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ECONOMIC SECURITY MANAGEMENT IN THE CONTEXT OF NATIONAL ENTREPRENEURSHIP DEVELOPMENT USING ARTIFICIAL INTELLIGENCE TOOLS

Abstract. Economic security is a critical factor in ensuring enterprises' stability, competitiveness, and contribution to Ukraine's national economic development. Amid globalisation, digitalisation, and rising cyber threats, enterprises face complex challenges that require innovative management approaches. Artificial Intelligence (AI) technologies offer new opportunities for automating business processes, predicting risks, and responding swiftly to threats, enhancing the economic security of individual enterprises and supporting national economic growth, job creation, and innovation initiatives. In Ukraine's wartime and post-war challenges, AI is a strategically vital tool for ensuring business resilience and supporting national priorities such as digital transformation and economic recovery.

This article aims to analyze directions for improving economic security management in enterprises that utilize AI technologies, focusing on their contribution to Ukraine's national development. The study encompasses defining economic security and its role in the national economy, analyzing AI's potential in economic security

management, evaluating the challenges and prospects of AI implementation in Ukrainian enterprises, and developing recommendations for leveraging AI in national development.

The research is based on scientific publications, analytical reports, and statistical data from recent studies. The methodological framework includes a systemic approach, integrating economic security theories, AI applications, and national development perspectives. The study employs interdisciplinary analysis to address the challenges of wartime and post-war economic conditions in Ukraine, drawing on theoretical works and practical case studies to evaluate the role of AI in economic security management. The study identifies economic security as a multifaceted condition encompassing financial stability, information security, risk management, and innovation sustainability, contributing to enterprise competitiveness and national economic growth. Key findings include that AI enables real-time data analysis, anomaly detection, and process automation, enhancing enterprises' ability to counter financial and cyber threats; AI improves risk forecasting accuracy by 20–30% compared to traditional methods, supporting financial stability and economic recovery in Ukraine's wartime context. Challenges to AI adoption include high costs, limited access to quality data, and ethical considerations, particularly for small and medium-sized enterprises. Recommendations include developing accessible AI solutions, establishing legal frameworks for AI regulation, improving data processing methods, and promoting state-supported digital transformation programs to integrate AI into business processes, thereby strengthening economic security and supporting national development goals.

Keywords: economic security, artificial intelligence, national development, digital transformation, cybersecurity, risk management, innovation sustainability, wartime economy.

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УПРАВЛІННЯ ЕКОНОМІЧНОЮ БЕЗПЕКОЮ В КОНТЕКСТІ НАЦІОНАЛЬНОГО РОЗВИТКУ ПІДПРИЄМНИЦТВА З ВИКОРИСТАННЯМ ІНСТРУМЕНТІВ ШТУЧНОГО ІНТЕЛЕКТУ

Анотація. Економічна безпека є критично важливим фактором забезпечення стабільності, конкурентоспроможності та внеску підприємств у розвиток національної економіки України. В умовах глобалізації, цифровізації та зростання кіберзагроз підприємства стикаються зі складними викликами, що вимагають інноваційних підходів до управління. Технології штучного інтелекту (ШІ) відкривають нові можливості для автоматизації бізнес-процесів, прогнозування ризиків та швидкого реагування на загрози, тим самим не тільки підвищуючи економічну безпеку окремих підприємств, але й сприяючи національному економічному зростанню, створенню робочих місць та інноваційним ініціативам. У контексті воєнних та післявоєнних викликів України ШІ є стратегічно важливим інструментом для забезпечення стійкості бізнесу та підтримки національних пріоритетів, таких як цифрова трансформація та економічне відновлення.

Ця стаття має на меті проаналізувати напрями вдосконалення управління економічною безпекою на підприємствах з використанням технологій ШІ, з акцентом на їхньому внеску в національний розвиток України. Дослідження охоплює визначення економічної безпеки та її ролі в національній економіці, аналіз потенціалу ШІ в управлінні економічною безпекою, оцінку викликів і перспектив упровадження ШІ на українських підприємствах, а також розробку рекомендацій щодо використання ШІ в контексті національного розвитку.

Дослідження базується на наукових публікаціях, аналітичних звітах і статистичних даних останніх досліджень. Методологічна база включає системний підхід, що інтегрує теорії економічної безпеки, застосування ШІ та перспективи національного розвитку. У дослідженні використовується міждисциплінарний аналіз для вирішення викликів воєнного та післявоєнного економічного стану в Україні, спираючись на теоретичні роботи та практичні кейси для оцінки ролі ШІ в управлінні економічною безпекою.

Дослідження визначає економічну безпеку як багатогранний стан, що охоплює фінансову стабільність, інформаційну безпеку, управління ризиками та стійкість інновацій, які сприяють конкурентоспроможності підприємств та національному економічному зростанню. Основні висновки: ШІ дозволяє здійснювати аналіз даних у реальному часі, виявляти аномалії й автоматизувати

процеси, підвищуючи здатність підприємств протистояти фінансовим і кіберзагрозам; ШІ підвищує точність прогнозування ризиків на 20–30 % порівняно з традиційними методами, підтримуючи фінансову стабільність та економічне відновлення в умовах війни в Україні. Виклики для впровадження ШІ включають високі витрати, обмежений доступ до якісних даних та етичні міркування, особливо для малих і середніх підприємств. Рекомендації включають розробку доступних рішень ШІ, створення правових рамок для регулювання ШІ, вдосконалення методів обробки даних і просування підтримуваних державою програм цифрової трансформації для інтеграції ШІ в бізнес-процеси, тим самим зміцнюючи економічну безпеку та підтримуючи національні цілі розвитку.

Ключові слова: економічна безпека, штучний інтелект, національний розвиток, цифрова трансформація, кібербезпека, управління ризиками, стійкість інновацій, воєнна економіка.

Introduction. The economic security of an enterprise is a key element of its stability, competitiveness, and contribution to Ukraine's national economic development. In today's conditions of globalisation, digitalisation and the growth of cyber threats, enterprises face complex challenges that require innovative approaches to management. In the context of Ukraine, where the economy is affected by war and post-war factors, the use of AI to manage economic security is a strategically vital tool to ensure business resilience and support national priorities such as digital transformation and financial recovery.

Analysis of recent studies. According to M. I. Nebava & Y. V. Mironova, economic security is a state in which an enterprise can effectively function, counteracting internal and external threats, ensuring its stability and development [5].

Economic security becomes especially relevant in wartime due to the need to adapt to crises, protect critical infrastructure, and support economic recovery. Artificial intelligence enables businesses to process large amounts of data, detect anomalies in real-time, and optimize management processes, which helps increase their competitiveness in national and international markets.

Foreign scientists have published several papers on the use of AI in enterprise activities. M. Benedeti Rosa & L. C. Kubota have studied how the pace of AI adoption by Brazilian companies corresponds to the indicators of European countries – the need to harmonise various government strategies related to digital transformation in Brazil [12].

I. Emerling, to study how modern technologies are used in business units, surveyed 2,000 employees of various companies who worked in finance and accounting departments and were at the same time students of one of three economic universities: in Kraków, Wroclaw and Katowice. The author suggests that companies

can effectively utilize modern technologies to optimize processes and enhance the efficiency and accuracy of financial data analysis. This is achieved by employing AI-based tools to automate routine tasks, identify patterns and anomalies in data, and leverage advanced data analysis algorithms to produce more accurate and comprehensive reports [13].

Danish scientists E. B. Hansen & S. Bogh conducted a comprehensive study of the prevalence of AI and the Internet of Things among small and medium-sized enterprises (SMEs) in the manufacturing sector and discussed the current limitations and opportunities for implementing predictive analytics. According to the authors, utilizing AI in SMEs can enable companies to leverage technologies such as decision support systems to combat implicit knowledge [14].

The topic is relevant due to the growth of economic and cyber risks that pose challenges for Ukrainian enterprises. O. M. Pavlova notes that digital transformation, particularly the introduction of financial technologies, increases the efficiency of business processes but creates new challenges for economic security due to the growth of cyber threats [8; 10; 11; 16].

AI, as a technology, can provide rapid threat detection, automate routine tasks, and increase forecast accuracy, which is critical for economic security [15].

In the context of national development, AI can contribute to Ukraine's economic recovery by optimizing resources, supporting innovative initiatives, and strengthening cybersecurity. I. Oklander emphasises that using AI in business processes increases management efficiency by 20–30%, contributing to the country's economic growth [6].

At the same time, the adoption of AI is accompanied by challenges, including the high cost of technology, the need for high-quality data, and ethical considerations that require both theoretical understanding and practical solutions.

The purpose of this article is to analyze the directions for improving the management of economic security in enterprises using AI technologies, with an emphasis on their contribution to national development in Ukraine. The study covers:

– determination of economic security and its role in the national economy;

– analysis of AI capabilities in economic security management;

– assessment of challenges and prospects for the introduction of AI in Ukrainian enterprises;

– development of recommendations for using AI in the context of national development.

This article aims to establish a theoretical foundation for further practical research, taking into account the unique characteristics of the Ukrainian economy, military challenges, and contemporary scientific perspectives. The topic's relevance is also related to the need to integrate AI into economic security management, thereby increasing the competitiveness of Ukrainian enterprises in the international market, which is crucial for Ukraine's economic recovery.

An enterprise's economic security is a complex state characterised by its ability to counteract internal and external threats, protect assets, and ensure the stability of activities in conditions of market competition and macroeconomic changes [5].

V. Harkusha & N. Ershova define economic security as a set of financial stability, information security, risk management and innovation sustainability, which are the basis for the competitiveness of an enterprise [2].

In national development, economic security acquires wider importance, as stable enterprises contribute to economic growth, job creation and support for innovative initiatives.

The economic security of the enterprise includes several key components:

1. Financial stability – ensuring liquidity, reducing debt risks and minimising financial losses. This allows enterprises to maintain the stability of the national economy through paying taxes and creating jobs [2].

Financial stability is crucial in Ukraine due to the economic challenges posed by the war, which necessitate effective financial management to facilitate economic recovery.

2. Information security – protecting confidential data from cyber threats is essential for national security, especially in the face of growing cyberattacks.

In wartime, cybersecurity becomes strategically essential for protecting critical infrastructure.

3. Risk management involves the identification, assessment, and management of risks that may affect the enterprise's activities and the country's economy [1].

Effective risk management allows businesses to adapt to crises and support national economic goals.

4. Innovation resilience –introducing new technologies, such as AI, to increase competitiveness and support national innovation initiatives [5].

Innovative sustainability is a key factor for developing Ukraine's digital economy.

In a war economy, the economic security of business structures depends on socially competent management, which considers both economic and social aspects [9].

In wartime, economic security is also closely tied to adapting to crises, rebuilding the economy, and supporting national priorities, such as digital transformation.

Economically safe enterprises are the basis for Ukraine's economic growth. They ensure the payment of taxes, job creation, and support for innovation, which contributes to increasing the national economy's competitiveness. Enterprise financial security is a key factor in forming a sustainable economic system [3].

S. V. Kyrylenko emphasizes that the digital transformation of the Ukrainian economy is a key factor in increasing competitiveness, but it requires protection from cyber threats [4].

Economically secure enterprises contribute to the creation of innovative ecosystems that support national development by introducing new technologies such as AI.

Ukrainian enterprises face several challenges:

– geopolitical risks associated with martial law, creating instability in the business environment;

– cyber threats that threaten information security and critical infrastructure;

– economic instability caused by war and global crises complicates financial planning.

AI offers tools for data analysis, risk forecasting, and process automation, contributing to economic security. M. L. Onishchenko and others experience that AI increases the accuracy of risk forecasting by 20–30% compared to traditional methods [7].

In Ukraine, AI can help businesses adapt to crises, optimise resources, and support national economic goals, such as economic recovery and digital transformation. It can become a tool for economic recovery by optimising business processes and protecting against cyber threats. The use of artificial intelligence technologies in business processes enhances management efficiency, thereby contributing to the country's economic growth [6].

During the war, these technologies provided enterprises with a means to adapt to new conditions, supporting national priorities such as innovative development and cybersecurity.

AI is transforming approaches to economic security management by offering automation, forecasting, and threat detection tools. L. V. Gnylytska defines AI as a set of technologies that enable machines to perform tasks previously requiring human intelligence, such as data analysis, forecasting, and decision-making [3].

AI processes large amounts of data to identify financial risks and assess the likelihood of bankruptcy and fraud. To build real-time risk models, machine learning algorithms analyse unstructured data, such as financial reports or market trends.

Financial institutions use AI to assess credit risks, contributing to the stability of the banking sector and the national economy. AI-based financial technologies enable businesses to manage financial flows more efficiently, which is crucial for economic security during digital transformation.

Viewed through the prism of national development, accurate forecasting of financial risks allows enterprises to avoid losses, contributing to the economy's stability. For example, AI can analyse market trends to predict changes in supply or demand, which is essential for planning in a war economy. In addition, AI can help businesses optimise financial resources, contributing to Ukraine's economic recovery.

Cyber threats are one of the primary challenges facing modern enterprises. AI monitors information systems, detecting anomalous activity that may indicate

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cyberattacks. AI algorithms recognize patterns associated with phishing or malware. Combining AI with blockchain technologies enhances the security of financial transactions, which is crucial for safeguarding Ukraine's critical infrastructure [2].

AI enables the detection of cyber threats in real-time, which is crucial for protecting sensitive information.

Automation with AI helps reduce human errors and increase the efficiency of business processes. In the retail sector, AI is utilized to automate cash transactions, thereby reducing costs and enhancing service quality. In Ukraine, such technologies are used in retail chains, which saves resources and increases competitiveness [6].

Automating business processes with AI can reduce operational costs by 15–25%.

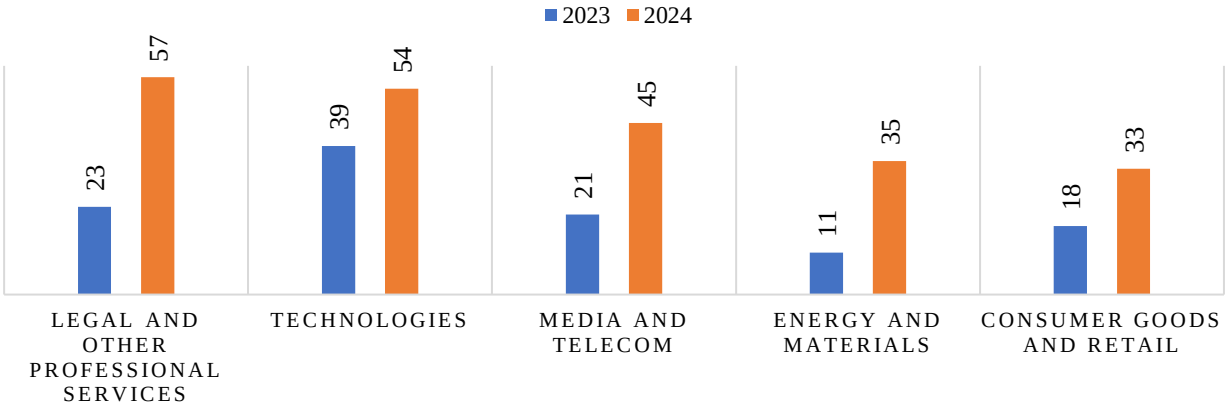

Fig.1. Percentage of companies with employees who regularly use generative AI tools at work, by industry.

Compiled based on the study "McKinsey Global Survey on AI"

Figure 1 shows that in 2024, the highest level of generative AI integration is seen in the legal sector (57%) and the technology industry (54%), with significant growth compared to 2023 (23% and 39%, respectively), while the media and telecommunications industries are also showing steady progress, from 21% to 45%. The lowest levels of integration in 2024 were recorded in the energy (35%) and consumer goods (33%) industries. However, both showed notable increases from 11% to 18% in 2023, indicating a positive trend towards the expansion of generative AI use across all sectors.

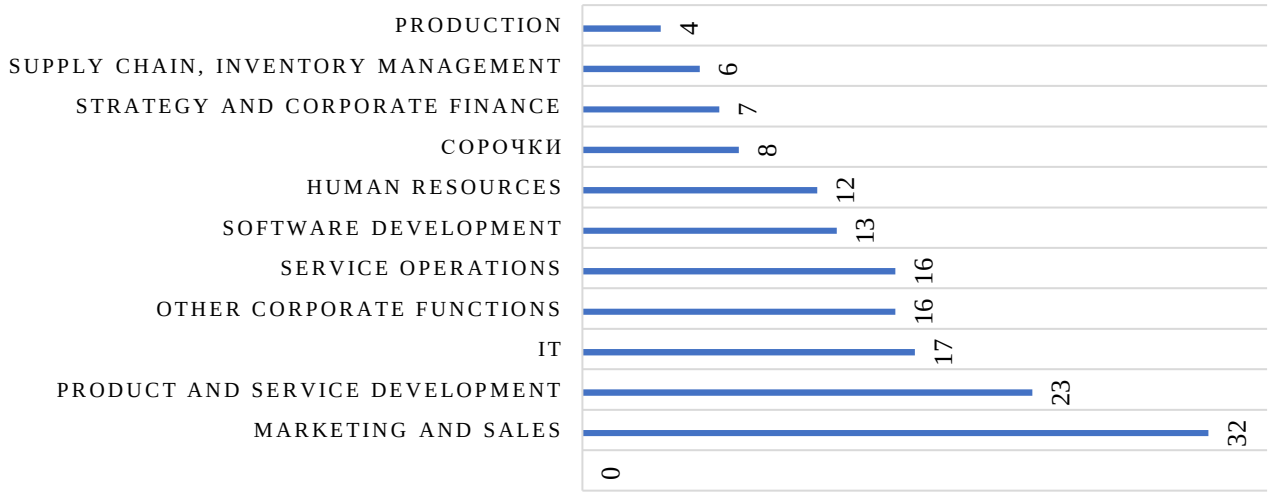

Fig. 2. Share of companies that regularly used AI in 2024, by function, %.
Compiled based on the study "McKinsey Global Survey on AI"

In 2024, companies are most actively using generative AI in marketing and sales (32%) and product and service development (23%), prioritising automating creative and customer-centric processes. Lower adoption was observed in production (4%), supply chain management (6%), and corporate finance (7%), which may be due to higher accuracy requirements and integration risks. This indicates the insufficient emphasis on implementing artificial intelligence technologies by enterprises. As we can see, the use of AI for risk analysis, and even more so for economic security, is relatively low, which requires additional attention from entrepreneurs.

Automation also contributes to national development through resource optimisation and increased productivity. In times of war, when resources are scarce, AI can help businesses utilize funds and labor more efficiently, contributing to economic recovery.

Artificial intelligence analyses historical data, builds forecasts, and supports managers in decision-making. AI systems can predict market changes, enabling businesses to adapt to economic challenges and inform strategies focused on innovative development and financial sustainability. Socially competent management using AI allows enterprises to consider social aspects, which is essential for the economy [9].

In times of war, AI can help businesses adapt to changes in market conditions, which is essential for maintaining economic stability. For example, AI can predict changes in demand for goods or services, allowing businesses to optimise production and logistics.

AI technologies open up new opportunities, such as adaptive models that are updated in real time, providing flexibility in responding to threats.This enables

businesses to swiftly respond to emerging challenges, such as economic or cyber threats, thereby contributing to national development through support for innovative initiatives.

Enterprises can customise AI algorithms to suit their specific needs, thereby reducing the number of false positives and enhancing protection effectiveness. In Ukraine, this is relevant for the banking sector, where AI detects fraudulent transactions [7].

The effectiveness of AI depends on the quality of the data, highlighting the importance of data processing and cleaning to enhance the accuracy of predictions [8]. In Ukraine, small and medium-sized enterprises often face limited access to quality data, which requires the implementation of systems for its processing [10]. Data quality is a key factor for national development, as accurate forecasts contribute to economic stability.

The combination of AI with blockchain ensures the transparency and immutability of transactions, which are crucial for protecting against fraud and increasing trust in Ukraine's financial systems, particularly during wartime [2].

Government programs can promote the adoption of AI in small and medium-sized enterprises. State support for digital transformation is key to developing Ukraine's economy [4].

In wartime, such programs can help businesses adapt to new conditions and support national economic goals.

Conclusions. Artificial intelligence (AI) plays a key role in improving enterprises' economic security management, which is strategically vital for Ukraine's national development. In today's war and post-war challenges, AI provides enterprises with the tools to adapt to an unstable business environment, optimise resources, and support national priorities such as digital transformation, economic recovery, and strengthening cybersecurity. Data, process automation, and rapid response to AI threats contribute to increasing business resilience, which is the basis for the country's economic growth.

AI enables you to effectively assess financial and cyber risks, which is especially relevant in a war economy. AI technologies help businesses predict market changes, optimise financial resources, and protect critical infrastructure from cyberattacks, contributing to the national economy's stability. At the same time, the adoption of AI is accompanied by challenges, including the need for quality data, high technology costs, and the need to address ethical and legal aspects.

To overcome these challenges, it is necessary:

– develop affordable AI technologies for small and medium-sized enterprises to ensure their competitiveness;

– create a legal framework to regulate the use of AI, which will guarantee data protection and transparency;

– improve data processing methods to improve the accuracy of AI algorithms;

– develop government programs to support digital transformation that will facilitate the integration of AI into business processes.

Further development of AI will strengthen the economic security of enterprises and contribute to Ukraine's sustainable development. It will support innovative initiatives and increase competitiveness in the international market. In wartime, this is crucial for economic recovery and stability.

Література:

1. Вараксіна О., Побіденна В., Гребеник Р. Управління ризиками в контексті економічної безпеки підприємства. *Економіка та суспільство*. 2023. № 56. DOI: https://doi.org/10.32782/2524-0072/2023-56-47.

2. Гаркуша, В., Єршова, Н. Систематизація наукових поглядів щодо сутності поняття «економічна безпека підприємства». *Економіка та суспільство*. 2021. № 28. DOI: https://doi.org/10.32782/2524-0072/2021-28-34

3. Гнилицька Л. В., Саттаров А. І. Технології штучного інтелекту в інформаційному забезпеченні бізнесу: переваги і виклики. *Ефективна економіка.* 2024. № 9. DOI: https://doi.org/10.32702/2307-2105.2024.9.17.

4. Кириленко С. В. System of economic security in the conditions of the digital economy. *Journal of Strategic Economic Research*. 2024. № 1, 40–47. DOI: https://doi.org/10.30857/2786-5398.2024.1.4

5. Небава М. І., Миронова Ю. В. Економічна безпека підприємства : підручник. Вінниця : ВНТУ, 2020. 75 с.

6. Окландер І. Системне використання штучного інтелекту в бізнес-процесах підприємств. *Економіка та суспільство.* 2025. № 74. DOI: https://doi.org/10.32782/2524-0072/2025-74-92.

7. Оніщенко М. Л., Дутченко О. А., Шпитглуз С. О. Економічна безпека як умова ефективного функціонування підприємства. Вісник Сумського державного університету. Серія Економіка. 2020. № 1. С. 36–42. URL: https://visnyk.fem.sumdu.edu.ua/media/attachments/2019/12/13/5-_36-42.pdf

8. Павлов К., Павлова О. Людський капітал і продуктивні сили сільських територій: аспекти економічної безпеки держави та її регіонів. *Herald of Khmelnytskyi National University. Economic Sciences,* 2024. Том 334. № 5. С. 397-403. DOI: https://doi.org/10.31891/2307-5740-2024-334-60.

9. Павлова О. М. Соціально-компетентне управління та безпека підприємницьких структур в умовах воєнної економіки. *Соціально-компетентне управління та безпека підприємницьких структур в умовах воєнної економіки* : матеріали І Міжнар. наук.-практ. інтернет-конф. 2022. С. 162–164. URL: https://www.researchgate.net/publication/366272314.

10. Павлова О., Павлов К., Ткачук Ю., Біло І. Digitalisation as the Main Factor of Business Development. *International Scientific Journal "Internauka". Economic Sciences*. 2021. № 17 (117), Т. 2. С. 38–43.

11. Стришенець О. М., Павлов К. В. Особливості конкурентних відносин на регіональних ринках нерухомості. *Науковий вісник Ужгородського університету. Серія "Економіка"*. 2016. Вип. 1 (47), Т. 2. С. 35–38. URL: http://nbuv.gov.ua/UJRN/Nvuuec_2016_1%282%29__7.

12. Benedeti Rosa M., Kubota L. C. Artificial intelligence: where does Brazil stand in global scientific production and what are the main technical determinants of adoption by Brazilian companies. *Economics.* 2025. DOI: https://doi.org/10.1108/ECON-01-2025-0010.

13. Emerling I. The impact of the COVID-19 pandemic on the use of artificial intelligence in the financial and accountant profession. Zeszyty Naukowe. Organizacja i Zarządzanie / *Politechnika Śląska.* 2024. № 60. С. 55–66. DOI: http://dx.doi.org/10.29119/1641-3466.2024.213.5

14. Hansen E. B., Bogh S. Artificial intelligence and internet of things in small and medium-sized enterprises: A survey. *Journal of Manufacturing Systems*. 2021. № 58. Special Issue. Part B. С. 362–372. DOI: https://doi.org/10.1016/j.jmsy.2020.08.009.

15. Pavlova O., Pavlov K., Matiichuk L., Kotsan I., Perevozova I. Imperatives to improve the efficiency of the energy security system of Ukraine. E3S Web Conf. 2024. № 567 (2024) 01015. DOI: https://doi.org/10.1051/e3sconf/202456701015.

16. Senyk I., Borysiak O., Semenenko Y., Pryshliak K., Petrukha N., Pavlova O. Assessment of the potential and forecasting of carbon sequestration by agricultural crops using artificial intelligence. Joint Proceedings of the Workshops "AI for Environmental and Social Sustainability Workshop" and "AI and Interdisciplinary Innovations for Sustainable Development" (YAISD-WS 2025) co-located with Second International Conference of Young Scientists on Artificial Intelligence for Sustainable Development (YAISD 2025). URL: https://ceur-ws.org/Vol-3974/paper04.pdf.

References:

1. Varaksina, O., Pobidenna, V., & Grebenyk, R. (2023). Upravlinnia ryzykamy v konteksti ekonomichnoi bezpeky pidpryiemstva [Risk management in the context of enterprise economic security]. Ekonomika ta suspilstvo, 56. Retrieved from https://doi.org/10.32782/2524-0072/2023-56-47 [in Ukrainian].

2. Harkusha, V., & Yershova, N. (2021). Systematyzatsiia naukovykh pohliadiv shchodo sutnosti poniattia “ekonomichna bezpeka pidpryiemstva” [Systematization of scientific views on the essence of the concept “economic security of the enterprise”]. Ekonomika ta suspilstvo, 28. Retrieved from https://doi.org/10.32782/2524-0072/2021-28-34 [in Ukrainian].

3. Hnylytska, L. V., & Sattarov, A. I. (2024). Tekhnolohii shtuchnoho intelektu v informatsiinomu zabezpechenni biznesu: perevahy i vyklyky [Artificial intelligence technologies in business information support: advantages and challenges]. Efektyvna ekonomika, 9. Retrieved from https://doi.org/10.32702/2307-2105.2024.9.17 [in Ukrainian].

4. Kyrylenko, S. V. (2024). System of economic security in the conditions of the digital economy. Journal of Strategic Economic Research, 1, 40–47. Retrieved from https://doi.org/10.30857/2786-5398.2024.1.4.

5. Nebava, M. I., & Myronova, Yu. V. (2020). Ekonomichna bezpeka pidpryiemstva: pidruchnyk [Enterprise economic security: textbook]. Vinnytsia: VNTU. Retrieved from https://library.vntu.edu.ua/catalog/documents/22638 [in Ukrainian].

6. Oklander, I. (2025). Systemne vykorystannia shtuchnoho intelektu v biznes-protsesakh pidpryiemstv [Systemic use of artificial intelligence in enterprise business processes]. Ekonomika ta suspilstvo, 74. Retrieved from https://doi.org/10.32782/2524-0072/2025-74-92 [in Ukrainian].

7. Onishchenko, M. L., Dutchenko, O. A., & Shpytgluz, S. O. (2020). Ekonomichna bezpeka yak umova efektyvnoho funktsionuvannia pidpryiemstva [Economic security as a condition for effective functioning of the enterprise]. Visnyk Sumskoho derzhavnoho universytetu. Seriia Ekonomika, 1, 36–42. Retrieved from https://visnyk.fem.sumdu.edu.ua/media/attachments/2019/12/13/5-_36-42.pdf [in Ukrainian].

8. Pavlov, K., & Pavlova, O. (2024). Liudskyi kapital i produktyvni syly silskykh terytorii: aspekty ekonomichnoi bezpeky derzhavy ta yii rehioniv [Human capital and productive forces of rural areas: aspects of economic security of the state and its regions]. Herald of Khmelnytskyi National University. Economic Sciences, 334(5), 397–403. Retrieved from https://doi.org/10.31891/2307-5740-2024-334-60 [in Ukrainian].

9. Pavlova, O. M. (2022). Sotsialno-kompetentne upravlinnia ta bezpeka pidpryiemnytskykh struktur v umovakh voiennoi ekonomiky [Socially competent management and security of business structures under war economy]. In Sotsialno-kompetentne upravlinnia ta bezpeka pidpryiemnytskykh struktur v umovakh voiennoi ekonomiky: materialy I Mizhnar. nauk.-prakt. internet-konf. (pp. 162–164). Retrieved from https://www.researchgate.net/publication/366272314 [in Ukrainian]

10. Pavlova, O., Pavlov, K., Tkachuk, Y., & Bilo, I. (2021). Digitalisation as the main factor of business development. International Scientific Journal "Internauka". Economic Sciences, 17(117), 38–43.

11. Stryshenets, O. M., & Pavlov, K. V. (2016). Osoblyvosti konkurentnykh vidnosyn na rehionalnykh rynkakh nerukhomosti [Features of competitive relations in regional real estate markets]. Naukovyi visnyk Uzhhorodskoho universytetu. Seriia "Ekonomika", 1(47), 35–38. Retrieved from http://nbuv.gov.ua/UJRN/Nvuuec_2016_1%282%29__7 [in Ukrainian].

12. Benedeti Rosa, M., & Kubota, L. C. (2025). Artificial intelligence: Where does Brazil stand in global scientific production and what are the main technical determinants of adoption by Brazilian companies. Economics. Retrieved from https://doi.org/10.1108/ECON-01-2025-0010.

13. Emerling, I. (2024). The impact of the COVID-19 pandemic on the use of artificial intelligence in the financial and accountant profession. Zeszyty Naukowe. Organizacja i Zarządzanie/ Politechnika Śląska, 60, 55–66. Retrieved from http://dx.doi.org/10.29119/1641-3466.2024.213.5.

14. Hansen, E. B., & Bogh, S. (2021). Artificial intelligence and internet of things in small and medium-sized enterprises: A survey. Journal of Manufacturing Systems, 58(Special Issue, Part B), 362–372. Retrieved from https://doi.org/10.1016/j.jmsy.2020.08.009.

15. Pavlova, O., Pavlov, K., Matiichuk, L., Kotsan, I., & Perevozova, I. (2024). Imperatives to improve the efficiency of the energy security system of Ukraine. E3S Web Conf., 567, 01015. Retrieved from https://doi.org/10.1051/e3sconf/202456701015.

16. Senyk, I., Borysiak, O., Semenenko, Y., Pryshliak, K., Petrukha, N., & Pavlova, O. (2025). Assessment of the potential and forecasting of carbon sequestration by agricultural crops using artificial intelligence. In Joint Proceedings of the Workshops "AI for Environmental and Social Sustainability Workshop" and "AI and Interdisciplinary Innovations for Sustainable Development" (YAISD-WS 2025) co-located with Second International Conference of Young Scientists on Artificial Intelligence for Sustainable Development (YAISD 2025). Retrieved from https://ceur-ws.org/Vol-3974/paper04.pdf.