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**ІНСТИТУЦІОНАЛЬНІ ЗМІНИ СОЦІАЛЬНО-ЕКОНОМІЧНОГО ЖИТТЯ
СУСПІЛЬСТВА НА ЗАСАДАХ ЦИФРОВОЇ ІНКЛЮЗІЇ ТА БЕЗПЕКИ**

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Анотація. Сьогодні якість, комфорт і безпека життя членів українського суспільства все більше залежать від рівня розвитку та доступності сучасних передових ІКТ та цифрових продуктів. Цифрове середовище, що активно розвивається, орієнтоване на забезпечення інформаційної рівності, кібербезпеки, цифрової грамотності та інклюзивності.

Стаття присвячена питанню цифрової трансформації економіки, що впливає на цифрову якість життя громадян країни та їх добробут. Метою дослідження є огляд динаміки, причин і наслідків зміни рейтингу України за індексом Цифрової якості життя у 2021–2023 роках, а також розробка пропозицій задля посилення віддачі і соціально-економічних ефектів від впровадження цифрових технологій і рішень для забезпечення зростання цифрової якості життя суспільства країни. Щоб досягти поставлену мету, використано методи аналізу та синтезу, узагальнення і порівняння, графічний та статистичний методи, які в комплексі дозволили аргументовано представити наукові напрацювання, що стануть корисними і для теоретиків, і для практиків. У статті проведено глибокий та комплексний аналіз рейтингу України за індексом Цифрової якості життя в загальному і за категоріями (доступність Інтернету, якість Інтернету, електронна інфраструктура, електронна безпека та електронний уряд) у 2021-2023 роках, що дало змогу виявити наявний стан справ із процесами цифровізації економічного та соціального життя суспільства, а також окреслити потенційні можливості для економічного росту. Наукова новизна дослідження полягає у представленій тепловій карті рейтингу України за індексом Цифрової якості життя у 2021–2023 роках, що не лише візуалізує позиції країни за цим індексом та в розрізі його елементів на карті світу, а й миттєво засвідчує сильні та слабкі сторони цифрових перетворень в країні. Практична значущість статті окреслюється наданими практичними рекомендаціями щодо посилення безпеки, доступності та інклюзивності цифрових рішень і перетворень в країні задля підвищення рівня цифрової якості життя українського суспільства, а також створення надійного підґрунтя для майбутнього економічного відновлення України та її процвітання.

Ключові слова: цифрова інклюзія, цифрова трансформація економіки, цифрова якість життя, інституціональні зміни, електронна безпека, добробут нації.

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**INSTITUTIONAL CHANGES IN THE SOCIO-ECONOMIC LIFE OF
SOCIETY ON THE BASIS OF DIGITAL INCLUSION AND SECURITY**

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Abstract. The article is devoted to the issue of digital transformation of the economy, which affects the digital quality of life of the country's citizens and their well-being. The purpose of the study is to review the dynamics, causes and consequences of changes in the rating of Ukraine according to the Digital Quality of Life index in 2021–2023, as well as the development of proposals to increase the return and socio-economic effects of the implementation of digital technologies and solutions to ensure the growth of the digital quality of life in the country's society. In order to achieve the goal, analysis and synthesis, generalization and comparison, graphic and statistical methods were used, which in the complex made it possible to present scientific developments in an argumentative manner, which will be useful for both theoreticians and practitioners. The article carried out a deep and comprehensive analysis of the rating of Ukraine according to the Digital Quality of Life index in general and by categories (Internet availability, Internet quality, electronic infrastructure, electronic security and electronic government) in 2021–2023, and made it possible to identify the current state of affairs with processes digitization of the economic and social life of society, as well as outline potential opportunities for economic growth. The scientific novelty of the research lies in the presented heat map of the rating of Ukraine according to the Digital Quality of Life index in 2021–2023, which not only visualizes the country's position according to this index and in the cross-section of its elements on the world map, but also instantly demonstrates the strengths and weaknesses of digital transformations in the country. The practical significance of the article is outlined by the provided practical recommendations on strengthening the security, accessibility and inclusiveness of digital solutions and transformations in the country in order to increase the level of the digital quality of life of Ukrainian society, as well as creating a reliable basis for the future economic recovery of Ukraine and its prosperity.

Key words: digital inclusion, digital transformation of the economy, digital quality of life, institutional changes, electronic security, welfare of the nation.

Introduction. Digital transformation, which dynamically entered our lives in the 21st century, not only changed the view and perception of the process of providing administrative services for the population by the state (e-government), modified the philosophy of modern business under the influence of the introduction of advanced digital technologies into business processes, but also brought to a new level the prospects for solving a number of socio-economic and environmental problems that are particularly important for humanity. New alternative methods of increasing labor productivity at workplaces and implementing remote involvement of employees in the performance of duties have appeared, a synergistic effect is observed from the simultaneous improvement of the quality of goods/services and their environmental sustainability, positive changes are taking place in the way of life of the population from the point of view of their accessibility to public goods, inclusiveness, expansion of opportunities to realize a person's creative potential regardless of his place of residence and the availability of start-up capital, a person's ability to receive education, medical services, etc.

In order to obtain positive effects from digital transformations in the economy of the country as a whole, in business and socio-economic life of society in particular, it is necessary to strengthen the innovative potential of the country, improve its digital ecosystem and infrastructure, form an extensive inclusive digital space, expand state support for digital transformation, stimulate the emergence and the development of information, ICT and digital technologies, which in the end will help to achieve significant competitive advantages in the international arena and build a powerful strategy of sustainable economic growth.

Attention to the digital economy and its consequences for the socio-economic development of the country and the well-being of society is increasing daily from

representatives of state authorities, entrepreneurs, scientists, and the community. Advanced technologies, which are actively being implemented these days, help to make high-tech digital decisions for various spheres and branches of the economy. And therefore, researchers of many countries try not to leave out of their attention the question of the impact of digitalization processes on improving the digital quality of life.

Representatives of the Chinese scientific community Y. Wu, H. Li, R. Luo and Y. Yu examine the role of digital transformation in achieving high-quality development, and conclude that in the process of digitalization, companies should actively improve information transparency, financial stability and innovation capabilities, choose differentiated paths based on ownership, scale and growth, and the government must improve not only the digital institutional environment, but also the financial policy and credit system. The researchers emphasize that financial restrictions restrain the contribution of digital transformation to the digital quality of life in society, and state subsidies, on the contrary, expand it [15].

In addition, Indonesian researchers (A. Kresnawiansyah, H. Rachmat, Z. Agustian, A. Ratih and J. Aulia) [9] are convinced that thanks to the development of ICT, organizations can change the way they work, interact with customers, compete in the market, and inject on the quality of society's life. Scientists note that in order to "maintain and expand competitive advantages in the digital era, companies are forced to create a strong digital presence and effective digital marketing strategies", and the implementation of digital technologies "requires prioritizing closer interaction with customers..., developing a strong strategy for security management data..., investing in education and training employees to understand and master digital technologies..., personalization of services, which will help increase customer loyalty" [9, p. 88].

Researchers from Sweden J. Martin, Q. Dang and I. Gremyr demonstrate in their work that digitalization also affects the role of quality management specialists, assessing its impact on the practice of improving professionals, because the impact of quality 4.0 is dynamically growing, and the acquisition of skills by professionals which allow using digital capabilities, becomes more important [13]. In the process of globalization of the economy in the 21st century, it is advanced information technologies that are the driving force of both economic growth and the improvement of the quality of life in society, note American researchers R. Atkinson and D. Castro, because "progress in many policy areas, including health care, transport, energy, the environment, public safety and the economy, will be determined by how well countries develop and deploy information technologies" [2, p. 12].

Scientists M. Alhassan and I. Adam justify the essential role of ICT in the quality of life of society, taking into account the prevalence of these technologies in everyday life, and also try to identify the impact of ICT on improving the quality of life and digital inclusion both at the level of an individual country and at the global level [1]. D. Ma and Y. Ma attempt to test whether the digital economy improves the quality of life of members of society and whether the impact of the digital economy on the quality of life varies depending on the level of its development. The conclusions drawn have proven that reducing the gap in the incomes of members of society is a mechanism by which the digital economy contributes to the improvement of the quality of life. And the "marginal impact" of the digital economy on the quality of life is non-linear and growing [10].

At the same time, scientists C. Xu, W. Zhao, X. Li, B. Cheng, and M. Zhang base their research not only on the importance of digitalization processes for humanity and the economy but also pay attention to the ecological side of these trends. They study the impact of the digital economy and changes in quality of life on carbon emissions, and find that the growth of the digital economy improves the quality of life for members of society while mitigating the impact of quality of life on carbon emissions [16].

In turn, researchers from China Y. Ma, J. Shui, and Y. Li studied the question of

whether digital infrastructure can improve people's well-being and quality of life, based on the practical experience of an experiment conducted in 220 cities in China, where a pilot project operated in the 2011–2020 “Broadband in China” program. As a result, scientists managed to find that the construction of modern digital infrastructure significantly improves the quality of life of the country's citizens, which is strengthened by increasing the level of the digital economy, intensifying the use of innovations, and developing progressive forms of entrepreneurship [11].

Investigating the opportunities and challenges for the modern economy from digital transformation, Spanish scientists A. Botti, R. Parente, and R. Vesci [3] emphasize changes in the social sphere and human well-being, which are also inevitable. In addition, the Italian P. Magliocca [12] with his partners in the scientific project KA2 “Teaching digital entrepreneurship” examines digital transformations in industry, transport and logistics, medicine and education, the financial sphere and state governance, which, as we can see, also affects various aspects of life of a person in the modern digital space. In addition, the Austrian D. Herold [5] focuses on the digital infrastructure and innovation ecosystem, with the help of which the mentioned spheres and industries will be able to function for the benefit of people and contribute to increasing the level of their digital quality of life.

Worthy of attention is the work of Indonesian researchers S. Hidayat, M. Setiawan, F. Rohman, and A. Hussein, who in their work find out how to increase a company's competitive advantage through the development of digital innovations that optimally use company resources to improve business performance. Scientists give a number of management recommendations “for provider companies regarding the optimal priority of using company resources for the development of digital innovations in order to increase competitive advantage and improve business efficiency” [6] and are convinced that they are able not only to have a positive impact on the activities of business structures, but also to improve the quality of society's life in conditions of digitalization.

In our previous scientific works, we have already investigated the role of digitalization in the innovative development of the country and ensuring its economic strength [7; 8]. Those transformations in the economic and social life of countries that occur in connection with the introduction of advanced digital technologies, products, and solutions in various spheres and industries are accompanied by both a number of institutional changes and innovations at the legislative level. This affects all spheres of life of people as members of society, entrepreneurs, and representatives of state authorities at various levels. On the one hand, all of them are participants in digital transformations in the country, which create new potential opportunities for a better life for citizens, facilitate business and ensure transparency in the performance of duties by public officials, and also stimulate the emergence of an impulse for economic growth.

However, on the other hand, digital changes have become prerequisites for the appearance of digital gaps and disparities in development. Therefore, it is extremely important and urgent to analyze the estimated values of the digital quality of life in a timely manner, which will allow authorities and management to have complete and up-to-date data in order to make balanced decisions taking into account the challenges and opportunities of today, as well as to develop effective mechanisms for the rapid and comprehensive implementation of digital technologies in everyday life of people, business, public administration, etc. Taking into account the trends of changes in the digital quality of life will help to focus attention on the problematic aspects of the strategic development of the economy in the conditions of digitization in order to enter the global digital space as well as minimize the likelihood of adverse institutional risks and obstacles. That is why we consider it expedient to carry out a deep and comprehensive study of the level of digital quality of life in Ukraine by category with the aim of developing a number of expedient and urgent tools for increasing the

effectiveness of digital transformations.

Task statement. The purpose of the article is to study the dynamics of changes in the rating of Ukraine according to the Digital Quality of Life (DQL) Index in 2021–2023, taking into account the causes and consequences accompanying such changes; construction of a heat map of Ukraine in terms of categories of the DQL Index 2021–2023 in order to identify strong positions, problem areas and hidden potential of the country in digital transformation; development of recommendations for increasing returns, social and economic effects from the introduction of digital technologies and solutions to improve the digital quality of life in society.

The scientific substantiation of the ideas and arguments put forward in the article requires analytical confirmation, and therefore, a comprehensive the DQL Index was used for this purpose, demonstrating the factors influencing the digital well-being of a country and the areas that should be prioritized for future improvement. The DQL Index is the result of a study by the Dutch cybersecurity company Surfshark, which evaluates countries according to five principles: Internet accessibility, Internet quality, e-infrastructure, e-security and e-government. The use of this index makes it possible to achieve methodological accuracy and reliability in the course of scientific research.

To achieve the goal, methods of analysis and synthesis were used, which made it possible to carry out a deep and comprehensive review of the dynamics of changes in the rating of Ukraine according to the DQL Index in general and by category in 2021–2023. The use of the comparison method made it possible to build a heat map of the rating of Ukraine according to the DQL Index in 2021–2023 and to substantiate the reasons for the identified changes and their consequences for the country's economy and the nation's well-being. The generalization method made it possible to propose a number of practical solutions on the basis of the conducted research, the implementation of which will allow the path of digital transformations in the economy and society to be easier and safer, and will allow to significantly improve the digital quality of people's lives.

Results. Digital changes in the economic, social, political, and public life of the country that are taking place today are accompanied by changes in the digital quality of life of its population. Ideally, this should bring us closer to the digital phenomenon, where, on the one hand, the population will be able to expand their access to services and public services, receive more useful and reliable information, have a chance for barrier-free, inclusive, impartiality, transparency, reduce the likelihood of manipulation and corruption, on the other hand, the population will have the opportunity to optimize their time by receiving many services remotely with the help of electronic services, will be able to save on their expenses and control them. However, in reality, the state of affairs is not always predictable and with positive effects.

This is due to the fact that in developed countries of the world, digitalization really has a significant effect on the growth of the population's well-being and the improvement of the digital quality of life. However, developing countries are deprived of this due to the fact that there are imbalances between the low standard of living and well-being of the population and the high cost of digital products and technologies, digital gaps between individual regions and cities are becoming extremely noticeable, income polarization is occurring, and the average is practically absent class of society, digital and information literacy of the population is at a low level, social tension is growing, the level of cyber threats and fraud in the virtual world is becoming extremely high. Let's try to figure out what kind of situation has developed in Ukraine with the state of the digital quality of life of the population, especially considering the conditions of martial law in the country.

The active use of various digital and information technologies in the world today in everyday life, business, public work, and state governance shape both the digital life of

society and new levels of economic prosperity. This makes it possible to study the issue of “digital well-being”, which is closely related to general well-being. But when it comes to safe, inclusive, and reliable access to the virtual world and its services, products, and platforms, not all countries have the same privileges and opportunities, which creates the prerequisites for a digital divide and digital prosperity [14].

The overall rating of the country according to the DQL is formed on the basis of five elements (Internet availability, Internet quality, electronic infrastructure, electronic security, and electronic government), each of which plays its role in creating comfort and safety for every citizen of the country, economic entity, and state bodies and institutions (Fig. 1). Up to and including 2021, Ukraine had positive dynamics to improve both the overall the DQL Index (47th place in the global ranking) and the breakdown of categories. However, since 2022, when the full-scale military aggression against Ukraine began, the position of our country in the world rating of the DQL has significantly decreased.

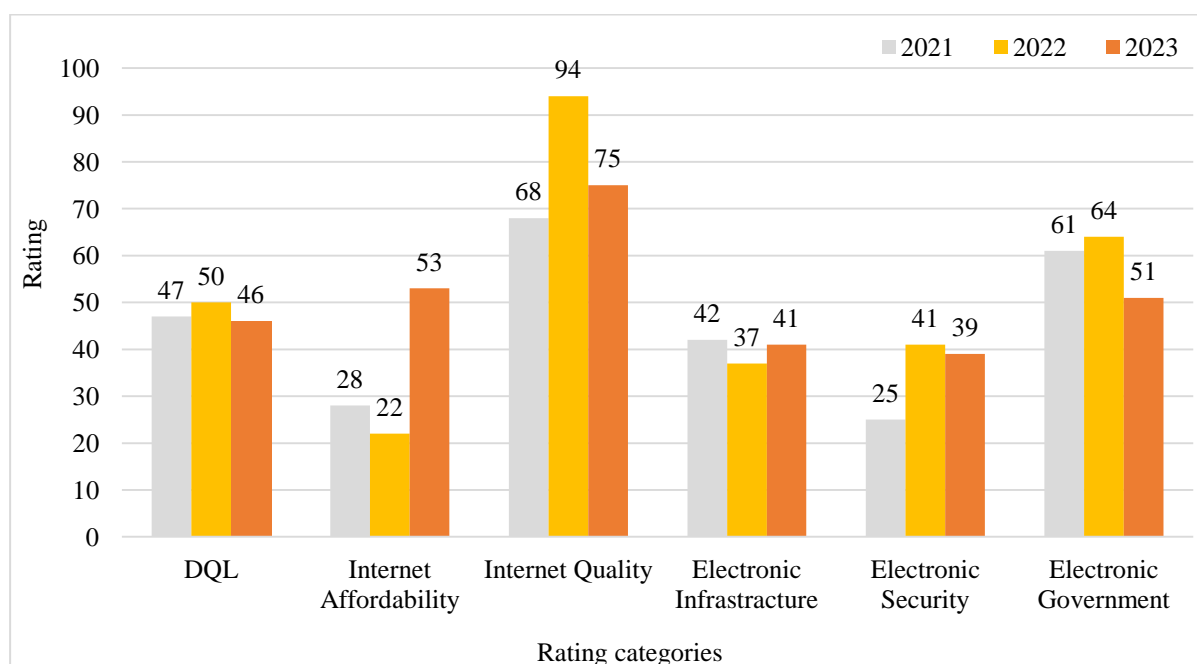


Fig. 1. The dynamics of changes in the rating of Ukraine according to the DQL Index and by its categories in 2021–2023

Source: built on source [4].

Already in 2023, the DQL index of Ukraine not only reached the pre-war period but also surpassed it by 1 position – Ukraine became 46 among the countries of the world represented in the rating. Of course, this required the mobilization of significant internal reserves and the search for new opportunities in efforts to be a digital and innovative state despite all the difficulties and negative external influences. The international support of partners, who provide material and technical support for the restoration and strengthening of Ukraine’s digital infrastructure, direct additional funding, and strengthen the country’s human resources through training and consultation of Ukrainian specialists for the rapid recovery, modernization, and digitalization of life in Ukraine, also played a role here.

A particularly noticeable role in improving the DQL in Ukraine in 2023 was played by a fairly effective electronic infrastructure, which rose by 1 position compared to 2021, and in 2023, Ukraine already occupied 41st place among the countries in the world ranking (Fig. 1). Although insignificant, it was still possible to strengthen the country’s electronic security in 2023 – Ukraine became 39th in the global ranking, although it was 41st in 2022. At the same

time, constant cyber-attacks, the growth of hacking, and fraudulent actions in the virtual space do not allow Ukraine to reach the pre-war 25th place. The continuation of the active activities of the Ministry of Digital Transformation of Ukraine in the context of the digitization of administrative services for the population and business in 2021–2023 was marked by some successes, which allowed Ukraine to take 51st place in 2023 in the DQL rating in the “Electronic Government” category, although in 2021 and 2022, the country was 61 and 64, respectively (Fig. 1).

Availability and quality of the Internet still remain problematic aspects in ensuring a high level of digitization in Ukraine. If, at the beginning of 2022, Ukraine took 22nd place in the global ranking, then in 2023 it will only take 53rd place, i.e., a decrease of 2.5 times. This is primarily due to power outages, destruction, and damage to telecommunication networks as a result of active military operations on the territory of the country. As a result, the quality of the Internet is also far from ideal – in 2023, Ukraine took 75th place in the global ranking, and in 2022, it was 94th overall. Even using all their technical capabilities, Internet providers and mobile operators are unable to solve the problem of accessibility and quality of the Internet because in addition to the continuation of the aggressor’s constant attacks on the civilian population of Ukraine, the wartime conditions also caused a significant decrease in the population’s well-being and their purchasing power.

Given the decrease in Internet availability in Ukraine in 2023, let’s find out the reasons for such trends (Fig. 2). First of all, we are talking about a significant extension of the working time of companies and specialists in providing access to the cheapest broadband Internet (at the beginning of 2022, Ukraine was in 44th place in the global ranking, and in 2023 it will be only 81st), as well as operators that provide the cheapest mobile Internet (at the beginning of 2022, our country occupied the 14th position among those presented in the DQL rating, and in 2023 it dropped to 30th place).

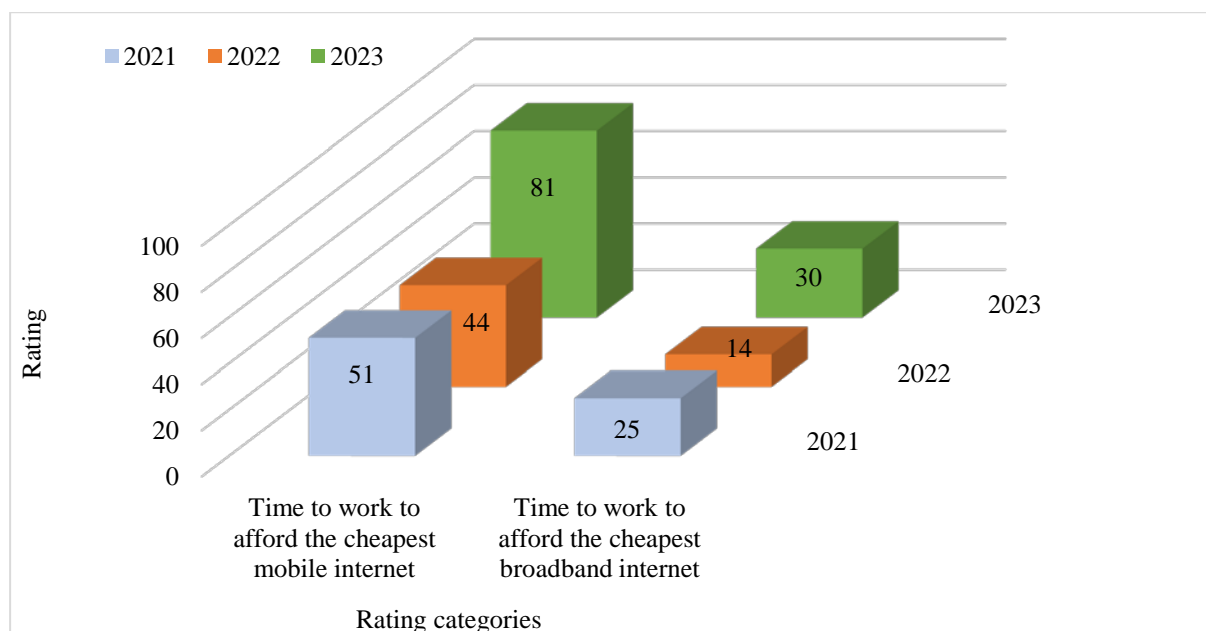


Fig. 2. The dynamics of changes in the rating of Ukraine according to the DQL Index in the section “Accessibility of the Internet” in 2021–2023

Source: built on source [4].

Speaking about the influence of modern information technologies on improving the quality of life in society, researchers R. Atkinson and D. Castro primarily consider: in the field of education – improvement of learning outcomes and the implementation of several

learning styles at once (face-to-face, distance learning, mixed), expanding access to education at acquirers; in the field of health care – reducing costs and expanding access to medical information, improving the quality of medical care and expanding access to it; in public safety – protection from crimes, reduction of thefts, avoidance of unforeseen losses, inclusiveness of vehicles; prevention of accidents, expansion of accessibility and inclusiveness for people with disabilities, improvement of quality and opportunities for recreation and entertainment, availability of information and increase of its level of reliability [2].

Internet accessibility indicators (Fig. 2) are marked by a downward trend, but given the wartime conditions in Ukraine, they are quite good and are able to provide citizens with both access to the World Wide Web and communication in the middle of the country. The quality of the Internet in Ukraine in 2023 compared to 2021 also decreased significantly (the country fell from 71st position to 95th position on the DQL index) (Fig. 3).

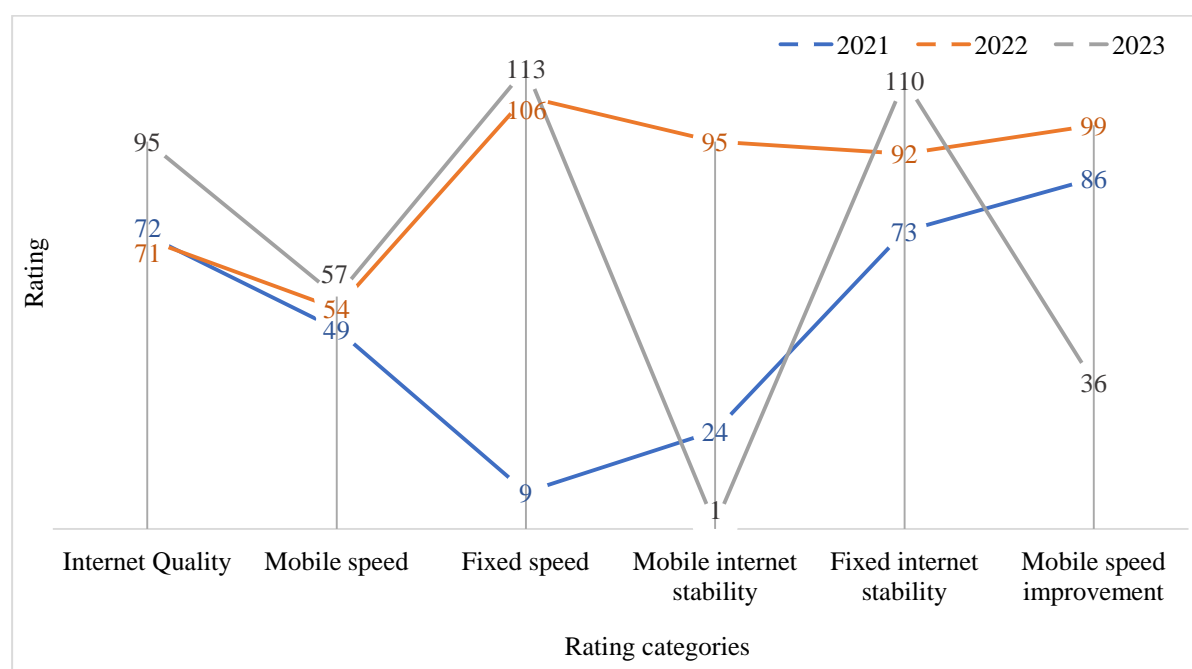


Fig. 3. The dynamics of changes in the rating of Ukraine according to the DQL Index in the section “Quality of the Internet” in 2021–2023

Source: built on source [4].

This happened mainly due to a decrease in mobile speed (in 2021, Ukraine ranked 49th, and already in 2023, it became 57th), and deterioration of fixed Internet stability (from 73rd position in 2021, Ukraine moved to 110th place in 2023). However, the decrease in fixed Internet speed had the greatest negative impact, since in 2021 Ukraine was among the leading countries in this subcategory in the DQL rating and ranked 9th, but already in 2023 it fell to a distant 113th place, which was a consequence of the armed conflict on the territory of the country, the forced displacement of Ukrainians to other regions of Ukraine and beyond, as well as the destruction and damage of a significant part of telecommunication networks.

In Table 1, we made an attempt to visualize the heat map of the rating of Ukraine according to the general index of the DQL and by category in 2021–2023, which makes it possible to track the weakest points in the digitalization of social life in the country recently, as well as to track those positions that it is possible to keep it at a stably high level and strengthen it. Thus, the best positions of Ukraine in the categories of the DQL in 2021–2023 among the studied countries of the world are marked in green (in 2023, 121 countries were included in the rating). We see that in 2023, Ukraine was the world leader in the stability of

the fixed Internet. According to the stability of the mobile Internet in 2022–2023, Ukraine, unfortunately, was in an extremely bad position (red color) – 106th place in 2022 and 113th in 2023. This was a consequence of the military aggression that has been ongoing in Ukraine since February 24, 2022, which significantly damaged the telecommunications infrastructure that provided stable and reliable Internet to subscribers.

Table 1

Heat map of the rating of Ukraine according to the DQL Index and by category in 2021–2023*

DQL rating by category	2021	2022	2023
DQL Index	47	50	46
<i>Internet availability</i>	28	22	53
Time to work to afford the cheapest mobile internet	51	44	81
Time to work to afford the cheapest broadband internet	25	14	30
<i>Internet Quality</i>	68	94	75
Mobile speed	72	71	95
Fixed speed	49	54	57
Mobile internet stability	9	106	113
Fixed internet stability	24	95	1
Mobile speed improvement	73	92	110
Fixed speed improvement	86	99	36
<i>Electronic Infrastructure</i>	42	37	41
Individuals using the internet	18	18	21
Network readiness	61	51	48
<i>Electronic Security</i>	25	41	39
Cybersecurity	25	24	24
<i>Electronic Government</i>	61	64	51
Online Service	69	69	33
AI readiness	54	60	58

Source: built on source [4].

*Dark green indicates a country's high position in the DQL Index categories; light green indicates a country's position in the DQL Index ranking is above average; yellow indicates a country's position in the DQL Index ranking is mediocre; light orange indicates a country's position in the DQL Index ranking is below average; dark orange indicates a country's position in the DQL Index ranking is low.

Nevertheless, the dynamics of mobile Internet stability are interesting, because from 95th place in 2022, Ukraine became the leader in 2023 and took 1st place (Fig. 3). This seems extremely strange given the current military and political situation in the country, but the country's government, even at the legislative level, obliges mobile operators to guarantee stability. For example, S. Pribytko, head of the direction of mobile Internet development at the Ministry of Digital Transformation, notes that at the beginning of 2024, "by the decision of the Commander-in-Chief, it was instructed to equip mobile communication stations with batteries or generators so that they could maintain the network for 10 hours during fan power outages" [17]. However, no mobile operator in Ukraine is currently able to 100% comply, with the resolution of the National Center for Operational and Technical Management of Telecommunications Networks, according to which, by February 1, 2025, companies must equip their base communication stations to guarantee 10 hours of network operation without light.

The representative of the Ministry of Digital Transformation S. Pribytko notes that "If the operators do not have time to reach the level of energy security in time by February 1, then the regulator of the field of electronic communications will conduct state supervision regarding the implementation of the decisions of the NCU regarding the sustainability of networks during fan outages or emergency outages" [17].

In order to restore economic activity in Ukraine, as well as revitalize the economic activity of business representatives, a developed and stably functional electronic infrastructure is extremely important. In Fig. 4, we can see that in 2022–2023 the work of the country's electronic infrastructure is marked by noticeable negative processes, if at the beginning of 2022, Ukraine was 37th in the global ranking of the DQL, then in 2023 it was already 41st, and unfortunately, such dynamics will continue to be observed. The reason for this was, in particular, the fact that the number of people in Ukraine who use the Internet has decreased.

According to the data of the UN Agency, since February 24, 2022, more than 6.6 million people have left the country and become war refugees in EU countries and other parts of the world [18]. However, in 2023, the indicator of network readiness for the development of the electronic network improved somewhat, and if in 2021 Ukraine ranked 61st in this category in the Digital Quality of Life rating, then in 2023, it became 48th.

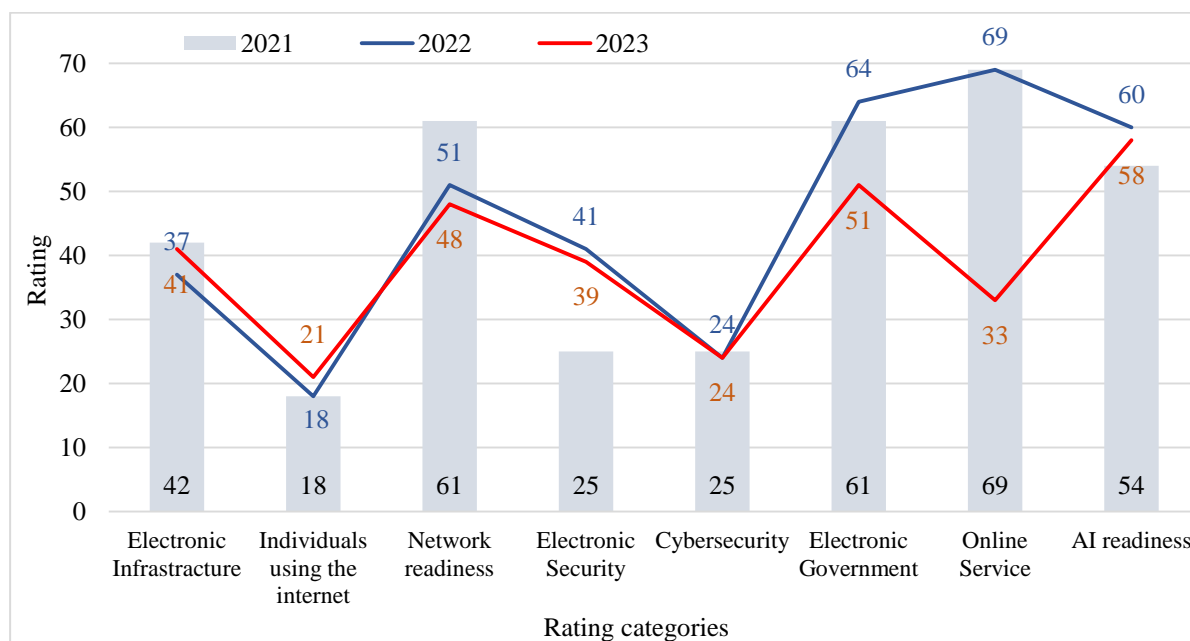


Fig. 4. Dynamics of changes in the DQL Index of Ukraine by e-infrastructure, e-security and e-government categories in 2021–2023

Source: built on source [4].

The success of a business and the stability of its activity now largely depends on the level of electronic security. It affects not only business representatives but also ordinary citizens of the country, their comfort and safety in the virtual space. And if, in 2021, Ukraine ranked 25th in terms of electronic security in the DQL rating, then in 2023 the country became 39th (Fig. 4). At the same time, in Fig. 4, we see that a lot of specialists are doing to strengthen cyber security in Ukraine (in 2023, the country was 24th in the ranking). In order to simplify and expand the access of businesses and citizens of the country to public services, to comply with the principle of inclusiveness, ease and speed of communication with representatives of state institutions and institutions, a lot of effort is being made to improve e-government (despite the wartime conditions, Ukraine in 2023 took 51st position by the level of e-government among 121 countries represented in the DQL rating). Special attention is being paid to the development of various online services (according to this indicator, Ukraine became 35th in 2023 compared to 61st place in 2021), as well as the readiness to implement AI technology (58th position of Ukraine in 2023).

Today it is becoming clear that the digital transformation of economic and social life in the country not only creates new opportunities and positive effects but is also a source of new

challenges and digital gaps. In order to make the path of digital transformation as safe and easy as possible in the country, we consider it expedient to implement the following:

1. To promote the digital development of small cities and settlements of the country with the aim that they reach the level of digital development centers, in particular in the field of medical care, education, gaining access to cultural, tourist, administrative, housing, communal, transport, and information services. For this, it is worth starting the implementation of projects for the training and education of specialists in the digital optimization of urban planning and management, which will help to create unique urban agglomerations with digital communities capable of improving both the well-being of residents and contributing to the growth of their digital quality of life.

2. Consolidate at the state level the need for mandatory express courses on cyber security and digital literacy of the country's population, including preschoolers, schoolchildren, and the elderly. This will help not only to raise the general educational level in the country in the field of ICT use, media literacy, and the acquisition of digital competences, but it will also contribute to the protection of citizens of all ages in the virtual space from fraudsters and cybercriminals.

3. Stimulate the creation and active implementation of digital innovations in various spheres of socio-economic life in the country, which will help overcome digital inequality at the institutional level, increase the level of digital competitiveness and innovativeness, strengthen social and environmental guidelines at the corporate level, stimulate the development of intellectual capital, improve technical technological potential of the country, develop digital infrastructure.

4. To develop ICT and implement it in various sectors of the economy, industry, and the social sphere of citizens' lives. This will ensure the balance of regional development, optimization of labor productivity, and close interaction between the state and private economic agents.

A high level of digital quality of life in the country, both in general and by category, in the current conditions of deep institutional changes in Ukraine, digital transformations in the economy and society are of great importance. It stimulates the rationalization of the use of labor resources, optimizes production costs, automates routine work, minimizes the probability of risky situations and the occurrence of unforeseen events, and helps to make reasonable and innovative management decisions. The deep penetration of digital products and technologies into various spheres of social and economic life of society is a modern driver of improving the quality of life, well-being and digital literacy of the country's population; a significant step towards openness, transparency and the growth of trust in relations between the state and its citizens; inclusiveness and accessibility to benefits and services regardless of age, gender, physical data, place of residence and social status.

Conclusions. From the conducted research, we can conclude that, today, the quality, comfort, and safety of life of members of Ukrainian society increasingly depend on the level of development and availability of modern advanced ICT and digital products. They form new habits, develop digital abilities, transform traditional ideas about the quality of life and, at the same time, become an integral part of educational and professional activities, realization of their creative ideas, leisure, and everyday life. The actively developing digital environment is focused on ensuring information equality, cyber security, digital literacy, and inclusiveness (equal access to information, educational and medical services, transport and social sphere, work and leisure for citizens of different ages and status - youth, pensioners, women, war veterans, and persons with disabilities).

The latest solutions provided by digital technologies affect various aspects of the modern life of members of society and, in particular, this is manifested in the following: the use of AI technology in video surveillance systems allows to strengthen protection and safety

at work, at home, in public places and in transport; digital remote control products help to balance the time a person spends on work, life and rest; road cameras and automated traffic management systems increase traffic safety, reduce time spent searching transport routes and optimize logistics routes; the variety of social platforms and networks creates opportunities for free, round-the-clock and remote communication with relatives, relatives, colleagues, acquaintances; big data and cloud services provide storage, fast processing and transfer of data; getting the opportunity to remotely participate in a number of cultural and religious events, save time when receiving tourist services, etc.

Of course, digital products and technologies not only create new opportunities and diversify people's lives, they are also a source of new challenges and risks for humanity (the negative impact of electromagnetic radiation from technical devices and machines on people's health, the possibility of a decrease in social adaptability and openness due to remote communication/jobs/education, cyber threats). However, if the proper foundation is provided (institutional and legislative framework, favorable investment climate and adequate financing, support of private-public partnership, development of human capital, development of Industry 5.0, technical and technological development, innovative ecosystem), then the negative impact of advanced technologies can be significantly minimized and stimulate so that their impact on the digital quality of society's life is positive. We consider it necessary to conduct further scientific research in the direction of strengthening the institutional base of digital transformations and restoring the economy of Ukraine on the basis of innovation and inclusiveness.

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