing specific tasks); high AI (systems possessing human-like intelligence).

- by training methods: supervised learning (algorithms learning from labelled data); self-paced learning (algorithms working with unlabeled data); case-based learning (learning through interaction with the environment).

- by application area: financial technology (using AI for data analysis, forecasting, and automation of financial processes); manufacturing (using AI to optimise production processes and quality management). [3]

RESULTS AND THEIR DISCUSSION. According to Oxford Insights' Government AI Readiness Index, Kazakhstan ranked 60th globally in terms of artificial intelligence use in 2025, with a score of 55.8 points, an increase of 16 notches compared to last year's 76th place. The index covers 195 countries and is the only international ranking that evaluates the implementation of AI in public administration, the economy, and society, as well as the creation of conditions for the safe and sustainable use of AI.

Overall, the results of the Government AI Readiness Index 2025 confirm that Kazakhstan is actively and systematically implementing artificial intelligence, relying on strong government institutions, a developed digital infra-

structure, and the practical application of AI in the public sector.

The country's further advancement in international rankings will be driven by the transformation of its government digital infrastructure into mass-market solutions and the sustainable economic impact of implementing AI technologies.[4]

Kazakhstan, as the most advanced digital country, currently leads the Central Asian region in AI adoption. Kazakhstan's high level of public sector adoption was achieved with a score of 73.6. This demonstrates the country's active use of digitalisation in public services, the development of e-government, and the introduction of services in the economy.

According to estimates, China's share of global AI research output has increased from 4.26% to 27.68% over the past 20 years. China ranks first in all key areas. China has attracted \$67.2 billion in private investment in AI. In the US, government agencies, private foundations, and corporations provide funding for AI research at universities and companies. Universities collaborate closely with companies on joint projects, providing students and faculty with practical experience and an understanding of AI.

Kazakhstan's competitive advantage lies in its developed digital and telecommunications infrastructure. Kazakhstan's national digital platforms, high internet access, and a well-developed ecosystem of electronic government services create the necessary conditions for the use of AI. This allows the country to systematically formulate long-term public policy in the field of AI. The study's results also highlight areas for further growth. The next stage of Kazakhstan's AI ecosystem development is associated with accelerating the commercialisation of AI solutions, the development of the private technology sector, startups, and market implementations, as well as expanding business access to data and financing tools.

In 2026, Kazakhstan adopted the Law of the Republic of Kazakhstan "On Artificial Intelligence" to establish a regulatory framework based on the principles of security, transparency, and accountability.

The foundations for the development of artificial intelligence are the quality and tools of data management. Kazakhstan has made significant progress in generating and collecting data. Intensive data collection is underway in the public administration sector: 183 information systems of central government agencies are registered on the state architecture portal.

Big data is being generated in the banking and financial sectors, cloud-based customer service for businesses, the telecommunications sector, and others.

AI is having a significant impact on business processes and changing management approaches. AI allows companies to more accurately forecast demand, optimise inventory, and improve service quality. The use of AI helps evaluate customer behaviour, offer targeted recommendations, and increase sales.

A key benefit of AI implementation is process automation, which reduces costs and increases productivity. AI is used in manufacturing to monitor equipment, avoiding downtime and increasing efficiency.[5]

AI facilitates the implementation of new business models. It allows companies to make decisions based on big data analysis, thereby increasing competitiveness. However, the implementation of AI in the economy is not without its challenges. One of these is the need for qualified personnel capable of developing and managing AI,

as well as the high costs of implementing innovative technologies.

There are also ethical issues surrounding the use of AI, data privacy, security, and the impact on jobs. Therefore, it is necessary to implement regulatory mechanisms that will facilitate the safe and effective use of AI.

It is important to note the experience of digital platforms in public administration and the improvement of public service quality, which ensures equal treatment and access to services, transparency, and improved service quality.

AI systems must be controlled by humans, not automated, to prevent potential consequences.

The republic's strengths include data availability, digital potential, and the adaptability of its legal framework to digital business models. Its weaknesses include a lack of strategic vision, insufficient technological development, underdeveloped infrastructure, low innovation potential, and limited human capital.[6]

It's important to develop human capital, train the population to work with AI, and train managers to make data-driven decisions. The shortcomings include the lack of large private IT companies, insignificant venture capital, and low spending on scientific research.[7]

However, certain challenges remain. For example, the Law of the Republic of Kazakhstan "On Informatisation" includes the categories of intelligent robots and electronic resources, but lacks the concept of AI, which hinders the implementation of AI-based projects.

There are no regulations governing the ethical use of AI, which, according to international practice, is the basis for the development of legal relations in the AI system.

Regulation of artificial intelligence is also unclear, and there is no regulation of the relationships between AI entities, such as the competencies of government agencies, or the rights, obligations, and responsibilities of entities in the AI system. It is also worth noting the lack of technical regulations and national standards for AI products and technologies.

There is a need for legislative regulation, problems with the evidence base for the domestic origin of AI-enabled IT services, and problems with AI copyright.

Therefore, the assessment of the state of AI development in Kazakhstan is aimed at addressing complex issues through the implementation of specific regulatory measures, which will enable the widespread adoption of AI in the economy.

CONCLUSION. The development of artificial intelligence in the economy opens up new avenues for business, enabling increased efficiency and the creation of innovative products and services.

AI will help expand the capabilities of intellectual work. Innovative models will enable the processing of vast amounts of information, the conduct of advanced analysis and assessment, the advancement of deeper scientific research, and the determination of personalised educational pathways.

This will enhance the efficiency of scientific research, reduce information processing time, and facilitate the creation of an innovative model for digital science and education. However, it is important to recognise the challenges associated with AI implementation and work to address them. In the future, AI will play an increasingly important role in economic development, and its impact will be felt across all sectors of the economy.

REFERENCES:

1. Wiener, N. (1965). *Cybernetics and Society*. Moscow: Nauka.
2. Russell, S., Norvig, P. (2016). *Artificial Intelligence: A Modern Approach*. Moscow: Williams.
3. Brynjolfsson, E., & McAfee, A. (2014). *The Second Machine*

Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies. W.W. Norton & Company.

4. Chui, M., Manyika, J., & Miremadi, M. (2016). Where machines could replace humans—and where they can't (yet). McKinsey Quarterly.

5. Bessen, J. E. (2019). AI and Jobs: The Role of Demand. NBER Working Paper No. 24235.

6. Arntz, M., Gregory, T., & Zierahn, U. (2016). The Risk of Automation for Jobs in OECD Countries: A Comparative Analysis. OECD Social, Employment and Migration Working Papers, No. 189.

7. Daugherty, P. R., & Wilson, H. J. (2018). Human + Machine: Reimagining Work in the Age of AI. Harvard Business Review Press.

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КОНЦЕПТУАЛЬНЫЕ ПОДХОДЫ И МОДЕЛИ УПРАВЛЕНИЯ ЧЕЛОВЕЧЕСКИМИ РЕСУРСАМИ В УСЛОВИЯХ КРЕАТИВНОЙ ЭКОНОМИКИ РК

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ABSTRACT. This article examines the theoretical foundations and development trends of artificial intelligence (AI) in economics. It explores the various directions of AI, its impact on efficiency, and the associated risks. Important considerations include government regulation and the prospects for AI development. The relevance of this article is determined by the widespread digitalisation of the global economy and the active implementation of artificial intelligence. In a context of growing competition, AI is becoming a strategic factor in economic growth and enhancing national competitiveness. The purpose of this article is to explore the current state and prospects of the impact of artificial intelligence in the economy and to identify its impact on key aspects of economic activity in the context of digitalisation development. The main objectives of the study are to examine the theoretical aspects of artificial intelligence use based on an assessment of economic development, government regulation, and an analysis of its impact, taking into account emerging risks. The primary research methods were assessment and analysis, synthesis, and comparative methods.

KEYWORDS: artificial intelligence, digital economy, government regulation, labour market efficiency, digital ecosystems.

Қазақстанның креативті экономикасындағы адами ресурстарды басқарудың тұжырымдамалық тәсілдері мен модельдері

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АНДАТПА. Мақалада жетекші елдердің тәжірибесі негізінде креативті экономикадағы адам ресурстарын басқарудың (АРБ) әдістемелік тәсілдері мен модельдері зерттеледі. Зерттеудің негізгі мақсаты — Қазақстан Республикасы үшін АРБ-ның тұжырымдамалық тәсілдерін әзірлеу. Жұмыста институционалдық шеңберлер талданып, дәстүрлі менеджменттен икемділік пен құндылықтарға бағытталған стратегиялық басқаруға (SHRM) көшу негізделген. Зерттеу Ұлыбританияның кластерлік тәсілі мен Швецияның горизонтальды құрылымдары сияқты халықаралық тәжірибелерді жүйелейді және оларды ұлттық контекстке бейімдеу бойынша нақты ұсыныстар береді. Жұмыстың ғылыми-практикалық маңыздылығы Қазақстан ЖІӨ-дегі креативті сектордың үлесін арттыру мақсатына жету үшін HR-менеджменттің тиімділігін арттыруда болып табылады.

ТҮЙІН СӨЗДЕР: креативті экономика, креативті индустрия, адами ресурстар, стратегиялық адами ресурстарды басқару, персоналды басқару, таланттарды басқару, HR модельдері.