INNOVATION INDICES AS A KEY FACTOR OF CHANGES IN INTERNATIONAL ECONOMIC RELATIONS IN THE DIGITAL ERA

ІННОВАЦІЙНІ ІНДЕКСИ ЯК КЛЮЧОВИЙ ФАКТОР ЗМІН У МІЖНАРОДНИХ ЕКОНОМІЧНИХ ВІДНОСИНАХ У ЦИФРОВУ ЕПОХУ

The article examines the impact of innovation indices (European Innovation Scoreboard, Global Innovation Index, and the Global Talent Competitiveness Index) on international economic relations. The author considers how these rankings reflect the level of development of scientific research, technological progress and efficient use of human capital. The importance of digital transformation for improving the positions of countries in world rankings is outlined. The situation in Ukraine is studied, its place in the world rankings of innovation is determined, and the main problems that hinder its development are outlined. It is determined that investments in science, technology and education are crucial for long-term economic growth and international cooperation. It is emphasized that innovation indices are not only an analytical tool, but also a strategic indicator that determines the prospects of states in the global economy.

Key words: *international economic relations, innovation indices, innovations, digital economy, digitalization, digital transformation, digital technologies, human capital, technological development, integration, competitive advantages, competitiveness, business, country.*

У статті досліджено роль інноваційних індексів (Європейського інноваційного табло (EIS), Глобального індексу інновацій (GII) та Глобального індексу конкурентоспроможності талантів (GTCI)) у формуванні міжнародних економічних відносин. Проаналізовано зв'язок між рівнем інноваційного розвитку, науково-технічним потенціалом держав та залученням інвестицій. Здійснено оцінку ключових показників, які використовуються для вимірювання здатності країн розвивати технології, інтегрувати цифрові рішення та залучати висококваліфікованих спеціалістів. Окреслено значення цифрової трансформації як одного з головних факторів змін у глобальній економіці. Досліджено, як розвиток інфраструктури, штучного інтелекту, автоматизації та кібербезпеки впливає на міжнародну конкурентоспроможність держав. Визначено, що країни, які активно впроваджують інноваційні стратегії та адаптуються до цифрових змін, мають значно вищі позиції у світових рейтингах, що відкриває їм додаткові можливості для економічного зростання. Наголошено на основних викликах для країн, які не мають достатньої наукової та технологічної бази, зокрема низький рівень фінансування досліджень, слабка комерціалізація розробок та недостатня інтеграція бізнесу і науки. Оцінено місце України в міжнародних інноваційних рейтингах та виявлено ключові проблеми, що перешкоджають її входженню до числа інноваційних лідерів. Запропоновано стратегічні заходи для підвищення конкурентоспроможності країни, зокрема посилення державної підтримки науки та технологій, залучення інвесторів та розширення міжнародного партнерства. Обґрунтовано, що інноваційні індекси відіграють важливу роль у розробці ефективної економічної політики та визначенні пріоритетних напрямів розвитку країн. Доведено, що орієнтація на зміцнення науково-дослідної сфери, цифровізацію та впровадження технологічних рішень сприяє зміцненню позицій держав у світовій економіці. Наголошено, що інноваційні індекси є не лише аналітичним інструментом, а й стратегічним показником, що визначає перспективи держав у глобальній економіці.

Ключові слова: *міжнародні економічні відносини, інноваційні індекси, інновації, цифрова економіка, цифровізація, цифрова трансформація, цифрові технології, людський капітал, технологічний розвиток, інтеграція, конкурентні переваги, конкурентоспроможність, бізнес, держава.*

UDC 330.341.1:339.9:004
DOI: https://doi.org/10.32782/dees.16-56

Mohylna Liudmyla[1]
Candidate of Economic Sciences,
Associate Professor at the Department of Management
named after Professor L.I. Mykhailova,
Sumy National Agrarian University

Могильна Л.М.
Сумський національний аграрний університет

Problem statement. In today's world, where technological progress and digital transformation have become the determining factors of economic development, innovation processes play a key role in international economic relations. The extent to which a country is able to develop innovations, attract talent and adapt to global technological changes determines its economic sustainability and competitiveness. The European Innovation Scoreboard (EIS), the Global Innovation Index (GII), and the Global Talent Competitiveness Index (GTCI) are important analytical tools for assessing these factors. They help to determine the level of innovative development of countries, their ability to make scientific and technological breakthroughs, and the effectiveness of their integration into the global economy. However, the question remains as to how these rankings influence management decisions, international investment, and economic strategies of individual countries.

Analysis of the latest researches and publications. The topic of innovation development and its impact on economic growth is widely studied by international organizations such as the European Commission, the World Economic Forum, and INSEAD. Numerous publications have examined the impact of digitalization, automation, and artificial

[1] ORCID: https://orcid.org/0000-0002-9053-5177

intelligence on the global competitiveness of countries. Some studies focus on the methodology for calculating the EIS, GII, and GTCI indices, as well as how these rankings correlate with the economic performance of different countries.

This problem is also studied by Ukrainian scholars, namely: Bezzubko L. [2], Brechko O. [3], Dashutina L. [10], Dovhal O. [9], Dykha M. [4], Getmanenko O. [7], Orlova N. [11], Pobihun S. [11], Skyba O. [12], Tochonov I. [2], Turchina S. [10], Vynnyk T. [11] and others. However, the issue of the relationship between innovation indices, international economic relations, and management strategies in the digital economy is still not sufficiently covered.

The purpose of the article is to study the role of innovation indices in shaping the economic strategies of states and their impact on international economic relations.

Presentation of the main research material. The European Innovation Scoreboard (EIS) and the Global Innovation Index (GII) are used to assess the innovation potential of countries. These indicators not only reflect the country's domestic scientific and technological potential, but also play an important role in shaping its international economic relations. The modern economy is built on knowledge, innovation and talent, and therefore the Global Talent Competitiveness Index (GTCI) is also taken into account. The GTCI assesses the ability of countries to attract, develop and retain talent, as highly skilled professionals are keys to innovation. Specialized indices are calculated every year to analyze the global picture of innovation in different countries. Complex indicators are widely used to compare different countries with different levels of development [10, p. 1894]. Together, the GTCI, EIS, and GII form a complete picture of how countries function in the modern world and international economic relations, attract investments, and which technological trends will determine the future of the global economy.

It should be emphasized that the development of digital technologies has dramatically changed economic processes, creating new opportunities for countries and companies. In this regard, indices such as the European Innovation Scoreboard, the Global Innovation Index and the Global Talent Competitiveness Index are gradually integrating new parameters that characterize the level of digitalization of a country. Previously, the main focus of the rankings was on research funding, the number of patents and scientific publications, but now, thanks to the digital revolution, new indicators have been added. These include access to digital infrastructure (development of broadband internet, 5G, data centres), investments in high technologies (artificial intelligence, automation, cybersecurity), the level of digital skills among the population and employees, and the integration of digital solutions into business (Big Data, cloud technologies, Internet of Things). It is thanks to digitalization that the GII ranking is increasingly focusing on the digital transformation of economies and the active use of the latest technologies in industry and services. The EIS now assesses the ability of countries to integrate digital solutions into the educational, public, and corporate sectors. The GTCI, in turn, emphasizes the role of technological competencies in shaping a competitive labor market. Due to new challenges, society is facing the issue of digital inequality of states. Countries that are the first to adapt to digital changes will gain competitive advantages, while countries with slower technology integration will be forced to face economic difficulties. For example, countries that are actively investing in artificial intelligence and automation are ranked highly in the GII and EIS, while countries with low levels of digital infrastructure lag behind in the rankings.

The European Innovation Scoreboard captures these disparities. The European Innovation Scoreboard is an analytical tool of the European Commission that assesses the innovation capacity of European countries based on various indicators. It helps states identify their strengths and weaknesses in research, technology and innovation, and formulate appropriate economic and scientific policies (Figure 1).

This indicator is used to classify countries by their level of innovation. All countries assessed in the EIS are divided into four groups according to their level of innovation development:

1) Innovation Leaders. This group is represented by countries that demonstrate the highest innovation performance in Europe. Their level of innovation exceeds the EU average by 125% or more. They have a strong research and development base, high investments in research and development, active interaction between business and academic institutions, a significant number of patents, and a developed digital economy. In 2024, these countries are led by Sweden with an index of 152.2. Denmark ranks second with an index of 149.3. The third place belongs to Sweden. Its index is 146.2.

2) Strong Innovators. These countries have a high level of innovation, but their scores range from 100% to 125% of the EU average. They demonstrate good results in technological development, research, and cooperation with business, but have some structural problems that limit their potential. Belgium leads these countries with an index of 136.0.

3) Moderate Innovators. The innovation performance of these countries is between 70% and 100% of the EU average. Countries in this cohort have significant potential for growth, but often face insufficient funding for science, weak commercialization of developments, or insufficient integration of innovations into business. In 2024, Slovenia (100.1), Spain (98.9), and the Czech Republic (98.7) are at the top of the list.

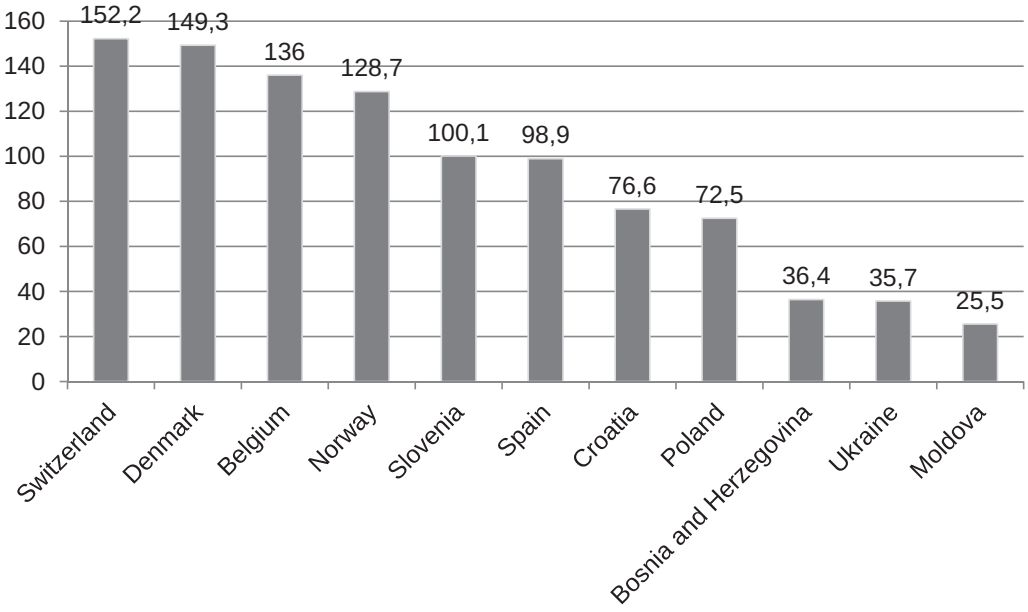

Fig. 1. European Innovation Scoreboard, 2024

Source: compiled by the author according to [6]

4) Emerging Innovators. Countries on this list demonstrate innovation activity at less than 70% of the EU average. They typically have weak infrastructure for science and technology development, limited research funding, unstable economic conditions for startups, and insufficient government support for innovative enterprises. Croatia leads the list of these countries with an index of 76.6. Ukraine is the penultimate country in this ranking.

It is worth noting that the level of innovation development in Ukraine, according to the European Innovation Scoreboard, demonstrates unstable but positive dynamics (Figure 2). During 2017–2021, the index values remained at 31–32 points, indicating a slowdown in the introduction of innovations. However, since 2022, there has been an increase. In 2024, the index was at 35.7, indicating the intensification of the innovation sector, the digital economy, and technological entrepreneurship. This was due to the development of military technologies. However, it should be emphasized that the main problems that limit innovation development in Ukraine are insufficient funding for science, weak commercialization of research, outflow of highly qualified specialists, and weak integration of business and science. However, strengths include a growing IT industry and promising startups that could form the basis for future growth.

The Global Innovation Index, a global index that assesses the innovativeness of economies, also plays an important role in measuring innovation potential. It is a comprehensive rating that reflects the ability of countries to create and implement

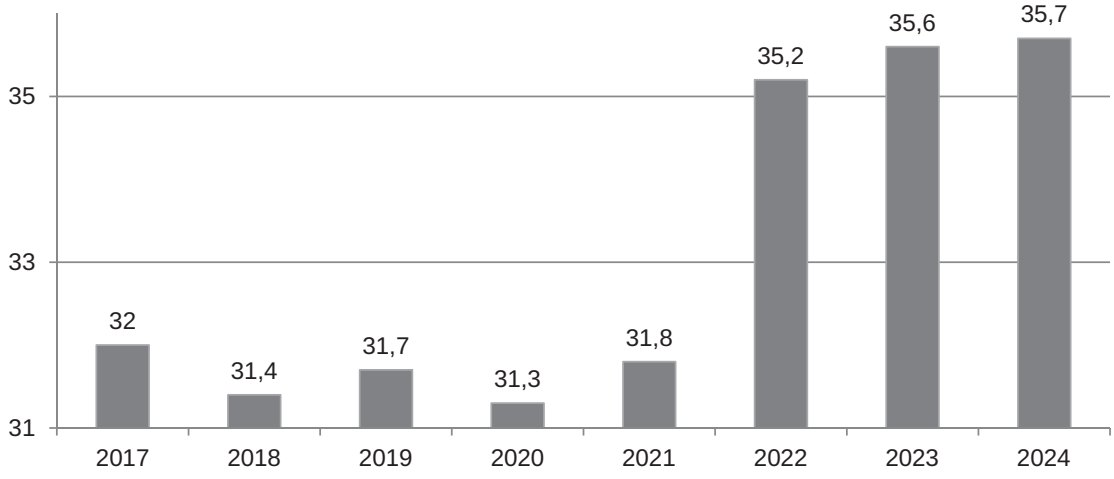

Fig. 2. Evolution of the European Innovation Scoreboard, Ukraine

Source: compiled by the author according to [5]

innovations. Its methodology is based on the analysis of more than 80 indicators covering various aspects: institutional capacity, human capital development, research, infrastructure, business activity, technological achievements and innovation results. The GII not only reflects the state of innovation in countries, but also serves as a tool for predicting their future economic trajectory. A high ranking in this index means a stable economic policy, a favorable business climate and a developed research and development base.

It should be emphasized that the country's innovativeness directly affects its international economic relations. A high level of innovation development helps to attract foreign investment, increase exports of high-tech products, and strengthen positions in global trade. Countries with high GII scores are more likely to become centers of international technological cooperation, actively participate in transnational research, attract venture capital, and create favorable conditions for international corporations.

In 2024, the Global Innovation Index is headed by six countries, namely: Switzerland (67.5), Sweden (64.5), the United States (62.4), Singapore (61.2), the United Kingdom (61.0), and South Korea (60.9) [8]. It should be emphasized that these countries traditionally occupy leading positions in the GII and demonstrate a significant share of innovative exports and have strong economic ties with other countries. It should be emphasized that countries with low GII scores face economic difficulties, limited access to technology, and a lack of funding for innovation. The lack of a developed innovation ecosystem hinders their integration into the global economy and reduces opportunities for attracting international business. The last place in the ranking among 133 countries is taken by Angola with 10.2 points.

In 2024, Ukraine took 60th place thanks to defense and technological developments, as well as the digitalization of public services (Figure 3). Colombia ranks next behind Ukraine with a score of 29.2. At the same time Ukraine has ranks 4th among 38 lower-middle-income countries. It demonstrates moderate results in the GII, occupying an average position among developing countries.

This index shows that Ukraine's important strengths include a developed educational system, the availability of qualified IT professionals, and a high level of entrepreneurial activity. At the same time, the country faces challenges, including low funding for science, insufficient protection of intellectual property, and weak commercialization of innovations. To improve its position in the GII, Ukraine needs to more actively implement reforms, stimulate research, improve the investment climate, and expand international cooperation in the technology sector.

Analyzing the data of the two indices, it should be noted that countries that occupy high positions in the EIS and GII become more attractive to foreign investors. These innovation indices affect international economic relations because they shape a country's reputation and identify opportunities for cooperation. A high level of innovation development indicates favorable conditions for doing business, reliable protection of intellectual property, and the prospects for investment in research and development. In addition to investment attractiveness, innovative countries export high-tech goods, software, pharmaceuticals, and scientific research rather than raw materials. A high ranking in the GII or EIS promotes the development of technology trade and the creation of new markets for innovative products.

High scores in these rankings also contribute to a country's active participation in international research

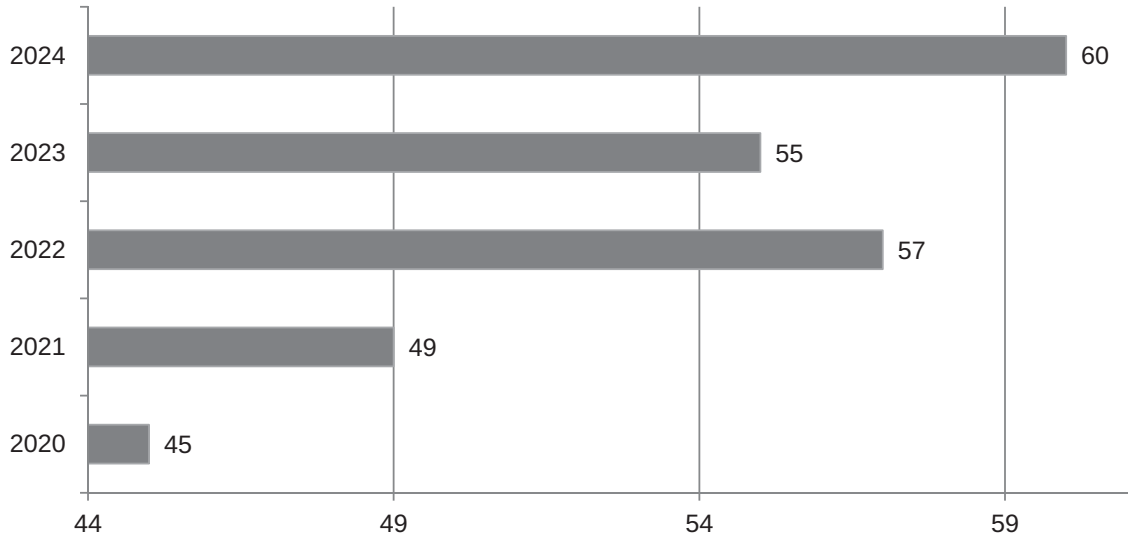

Fig. 3. Evolution of the Global Innovation Index, Ukraine

Source: compiled by the author according to [14]

projects, joint research, and technology alliances. For example, the EU actively involves countries with a high level of innovative development in the Horizon Europe programs aimed at co-financing research initiatives. In addition, participation in global innovation rankings allows countries to assess their own strengths and weaknesses, adjust their economic policies, and focus on long-term growth. The leaders of the EIS and GII have the opportunity to dictate trends in high-tech industries such as artificial intelligence, biotechnology, and green energy.

Thus, the European Innovation Scoreboard and the Global Innovation Index are not just statistical indicators, but strategic tools that shape international economic relations. For Ukraine, improving these indicators should become one of the priorities of state policy to help integrate into the global economy and ensure sustainable economic growth.

While the European Innovation Scoreboard (EIS) and the Global Innovation Index (GII) assess the innovation potential of countries, the Global Talent Competitiveness Index (GTCI) focuses on human capital as the main driver of competitiveness. It measures the ability of countries to attract, develop and retain talented professionals in their countries. It evaluates countries on several key parameters: the level of education and training, opportunities for professional growth, investment in talent development, openness to international talent, and labor market efficiency. This ranking is extremely important, as human capital is becoming a key factor in sustainable economic growth in a globally competitive environment. The countries leading the GTCI (Switzerland, Singapore and Luxembourg) are actively investing in education, creating favorable conditions for innovation, and maintaining a high level of social mobility (Figure 4). Their success confirms that in today's world, the key resource is not natural resources, but people – their minds, skills, and desire for development. The first and perhaps the most important factor that determines the success of the ranking leaders is a high-quality education system. It not only creates highly skilled professionals, but also enables people to adapt to the new challenges brought by digital transformation. In the GTCI leader countries, education is flexible, focused on critical thinking, practical skills, and innovation. In addition, these countries are actively implementing the concept of lifelong learning. This allows employees to quickly retrain, change their field of activity, and meet the demands of a rapidly changing market. Another important characteristic of GTCI leaders is their ability to attract talent from all over the world and create a space for them to realize their potential. That is why high positions in the GTCI affect international economic relations of countries, determining the attractiveness of the country for investors, the possibility of integration into the global economy and the export of high technologies and services. The last place in the ranking of 67 countries was taken by Mongolia with a score of 26.47.

Ukraine has traditionally been included in the Global Talent Competitiveness Index ranking, for example, 66th among 133 countries in 2022 [13]. However, Ukraine is not included in the 2024 edition of the GTCI. This is likely due to the fact that the necessary data for the assessment was not available or incomplete at the time.

The Global Talent Competitiveness Index has become an important tool for assessing the ability of countries to attract, develop, and retain talent. It takes into account not only the level of education

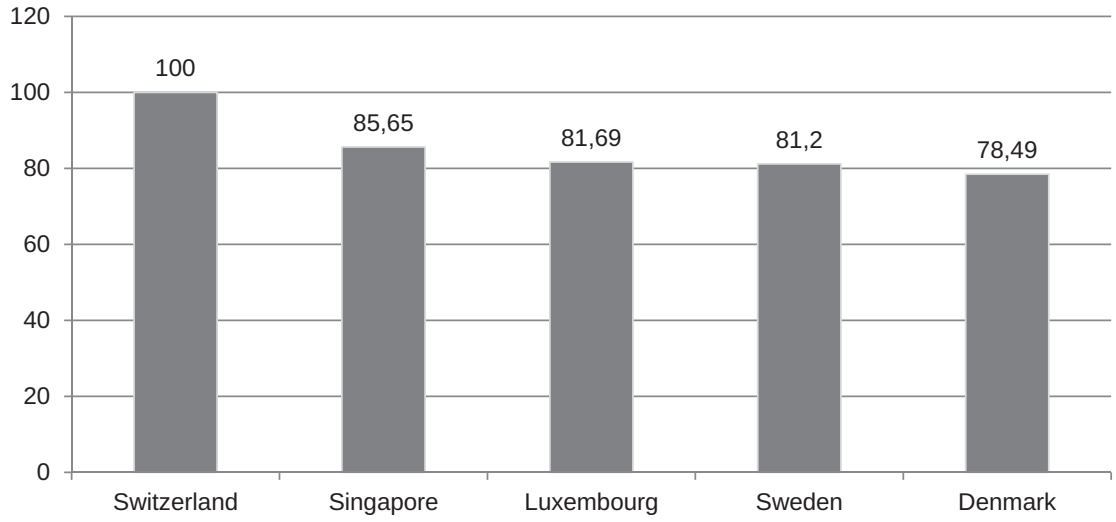

Fig. 4. Top countries according to Global Talent Competitiveness Global Talent Competitiveness Index, 2024

Source: compiled by the author according to [15]

and training, but also economic, social, and political factors that affect the mobility and competitiveness of human capital. As artificial intelligence is gradually changing the structure of employment, countries that effectively integrate technology and at the same time create a favorable environment for highly skilled workers will gain a significant advantage.

This approach to management is becoming especially important in the context of rapid automation and the introduction of artificial intelligence, which significantly changes the structure of the labor market and global economic dynamics. Technological changes, on the one hand, create new opportunities for business and innovation, and on the other hand, can become a factor of social instability and inequality. This is confirmed by the results of the WCC study [6], which shows that in developed countries, artificial intelligence is replacing jobs more actively than in less developed economies. Thus, AI levels the competitiveness of countries, reducing the advantages of leaders and helping outsiders. However, automation of workflows and a reduction in the need for human labor may increase social exclusion in some large economies. In 2024, according to the GTCI, in countries such as Japan (43rd), Thailand (47th), Singapore (2nd), the United Kingdom (27th), and Canada (19th), top managers note that it is in these countries that AI has the most significant impact on the labor market, displacing workers. Moreover, the level of discrimination is growing in these countries, which creates additional challenges. However, there is also an important nuance: despite certain difficulties at the stage of introducing artificial intelligence, these economies are likely to benefit from its development in the long run. At the same time, increased discrimination may negatively affect their ability to attract and retain highly skilled foreign professionals, which could pose a threat to their future competitiveness, the report notes.

It should be noted that innovation indices have become an important tool for making effective management decisions. The European Innovation Scoreboard (EIS), Global Innovation Index (GII), and Global Talent Competitiveness Index (GTCI) allow managers to analyze the prospects for company development, choose strategies for entering international markets, and determine areas for investment in technology and human capital. A country's high ranking in the GII indicates a favorable environment for technology businesses, access to research and development, and financing for innovation, which helps managers make decisions about the introduction of the latest products and technologies. In turn, the EIS allows us to assess the level of government support for innovation, which is an important factor for cooperation between business and government, and gives us an understanding of how ready the country is for digital transformation. The GTCI helps determine whether the country has enough highly qualified specialists and assesses the level of competitiveness of the labor market, which is important for the company's HR policy. If a country has a high position in the GTCI, it means that it has talented personnel, and therefore, the company can focus on developing R&D centers, opening new offices or production facilities. If a country has low scores in the index, the manager should consider attracting foreign specialists or investing in internal educational programs. In a globally competitive environment, management decisions should be based on an in-depth analysis of the economic environment, and innovation indices are a reliable source of information about key trends. High scores in the EIS, GII, and GTCI mean not only the stable development of the innovation ecosystem, but also the prospects for long-term economic growth, which directly affects management strategies. Managers who rely on this data can not only assess the current state of the market but also predict future risks and opportunities, which allows them to allocate resources more efficiently, attract investors, and develop international partnerships. In today's business environment, analytics of innovation indices gives companies a significant competitive advantage by helping them adapt to rapid changes and implement strategies focused on innovative development.

The analysis of the European Innovation Scoreboard, Global Innovation Index, and Global Talent Competitiveness Index shows that innovative development directly affects international economic relations, investment attraction, and competitiveness of countries. High scores in these rankings enable countries to export technology, attract talent, and strengthen international scientific and technical cooperation.

For Ukraine, which is currently lagging behind in many indicators, it is especially important to take strategic steps to improve its position in these rankings. Key measures that can ensure growth include:

– increasing public and private funding for research and development, which will create the basis for technological breakthroughs and attracting international partners;

– reform of the educational system with a focus on STEM disciplines, digitalization, and entrepreneurial skills that will allow Ukraine not only to develop its own personnel but also to compete for international talent;

– improving conditions for startups and venture capital, creating tax incentives and a favorable business environment, which will help to better commercialize scientific achievements;

– integration of Ukraine into international research programs and partnerships, which will facilitate further cooperation and implementation of advanced technologies;

– development of innovative infrastructure (technology parks, science hubs, accelerators) to support high-tech business;

– protecting intellectual property and promoting patenting, as this will increase Ukraine's share in the global innovation market;

– reducing the outflow of intellectual capital by creating conditions for the return of highly qualified specialists and attracting international talent.

Thus, Ukraine has significant potential to improve its position in global innovation and competitiveness rankings. However, this requires a comprehensive reform of the research and education sector, stimulation of innovative businesses, and a favorable investment climate. Only a systematic approach will allow Ukraine to integrate into the global economy as a strong player in technology and innovation.

Conclusions. The analysis of innovation indices demonstrates their key role in determining the competitiveness of countries in the modern economy. The European Innovation Scoreboard (EIS), Global Innovation Index (GII) and Global Talent Competitiveness Index (GTCI) allow assessing the scientific and technological potential of countries, the level of human capital development and the ability to implement innovations. High positions in these rankings have correlate with active investment attraction, development of high-tech industries, and the country's integration into international economic processes.

However, it should be emphasized that the digital transformation of the global economy creates new challenges and opportunities for countries. Countries investing in digital infrastructure, education, and innovation ecosystems are gaining competitive advantages and strengthening their positions in the global market. Instead, those lagging behind in technology and research face economic difficulties and the risk of losing highly qualified specialists.

For Ukraine, improving its position in international rankings requires a comprehensive approach, including support for science, development of an innovative business environment, stimulation of research and development, and active integration into global technology networks. Investments in human capital, digitalization, and the development of the startup ecosystem can become the foundation for long-term economic growth and increase the country's competitiveness.

Thus, innovation indices are not only an analytical tool for assessing the development of countries, but also a strategic guide for governments and businesses in formulating effective economic policies. Focusing on strengthening innovation potential, using digital technologies, and developing international cooperation can be the key to successful integration into the global economy and raising the level of society's welfare.

БІБЛІОГРАФІЧНИЙ СПИСОК:

1. AI could threaten high-income economies' attractiveness to talent, finds 2024 IMD World Talent Ranking, *IMD.* Available at: https://www.imd.org/news/ai-could-threaten-high-income-economies-attractiveness-to-talent-finds-2024-imd-world-talent-ranking (accessed March 20, 2025)

2. Bezzubko L., Tochonov I., Bezzubko B. (2022). Otsiniuvannia natsionalnoho innovatsiinoho potentsialu Ukrainy [Evaluation of the national innovative potential of Ukraine]. *Halytskyi ekonomichnyi visnyk*, vol. 75, no 2, pp. 64–71. DOI: https://doi.org/10.33108/galician-visnyk_tntu2022.02.064 (in Ukrainian)

3. Brechko O. (2020). Determinanty tsyfrovoi transformatsii natsionalnoi ekonomiky. [Determinants of digital transformation of the national economy]. *The Visnyk ekonomiky*, no. 4, pp. 7–24. DOI: https://doi.org/10.35774/visnyk2020.04.007 (in Ukrainian)

4. Dykha M., Dykha V. (2023). Riven innovatsiinosti rozvytku Ukrainy v hlobalnomu vymiri ta okreslennia yoho perspektyv [The level of innovation of Ukraine's development in the global dimension and outlining its prospects]. *Kyivskyi ekonomichnyi naukovyi zhurnal,* no. 2, pp. 5–15. DOI: https://doi.org/10.32782/2786-765X/2023-2-1 (in Ukrainian)

5. EIS interactive tool 2024. *An official website of the European Union*. Available at: https://projects.research-and-innovation.ec.europa.eu/en/statistics/performance-indicators/european-innovation-scoreboard/eis-2024#/eis/countries/UA?compare_year=2023&country_scope=all (accessed March 20, 2025)

6. European Innovation Scoreboard. *An official website of the European Union*. Available at: https://projects.research-and-innovation.ec.europa.eu/en/statistics/performance-indicators/european-innovation-scoreboard/eis-2024#/eis (accessed March 20, 2025)

7. Getmanenko O., Fizeshi Y. (2024). Tsyfrova transformatsiia mizhnarodnoi torhivli u vymirakh tsyfrovoho rozryvu. Naukovyi visnyk Uzhhorodskoho natsionalnoho universytetu [Digital transformation of international trade in the dimensions of the digital divide]. *Naukovyi visnyk Uzhhorodskoho natsionalnoho universytetu,* vol. 52, pp. 44–49. DOI: https://doi.org/10.32782/2413-9971/2024-52-6 (in Ukrainian)

8. Global Innovation Index (GII) 2024. *WIPO.* URL: https://www.wipo.int/global_innovation_index/en/ (accessed March 20, 2025)

9. Imperatyvy rozvytku mizhnarodnykh ekonomichnykh vidnosyn v umovakh hlobalnykh vyklykiv: kolektyvna monohrafiia (2022) [Imperatives for the Development of International Economic Relations in the Context of Global Challenges: a collective monograph]. In O.A. Dovhal. Kharkiv: KhNU imeni V. N. Karazina, 528 p. Available at: https://international-relations-tourism.karazin.ua/themes/irtb/resources/6a9f33a07ff9a208743ba17bc6709d07.pdf (accessed March 25, 2025) (in Ukrainian)

10. Mohylna L., Xu T., Pizniak D., Dashutina L., Turchina S. (2023). Trends in the Development of Innovative Processes in the Global Economy: Ukraine as an Example. *Review of Economics and Finance,* vol. 21,

pp. 1893–1903. DOI: https://doi.org/10.55365/1923.x2023.21.204

11. Orlova N., Vynnyk T., Pobihun S. (2023). Innovatsiini stratehii rozvytku biznesu v umovakh kryzy: analiz i praktychna realizatsiia v Ukraini [Innovative strategies for business development in crisis: analysis and practical implementation in Ukraine]. *Ekonomika ta suspilstvo*, no. 56. DOI: https://doi.org/10.32782/2524-0072/2023-56-75 (in Ukrainian)

12. Skyba O. (2024). Otsinka innovatsiinoho potentsialu Ukrainy v konteksti svitovykh reitynhiv [Assessment of the innovation potential of ukraine in the context of global ratings]. *Ekonomichnyi prostir,* no. 190, pp. 348–354. DOI: https://doi.org/10.32782/2224-6282/190-62 (in Ukrainian)

13. The Global Talent Competitiveness Index 2022. The Tectonics of Talent: Is the World Drifting Towards Increased Talent Inequalities? Bruno Lanvin and Felipe Monteiro, Editors. 336 p. Available at: https://www.insead.edu/sites/default/files/assets/dept/fr/gtci/GTCI-2022-report.pdf. (accessed March 20, 2025)

14. Ukraine ranking in the Global Innovation Index 2024. *WIPO.* Available at: https://www.wipo.int/gii-ranking/en/ukraine (accessed March 20, 2025)

15. World Talent Ranking. *IMD*. Available at: https://www.imd.org/centers/wcc/world-competitiveness-center/rankings/world-talent-ranking/ (accessed March 20, 2025)

REFERENCES:

1. AI could threaten high-income economies' attractiveness to talent, finds 2024 IMD World Talent Ranking, *IMD.* URL: https://www.imd.org/news/ai-could-threaten-high-income-economies-attractiveness-to-talent-finds-2024-imd-world-talent-ranking (дата звернення: 20.03.25)

2. Беззубко Л., Точонов І., Беззубко Б. Оцінювання національного інноваційного потенціалу України. *Галицький економічний вісник.* 2022. Том 75. № 2. С. 64–71. DOI: https://doi.org/10.33108/galicianvisnyk_tntu2022.02.064

3. Бречко О. Детермінанти цифрової трансформації національної економіки. *Вісник економіки*. 2021. № 4. С. 7–24. DOI: https://doi.org/10.35774/visnyk2020.04.007

4. Диха М., Диха В. Рівень інноваційності розвитку України в глобальному вимірі та окреслення його перспектив. *Київський економічний науковий журнал.* 2023. № 2. С. 5–15. DOI: https://doi.org/10.32782/2786-765X/2023-2-1

5. EIS interactive tool 2024. *An official website of the European Union*. URL: https://projects.research-and-innovation.ec.europa.eu/en/statistics/performance-indicators/european-innovation-scoreboard/eis-2024#/eis/countries/UA?compare_year=2023&country_scope=all (дата звернення: 20.03.25)

6. European Innovation Scoreboard. *An official website of the European Union*. URL: https://projects.research-and-innovation.ec.europa.eu/en/statistics/performance-indicators/european-innovation-scoreboard/eis-2024#/eis (дата звернення: 20.03.25)

7. Гетманенко О. О., Фізеші Й. Й. Цифрова трансформація міжнародної торгівлі у вимірах цифрового розриву. *Науковий вісник Ужгородського національного університету*. 2024. Вип. 52. С. 44–49. DOI: https://doi.org/10.32782/2413-9971/2024-52-6

8. Global Innovation Index (GII) 2024. *WIPO.* URL: https://www.wipo.int/global_innovation_index/en/ (дата звернення: 20.03.25)

9. Імперативи розвитку міжнародних економічних відносин в умовах глобальних викликів: колективна монографія / кол. авт.; за ред. О. А. Довгаль. Харків: ХНУ імені В. Н. Каразіна, 2022. 528 с. URL: https://international-relations-tourism.karazin.ua/themes/irtb/resources/6a9f33a07ff9a208743ba17bc6709d07.pdf (дата звернення: 25.03.25)

10. Mohylna Liudmyla, Xu Tian, Pizniak Dmytro, Dashutina Liudmyla, Turchina Svitlana Trends in the Development of Innovative Processes in the Global Economy: Ukraine as an Example. *Review of Economics and Finance.* 2023. Vol. 21. P. 1893–1903. DOI: https://doi.org/10.55365/1923.x2023.21.204

11. 1Орлова Н., Винник Т., Побігун С. Інноваційні стратегії розвитку бізнесу в умовах кризи: аналіз і практична реалізація в Україні. *Економіка та суспільство*. 2023. № 56. DOI: https://doi.org/10.32782/2524-0072/2023-56-75

12. Скиба О. Оцінка інноваційного потенціалу України в контексті світових рейтингів. *Економічний простір*. 2024. № 190. С. 348–354. DOI: https://doi.org/10.32782/2224-6282/190-62

13. The Global Talent Competitiveness Index 2022. The Tectonics of Talent: Is the World Drifting Towards Increased Talent Inequalities? / Bruno Lanvin and Felipe Monteiro, Editors. 336 p. URL: https://www.insead.edu/sites/default/files/assets/dept/fr/gtci/GTCI-2022-report.pdf. (дата звернення: 20.03.25)

14. Ukraine ranking in the Global Innovation Index 2024. *WIPO.* URL: https://www.wipo.int/gii-ranking/en/ukraine (дата звернення: 20.03.25)

15. World Talent Ranking. *IMD*. URL: https://www.imd.org/centers/wcc/world-competitiveness-center/rankings/world-talent-ranking/ (дата звернення: 20.03.25)