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MONITORING OF DIGITAL COMPETITIVENESS IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT AND ECONOMIC GROWTH: GLOBAL TRENDS AND UKRAINIAN REALITIES

KATERYNA KRAUS

Abstract. In the era of digital transformation of the economy and globalization of economic processes, competition between countries takes on a new format and becomes digital. The rivalry is no longer only for natural, human, financial resources, the center of the struggle is information, innovative developments, advanced digital technologies. The purpose of the article is to study the dynamics and reasons for changing the rating of digital competitiveness of the countries of the world; monitoring of Ukraine's position in the world ranking of digital competitiveness; outlining promising opportunities for strengthening Ukraine's competitive power. The author found that in 2023, the USA, the Netherlands, and Singapore became the first in the overall ranking of digital competitiveness due to technological leadership, attention to increasing the level of knowledge in the country, and the development of strategic approaches to future development. As a result of the analysis of the digital competitiveness of Ukraine in 2019–2021, the author found out that the country had positive dynamics in all factors, and achieved the greatest progress in the "Knowledge" factor thanks to the support of talented young people in scientific research; deepening the orientation of education in educational institutions to European principles; creation of scientific centers of researchers to accelerate the exchange of ideas. The scientific novelty and practical value of the article lies in the provided recommendations for ensuring better digital competitiveness of Ukraine, in particular, in terms of strengthening the development of digital skills of citizens, improving the national system of cyber security and protection of personal data on the Internet, stimulating the improvement of the quality of scientific research. Thus, the author recommends creating a powerful technological framework of the country, strengthening the protection of intellectual property rights, strengthening the information protection, which in the complex will ensure the growth of trust and protection in the country.

Keywords*:* digital competitiveness, digitalization of the economy, technologies, technological framework, business mobility, innovative solutions, economic growth.

JEL Classification: F20, O10, O31, O33, O40

1. INTRODUCTION

The current state of the economy of many countries of the world is marked not only by globalization and a high degree of uncertainty, but also by political and socio-economic transformations that largely determine the distribution of forces on the world map. The external challenges of recent years, in particular the global Covid-19 pandemic, have further strengthened the role of the digital economy, the active use of various information and communication and advanced digital technologies to increase the efficiency of economic processes and the continuity of business activities, maintaining communication between individuals, organizations, companies, receiving quality public services remotely.

Under such conditions, ensuring sustainable economic growth and social well-being intensifies competition between countries and individual regions for modern digital technologies and innovative solutions, highly intelligent human resources, and new sources of funds. Competition is taking on a new format, becoming digital, and therefore, in order to be able to assess the balance of forces in the future economic order in the world, it is necessary to take as a basis the rivalry between countries for digital advantages, achievements, solutions, technologies, to consider cooperation in the field of digital equality and accessibility, which, after all, involves taking into account indicators of digital competitiveness of countries.

2. RESEARCH METHODS

Various scientific methods were used in the work, including: the analysis method – for processing the available scientific literature on understanding the importance of digital competitiveness for the country's economic prosperity and when identifying its current trends; methods of synthesis and generalization – for reviewing the views of scientists on the methodology of assessing the level of digital competitiveness, as well as when formulating conclusions regarding the dynamics of changes in the positions of economically developed countries of the world according to the rating of digital competitiveness; the comparison method – for comparing the digital competitiveness ratings of different countries of the world in general and in terms of the main factors in 2019–2023; statistical method – for studying the dynamics of changes in the digital competitiveness rating of the countries of the world according to the version of the IMD World Digital Competitiveness Ranking 2023; graphic method – for a visual presentation of the dynamics of changes in the rating of digital competitiveness of individual countries of the world.

3. LITERATURE REVIEW

Questions related to the development of methodical approaches to assessing the rating of digital competitiveness of countries, the study of factors that determine digital competitiveness and influence it, and the formation of proposals for improving the competitive positions of the countries of the world in the international arena are in the field of view of both foreign and Ukrainian scientists.

Researchers from Serbia and Croatia J. Stankovic, I. Marjanovic, S. Drezgic, and Z. Popovic propose a methodology for measuring digital competitiveness using a composite index approach that includes various indicators and integrates CRITIC and TOPSIS as weighting and aggregation methods. In addition, scientists are convinced that high-quality digital infrastructure is the basis of the country's modern innovative economy and society, and digital competitiveness is a multidimensional structure that takes into account various aspects of digital transformation – both digital technologies and the digital readiness of the economy and citizens for digital transformation (Stankovic et al., 2021, p. 117).

At the same time, D. Sagarik, as a representative of the scientific community from Thailand, makes an attempt to measure the digital economy by several indicators of digital competitiveness and focuses attention on the extent to which the introduction of digital variables in the context of digital competitiveness in countries contributes to the development of readiness for the digital future. The researcher emphasizes the importance of open government practices and cyber security in the digital era, as well as the need to improve citizens' access to public information and the provision of public services (Sagarik, 2023, p. 1).

Interesting from a scientific point of view is the methodological approach of Lithuanian scientists V. Skvarciany, and D. Jureviciene, who proposed using the EDCI digital competitiveness index, which makes it possible to assess the level of digital competitiveness and can be used in developing a strategy for the transition to a digital economy (Skvarciany & Jureviciene, 2024, p. 220). The team of researchers from China L. Zhang, P. Qiu, and P. Cao believe that in the era of the development of the digital economy, the construction of internationally competitive intellectual production becomes the key to the

transformation of the country into a manufacturing state and the achievement of high-quality economic development (Zhang et al., 2023, p. 1).

Scientists from Greece E. Laitsou, A. Kargas, and D. Varoutas consider digital competitiveness as a source of competitive advantage at the level of business and the country's economy, and consider the effectiveness of the digital economy as a matter of national strategy for economic growth and socio-economic development. To assess digital competitiveness, researchers use the Digital Economy and Society Index (DESI index), which covers 5 aspects: communication, human capital, use of Internet services, integration of digital technologies, digital public services (Laitsou et al., 2020, p. 1).

We agree with the scientific view of the representative of Romania, D. Lixandroiu, on the interpretation of the concept of "digital competitiveness of the country", which she considers, first of all, from the point of view of creating an electronic government, which involves the use of digital technologies, as it provides access to data, information and services, allows participation in the decision-making process in a transparent and efficient way and implicitly increases the responsibility of the government (Lixandroiu, 2018, p. 107).

A slightly different scientific approach to understanding digital competitiveness is offered by a researcher from Croatia, I. Martincevic, who believes that it should be considered at the level of the company and at the level of the country's economy as a whole and take into account the impact of digital technologies on it, because "new modern digital technologies affect business company processes, increasing operational efficiency and excellence... Although digital technologies are not a new phenomenon, their growth and development are changing the principles of how companies work" (Martincevic, 2022, p. 551).

Practically oriented are the results of scientific research by representatives of China and Malaysia (T. Meng, D. Yu, L. Ye), who are convinced that in the era of rapid technological progress, the spread of digital technologies changes urban landscapes, affects economic, social and environmental dynamics, and therefore it is important to analyze the Digital Competitiveness Index not only of the country as a whole, but also of a separate city or territory. Researchers justify this by the fact that there is a close relationship between the competitiveness of a digital city and overall productivity, and there are clear interactions between the development of a digital city and its economic benefits (Meng et al., 2023, p. 1).

We consider also noteworthy, from the point of view of finding ways to increase the level of digital competitiveness, the results of research conducted: scholars from Malaysia and Great Britain (Hashim et al., 2024) who study the key elements of data culture practices to understand how they stimulate digital competitiveness; the Italian P. Magliocca (2021), who considers the development of Industry 4.0, the formation of Society 5.0 and the creation of comfortable conditions for the implementation of digital entrepreneurship as driving forces for increasing digital competitiveness; representatives of the Spanish academic community (Botti et al., 2021), who focus in their research on successful practical cases of the use of digital technologies in education, medicine, logistics, e-government, business, banking, trade, marketing activities, scientific research, media field and cinematography.

Among Ukrainian scientists, N. Kraus, K. Kraus, and N. Andrusiak (2020) consider the digital section of the modern economy and the prerequisites for its high competitiveness in the digital age, emphasizing the innovative component of the economy in the conditions of modern globalization of the world and emphasizing the importance of the institutional basis in ensuring sustainable economic growth (Kraus, 2019).

Taking into account the above, we set ourselves the goal of investigating the dynamics and reasons for changes in the digital competitiveness rating (general and according to the factors "Knowledge", "Technology", "Readiness for the future") of the leading countries, as well as to find out the place of Ukraine in the world rating of digital competitiveness in the context identifying the sources of weak positions of the country, driving forces of positive changes and finding potential opportunities to strengthen Ukraine's competitive power on the world map.

4. RESULTS AND DISCUSSION

Digital transformations in various spheres of our life (political, economic, cultural, social, educational, medical, etc.) are already today an integral part of everyday life and human existence, the driving force for changing the philosophy of market behavior of all participants in economic relations, a determinant of the formation of Society 5.0 and Industry 5.0, the source of the digital divide and social inequality. It is quite obvious that the level of digitization of the economy and the speed and scale of changes are directly dependent on the level of economic development and the well-being of the country's citizens, which leads to the fact that in the less developed countries of the world (with a less stable economy, a lower level of the rule of law and perfection of legislation, lower resource potential – personnel, natural, financial) the degree of penetration of digital technologies and solutions is much lower than in highly developed countries.

Doctor of Science from Croatia takes the position that it is currently impossible to achieve and ensure the long-term competitiveness of the country without the introduction of new digital technologies that create the prerequisites for its achievement, and for this the scientist makes an attempt to determine the correlation between digital technologies, digital competitiveness and digital technologies, stating, that the latter ensure the creation of sustainable competitive advantages and lead to digital competitiveness (Martincevic, 2022, p. 541). The assessment of the level of digital competitiveness of the country makes it possible to identify aspects of socio-economic development that require more effort and attention from regulatory bodies and state institutions, and the level of digital competitiveness itself is a strong indicator of the expected results that will be achieved (Laitsou et al., 2020, p. 20).

Taking into account the above, we consider it necessary to analyze the dynamics of digital competitiveness ratings (both overall and factor-wise) in recent years, with the aim of identifying the driving forces of the most innovative, competitive and economically developed countries in the world, as well as finding out which the areas of digital transformation of the economy need improvement, and on this basis, to offer our own solutions.

The IMD World Digital Competitiveness Ranking in 2023 combined the overall ranking of the economies of 64 countries from different continents, which are ranked from the most to the least competitive in the digital world. Let's analyze the dynamics of changes in the overall rating of digital competitiveness of individual countries of the world that have become leaders in 2023 (Fig. 1). In the 2023 ranking, the United States, as in 2019 and 2021, took first place in the ranking, which confirms its systematic work on the measured factors, namely knowledge, technology and readiness for the future.

In 2023, the Netherlands took second place in the overall ranking of digital competitiveness of countries, rising 4 positions compared to 2021–2022, which was mainly due to its increased technological awareness and readiness for the future. It is also worth noting that Singapore rose one position compared to 2022 and took the 3rd position, primarily due to maintaining technological leadership and increasing the level of knowledge. Denmark in 2023 gave up the first place and took the 4th place in the ranking, which was mainly due to a decline in the factors of future readiness and technological equipment. Rounding out the top five is Switzerland, which has improved this position since 2021, remaining the leader in the knowledge factor for the third year in a row and improving both the technology and future readiness factors. Note that the world's best economies are developing digital nations with extensive digital talent, diverse digital culture, and extensive digital infrastructure.

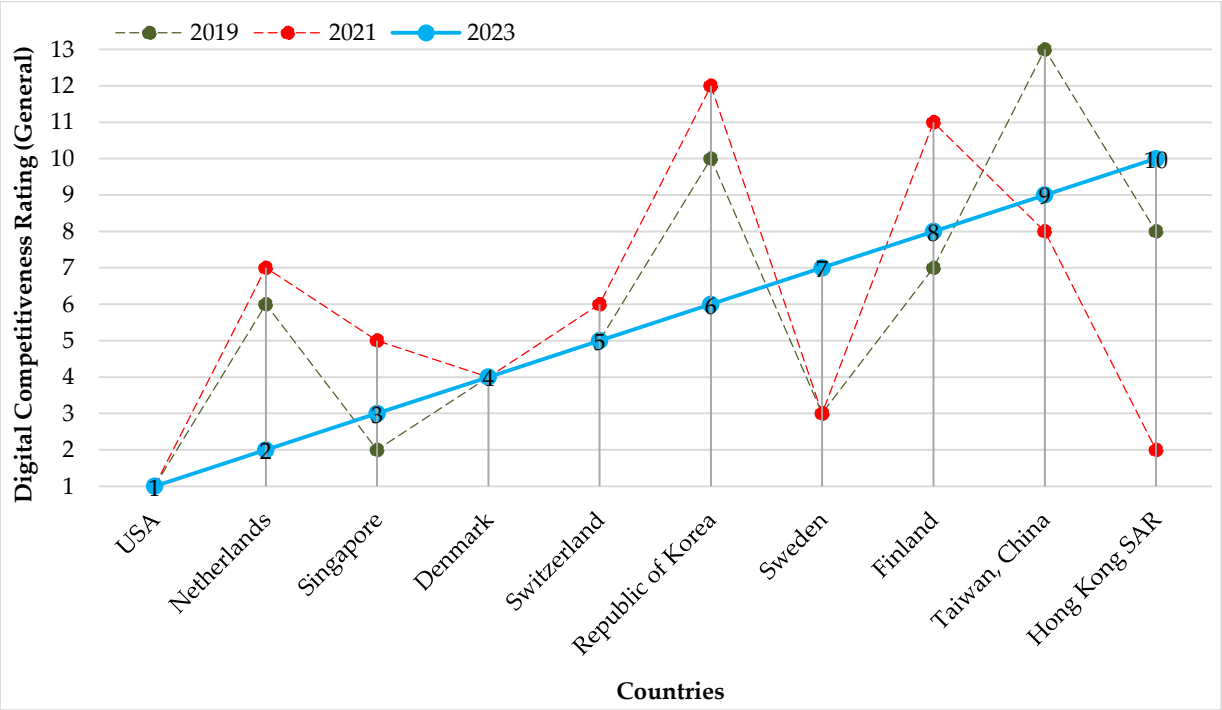

Fig. 1. Dynamics of changes in ranking of the digital competitiveness (general) of the countries of the world (TOP-10), the IMD World Digital Competitiveness Ranking 2023 in 2019, 2021, 2023
Source: built on the basis (IMD. World Competitiveness Center, 2024, pp. 50–51)

In 2023, according to the rating of digital competitiveness, Sweden showed worse results, which in 2019 and 2021 was 3, and in 2023 it was only 7 in the rating. In the same way, we notice the "slump" of digital competitiveness in Hong Kong, SAR – in 2023, the country took 10th place in the digital competitiveness rating, although it was second in 2021. At the same time, the top ten most digital countries in the world also include those that have demonstrated positive dynamics of change. For example, the Republic of Korea in 2023 became 6 in the rating of digital competitiveness, although it was 12th in 2021, as well as Finland – in 2023 it became eighth in the rating, but in 2021 it was 11.

The overall ranking of countries by the level of digital competitiveness in the world (even if only among the 64 countries represented in this ranking) depends on three main factors (knowledge, technology and readiness for the future), which to some extent influence it. So, as for the "Knowledge" factor, in 2023 the best result was secured by Switzerland (1st position), the USA (2nd position) and Singapore (3rd position) (Fig. 2).

The most noticeable positive "breakthrough" in knowledge can be seen in the Netherlands, which took 7th place in the "Knowledge" factor of the digital competitiveness rating of the world's countries in 2023, although it was 13th in 2019. The Republic of Korea rose by 5 positions according to this factor, which became 10, although a year before that it was in 15th place. This shows that the governments of many countries of the world see the great role of an educated nation, creative and talented youth, active scientists and inventors, progressive programmers and innovators in their economic prosperity, social welfare, scientific and technical growth and competitiveness on the international market. And therefore, the support (financial, technical, informational) of these population groups and the promotion of their access to information, education, ensuring their mobility and connection with business and production, is what the government pays attention to and does not ignore. At the same time, we can see in Figure 2 that countries such as Sweden, Denmark, Taiwan, Hong Kong SAR fell in 2023 by several positions each in the rating of digital competitiveness according to the "Knowledge" factor, which weakened their place in the global dimension.

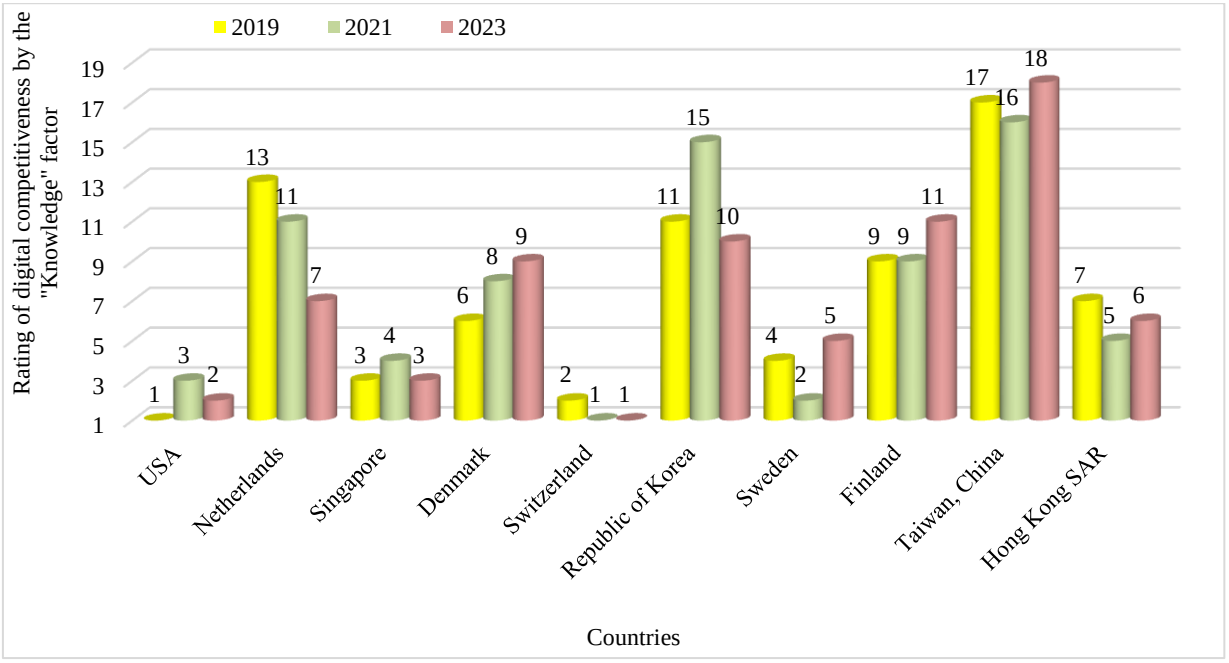

Fig. 2. Dynamics of changes in the ranking of the digital competitiveness of the countries of the world (TOP-10) according to the "Knowledge" factor, the IMD World Digital Competitiveness Ranking 2023 in 2019, 2021, 2023
Source: built on the basis (IMD. World Competitiveness Center, 2024, pp. 50–51)

In the context of the "Knowledge" factor, its quality and availability, researcher from Thailand D. Sagarik is convinced that "it is important to ensure equal access to basic information services, such as the Internet and computer networks, for all sectors and the population. This contributes to the creation of a reliable digital ecosystem and the development of digital government. Practical implications include improved public administration, reduced corruption, increased transparency and increased trust in government. Limitations can arise from infrastructure gaps and digital literacy issues. Future directions include bridging the digital divide, promoting digital literacy programs, and leveraging new technologies for transformative public services. Practical implications include transparency, citizen engagement, economic development and improved public services. Limitations arise from inclusivity issues, resource constraints, and infrastructure gaps" (Sagarik, 2023, p. 10).

The second factor in the IMD Digital Competitiveness Ranking is technology. This factor played a significant role in the overall ranking of digital competitiveness in 2023, because the leading countries showed a positive result here as well – Singapore (1st place), Hong Kong (2nd place), Taiwan (3rd place), UAE (4th place) and the Netherlands (5 place) (Fig. 3).

Note that they managed to achieve this due to a perfect regulatory framework (clear laws that protect those who produce technologies and stimulate those who apply them; supportive tax policy; absence of corruption and shadow economy; democracy and the rule of law), as well as a powerful technological framework (developed digital infrastructure and innovative ecosystem for the effective work of all economic agents; strong ties between participants of scientific and technological and industrial clusters; interaction between representatives of business, science and the state).

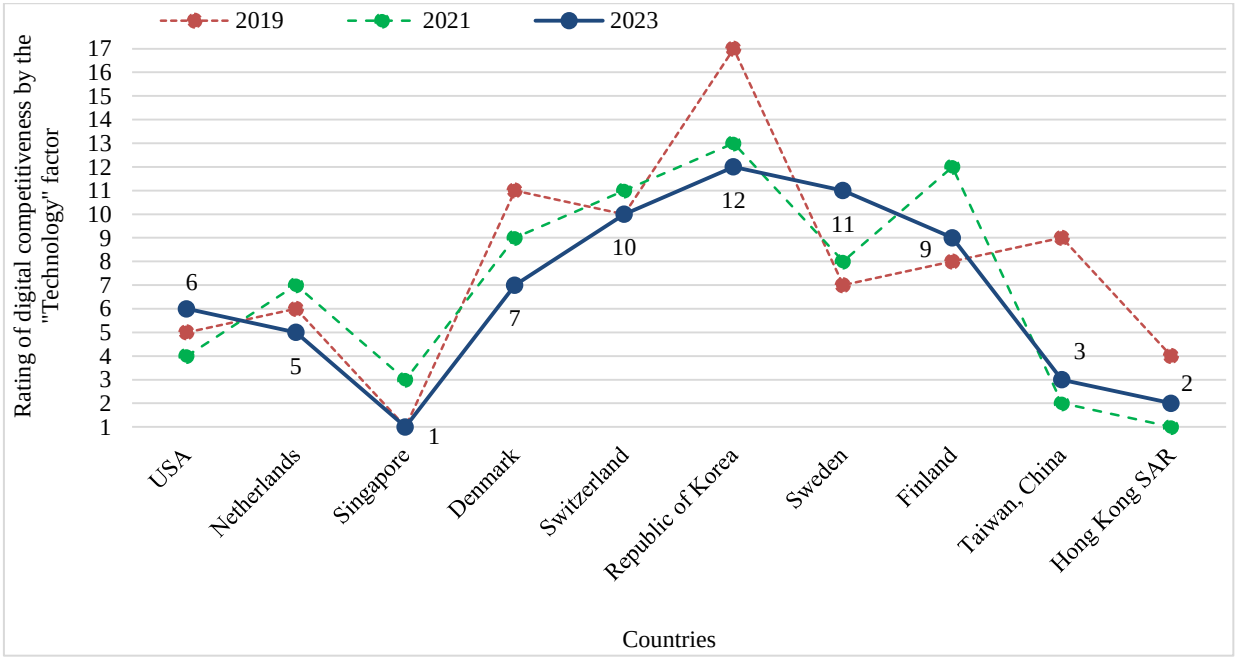

Fig. 3. Dynamics of changes in the ranking of the digital competitiveness of the countries of the world (TOP-10) according to the "Technology" factor, the IMD World Digital Competitiveness Ranking 2023 in 2019, 2021, 2023
Source: built on the basis (IMD. World Competitiveness Center, 2024, pp. 50–51)

D. Lixandroiu, a researcher from Romania, is convinced that "thanks to e-government, public services can be available to citizens in a convenient, efficient and transparent way...; the provision of public services to citizens and companies using electronic means will become better" (Lixandroiu, 2018, p. 119), and this, in turn, will increase the efficiency of public administration, strengthen the institution of democracy, and ensure a higher level of digital competitiveness of the country in the international arena.

At the same time, technological lag among the leading countries in terms of digital competitiveness in 2023 will be demonstrated by the Republic of Korea (12th place), Sweden (11th place). Among the reasons for this situation, it is worth noting the not always satisfactory state of the material and technical base in the country (moral obsolescence, lack of rapid implementation of innovations), lack of human resources, limited natural potential, etc.

In this context, a scientist from Thailand D. Sagarik considers the lack of permanent state support as an obstacle to entrepreneurial innovation, and considers the use of digital technologies in the public sector necessary for effective service provision. He takes the position that the practical effect of e-government is to increase transparency and accountability, while limitations may arise due to issues of digital inclusion. "Government has a critical role to play in raising awareness of cyber security issues and promoting collaboration between relevant sectors to improve cyber protection. This facilitates risk management and increases consumer and industry confidence... Insufficient government support hinders entrepreneurial innovation in developing countries, undermining their digital competitiveness. To address this issue, the government should implement clear administrative guidelines and policies for each sector to support the digital industry" (Sagarik, 2023, p. 10).

Researchers from Lithuania note that the concept of the country's competitiveness has undergone changes in today's conditions and transformed into digital competitiveness, which was the result of digitalization of various spheres of human life. Active use of ICT is an important aspect of the country's digital competitiveness. "The most developed countries pay more attention to the development of ICT and the promotion of digital competitiveness, which, in turn, affects the economic growth of the country" (Skvarciany & Jureviciene, 2024, p. 238). In confirmation of this, a group of European scientists conclude that "the use of ICT in enterprises has the highest relative importance in assessing the achieved

level of digital competitiveness...; the use of ICT in households is not crucial...; the level of digital skills is less important than the importance of ICT use in enterprises...; criteria related to commercial use of ICT (e-commerce) are less important than criteria related to non-commercial use of ICT (online security)" (Stankovic et al., 2021, p. 129). From this, it becomes quite obvious that before talking about the digital competitiveness of the country as a whole, one should not forget and worry about the digital competitiveness of individual economic entities, households.

Readiness for the future is another factor in the digital competence ranking, which also contributed to the overall ranking. The first place in 2023 in terms of readiness for the future went to the Republic of Korea, the second place was taken by the USA, and the third place was taken by Denmark (Fig. 4). It is noteworthy that the leadership in this rating was achieved due to the rapid adaptability of these countries to external challenges, mobility and reorientation of business and production to new needs, adaptation to circumstances that cannot be changed, but their negative impact can be minimized, and those additional benefits, which they create, can be oriented towards achieving an optimal state of functioning and development. It should also be noted the business acumen of these countries, their ability to remain flexible and effective when markets fluctuate and undergo changes; ability to anticipate market trends and outperform competitors; dynamic mobility and adaptability, innovativeness; a strong and stable "foundation" of activity that does not change, even when other factors fluctuate.

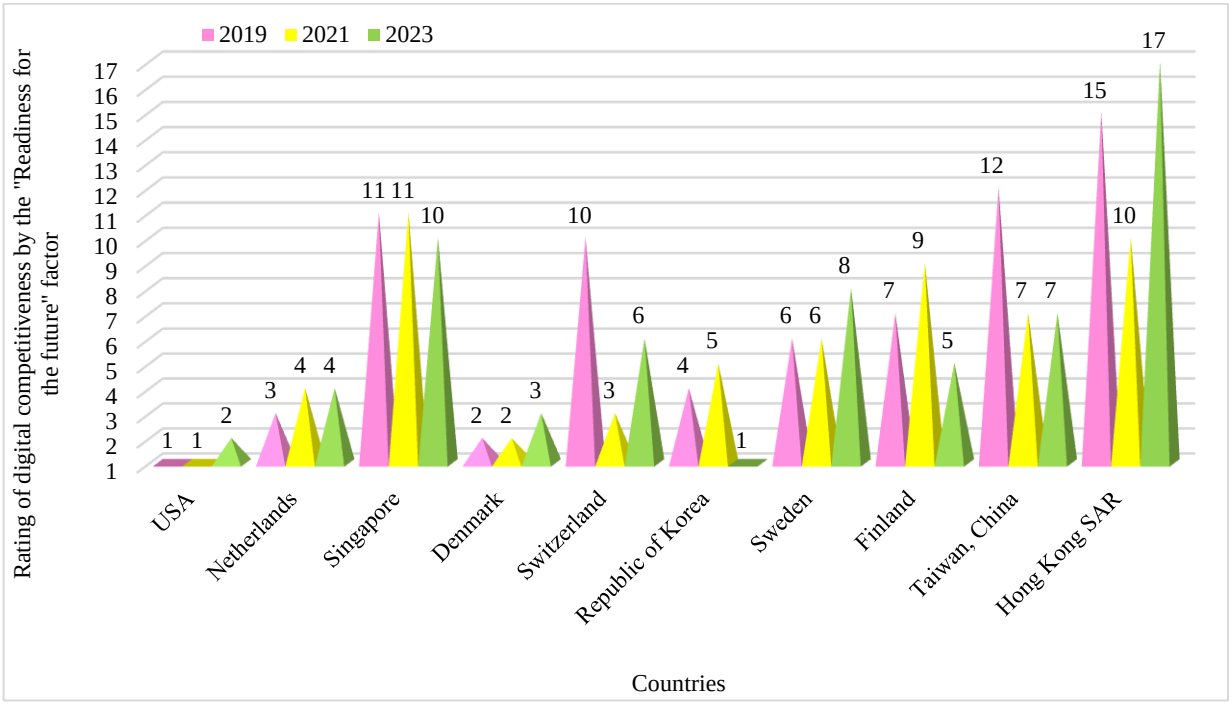

Fig. 4. Dynamics of changes in the ranking of the digital competitiveness of the countries of the world (TOP-10) according to the "Readiness for the future" factor, the IMD World Digital Competitiveness Ranking 2023 in 2019, 2021, 2023

Source: built on the basis (IMD. World Competitiveness Center, 2024, pp. 50–51)

Countries such as Finland, Canada, Israel, Estonia, China, and the Czech Republic have significantly improved their ranking in the "Readiness for the future" factor of the IMD Digital Competitiveness Ranking for the period 2019–2023. And here it is worth noting their focus on IT integration, which is extremely important for digital competitiveness. The need for such integration is associated with the acceleration of the pace of development of modern progressive technologies and the emergence of new needs and requests on the market. IT integration can bring real benefits to the country as a whole and to the company, because it can increase the efficiency and productivity of economic processes, expand the variety of services (state and commercial) and improve their quality, accelerate the market entry of

novelties, ensure flexibility and adaptability to changes.

At the same time, in Figure 4, we can see that Sweden and Hong Kong SAR in 2023 fell in the IMD digital competitiveness rating for the "Readiness for the future" factor compared to 2021, and this is due to the decrease in the level of reliability of these countries in the world of modern complex technologies and innovative solutions.

Chinese researchers conclude that "the increased competitiveness caused by digital transformation is more significant for market leaders and laggards" (Zhang et al., 2023, p. 1). Critically important, in today's environment of accelerated digitization, is attention to four key drivers of data: data analytics, data literacy, data democratization, and data leadership, which are becoming critical for competitiveness in the digital environment and offer the foundation for a data-driven culture (culture of production, culture of use, data cultivation, data processing and data infrastructure) (Hashim et al., 2024).

It should be noted that IMD adds new countries to the digital competitiveness rating every year, so in 2023, Kuwait was included in the rating for the first time. However, there are also those countries that, due to the unreliability and limited data, are excluded from the digital competitiveness rating, in particular, Ukraine and the Russian Federation became such in 2023, as well as in 2022, whose economies underwent significant structural changes due to the military conflict between them. However, for a general understanding of Ukraine's place in the ranking of digital competitiveness of the world in pre-war times, let's consider the dynamics of the ratings (general and by main factors) in 2019 and 2021 (Fig. 5).

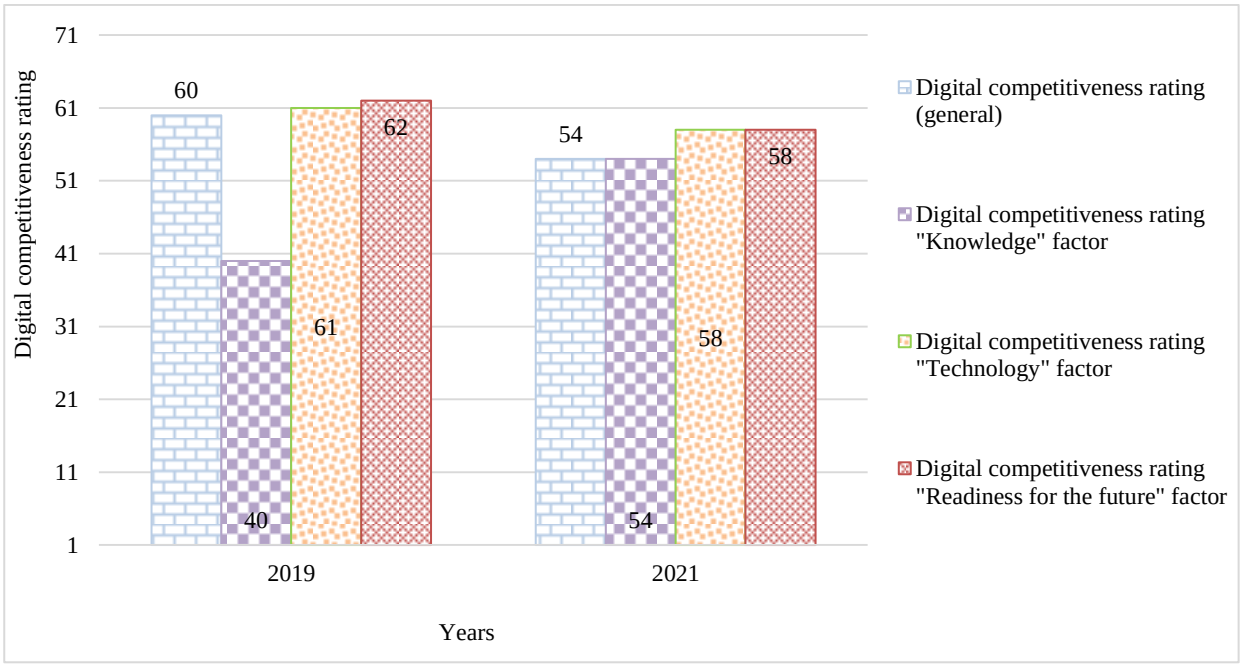

Fig. 5. Dynamics of changes in ratings (overall and by main factors) of digital competitiveness of Ukraine in 2019 and 2021 according to the IMD World Digital Competitiveness Ranking

Source: built on the basis (IMD. World Competitiveness Center, 2022, p. 168)

Ukraine in 2019–2021 had a positive dynamic of digital transformation, and the initiatives laid by the government, parliamentarians and the President made their contribution. We are talking about the formation in September 2019 of the Ministry of Digital Transformation of Ukraine, increasing the law-making activity of the Digital Transformation Committee of Ukraine, launching the public services portal and the mobile application "Diia" in 2020, increasing the number of electronic public services, developing the field of electronic communications, and improving the system of providing electronic trust online, digital public services (eMalyatko, eSupport, subsidies and pensions) increasing the

number of initiatives in the field of digital education (Diia. Education), digital business (Diia. Business) and digital medicine (eHealth), development of a strategy for the integration of Ukraine into the Single Digital Market of the European Union (EU4Digital), etc.

In addition, in terms of factors influencing the country's digital competitiveness, Ukraine had a positive rating dynamics in 2019–2021 for all factors. The country demonstrated the greatest progress in the "Knowledge" factor, which was the result of supporting talented people, particularly young people, in scientific research and development of innovative products and solutions; deepening the orientation of national education and training in educational institutions of various levels to European principles and values, which increased the competitiveness of Ukrainian youth on the world market and guaranteed their demand by the world's leading employers (we are talking, in particular, about IT specialists, developers, programmers, etc.); stimulating the creation of scientific centers of researchers in order to strengthen and speed up the exchange of ideas, knowledge, and experience between them.

In 2021, compared to 2019, Ukraine rose in the "Technology" factor in the IMD digital competitiveness rating and took the 58th place. This was facilitated by changes in the legal framework of the country, namely, the simplification of the business registration procedure and the facilitation of its management, the improvement of the enforcement of contracts with counterparties, the improvement of immigration legislation that encourages foreigners to come to work in Ukraine, and the strengthening of work on the active use of modern digital technologies. However, the legislation on scientific research and development in the country, as well as the protection of intellectual property rights, still needs to be finalized.

The basis for the development of the technological component of the country and the strengthening of its digital competitiveness is capital (Kraus, 2019; Kraus et al., 2020). And if Ukraine increased and stimulated investments in telecommunications until 2021 inclusive, then, unfortunately, the financing of the technological development of the country, the quality of banking and financial ambassadors, the credit rating of the state and the spread of venture capital need improvement and more attention from government institutions. In terms of the technological framework of the country, there is an intensification of efforts to develop communication technologies and their implementation in practice. However, until 2021, it was not possible to increase high-tech exports, significantly increase Internet speed and the number of Internet users, there are problems with wireless broadband access, and therefore the number of mobile broadband subscribers in Ukraine is not the smallest among the studied countries.

Another aspect of the country's digital competitiveness is its readiness for the future, and according to this factor, Ukraine advanced in 2021 from 2019 to 58th place. This was facilitated by the country's business dexterity in terms of the active use of big data by business representatives, the adaptability of existing business entities to changing external conditions, and the use of emerging opportunities. Positive transformations were also observed in 2021 in some adaptive settings of Ukraine, in particular, we are talking about expanding the possibilities of electronic participation in economic processes, increasing the volume of Internet trade, scaling business and its participation in globalization transformations. However, the IT integration of Ukraine is still very slow, and therefore requires the expansion of e-government opportunities, deepening of public-private partnership, strengthening of cyber security and information protection of both citizens and businesses, as well as the fight in the field of software piracy, cleaning up the market from unscrupulous participants.

A special role in the digital society and digital economy is being played by S&T clusters, urban agglomerations, which become centers of innovative development, and therefore it is important to strengthen the city's information infrastructure, encourage enterprises to innovate, promote the development of industry, increase the capabilities of city services using digital means, increasing public participation and environmental preservation (Meng et al., 2023, p. 1).

Taking into account the above, we can conclude that the urgent issues of digital development and transformation of Ukraine's economy remain: ensuring access to broadband and the Internet throughout

the country; strengthening the development of digital skills and digital literacy of citizens; strengthening of the national system of cyber security and protection of personal data on the Internet; improving the quality of scientific research and disseminating its results; comprehensive support for the digital transformation of the economy at various levels.

5. CONCLUSIONS

Continuation and ensuring consistent and systematic digital transformation of the economy and society today requires even greater attention to the level of digital competitiveness of the country. Undeniably important in this process is the valuable experience of the leading countries in the rating of digital competitiveness, because it reveals new opportunities and ways of active activity and initiative in domestic virtual markets and participation in the development of new global standards and rules. The expected result is the deepening of digital transformations at the national level and the promotion of the priorities of the digital order in the world.

However, digital competition does not only have positive effects, it does not always create exclusively new opportunities. Quite often, digital competition creates new challenges, increases the level of risk, leads to a digital divide between countries and social inequality in society. The struggle for economic leadership is changing its format, because the democracy traditionally accepted in Western society, which is considered as a path to long-term economic development, is weakening, instead, newly industrialized countries, often marked by autocratic institutions, are becoming leaders in the development of high technologies and demonstrating stunning economic achievements.

Structural changes in the economy and institutional transformations in many countries of the world are now the result of S&T progress and innovative development. The dynamism and variability of economic processes, the political sphere and everyday life of society leads to the deepening of economic ties and their globalization, and this even more requires the expansion of the spheres of application of modern digital technologies, scientific achievements, the results of technological development and innovative developments, which are components of the digital competitiveness of countries on the international stage.

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Kateryna Kraus, Candidate of Sciences (Economics), Associate Professor, Senior Research Officer, Bohdan Khmelnytskyi National University of Cherkasy, Cherkasy, Ukraine;
ORCID ID: 0000-0003-4910-8330
Address: Kateryna Kraus, Bohdan Khmelnytskyi National University of Cherkasy, Cherkasy, 81 Shevchenko Blvd., 18031, Ukraine.
E-mail: k23k@ukr.net
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Краус Катерина. Моніторинг цифрової конкурентоспроможності в контексті сталого розвитку і економічного зростання: світові тенденції та українські реалії. *Журнал Прикарпатського університету імені Василя Стефаника*, **11** (2) (2024), 91-102.

В епоху цифрової трансформації економіки та глобалізації економічних процесів, конкуренція між країнами набуває нового формату і стає цифровою. Суперництво ведеться вже не лише за природні, людські та фінансові ресурси, в центрі боротьби – інформація, інноваційні розробки, передові цифрові технології. Мета статті – дослідження динаміки і причин зміни рейтингу цифрової конкурентоспроможності країн світу; моніторинг позицій України у світовому рейтингу цифрової конкурентоспроможності; окреслення перспективних можливостей зміцнення конкурентної сили України. Авторка виявила, що у 2023 році у загальному рейтингу цифрової конкурентоспроможності першими стали США, Нідерланди та Сінгапур завдяки технологічному лідерству, увазі до підвищення рівня знань в країні і розробці стратегічних підходів до майбутнього розвитку. В результаті аналізу цифрової конкурентоспроможності України у 2019–2021 рр. авторка з'ясувала, що країна мала позитивну динаміку за всіма факторами, а найбільшого прогресу досягла за фактором "Знання" завдяки підтримці талановитої молоді у наукових дослідженнях; поглибленні орієнтації навчання у закладах освіти на європейські принципи; створення наукових осередків дослідників для пришвидшення обміну між ними ідеями. Наукова новизна та практична цінність публікації полягає у наданих рекомендаціях для забезпечення кращої цифрової конкурентоспроможності України, зокрема, в частині посилення розвитку цифрових навичок громадян, удосконаленні національної системи кібербезпеки і захисту персональних даних у мережі Інтернет, стимулювання підвищення якості наукових досліджень. Таким чином, авторка рекомендує створити потужний технологічний каркас країни, посилити захист прав інтелектуальної власності, посилити інформаційний захист, що в комплексі забезпечить зростання довіри та захисту в країні.

Ключові слова: цифрова конкурентоспроможність, цифровізація економіки, технології, технологічний каркас, мобільність бізнесу, інноваційні рішення, економічне зростання.