

UDC 330.34

JEL Classification: L1, O3, F1

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THE IMPACT OF DIGITAL TRANSFORMATION ON MODERN GLOBAL LABOR MARKET TRENDS

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The article examines the current trends in digital transformation at the state and international levels and highlights the use of blockchain technology in various economic models. The impact of the COVID-19 pandemic on the process of digitalization of enterprises was analyzed and it was proved that the pace of digitalization has increased several times, changing the structure of the labor market. The main threats to the implementation of digitization tools were characterized, which are associated with significant costs for technology, the risk of unsuccessful implementation of professional management policy, insufficient government support, the level of competition, etc. Trends in changes in costs, revenues and the number of users of digital transformation services and tools were studied by conducting a correlation analysis and creating a regression model. The main advantages of digital transformation were considered, including: improving the quality of products and focusing on the creation of an ecological product; adaptation to variability; acceleration of market penetration; improvement of operational efficiency, etc. The scientific novelty consists in the study of the impact of blockchain technologies, artificial intelligence, the Internet of Things on the world market by analyzing empirical data to form global trends, opportunities and threats arising from the implementation of such technologies by companies and consumers, which also provokes the study of social consequences, among which: the impact of technology on employment, privacy and security, exploring practical ways to mitigate the negative effects of digitization while maximizing its benefits for the global community. The practical value of the research lies in the promotion of the modernization of the digital activities of Ukrainian enterprises, taking into account world trends and forecasts in the conditions of martial law, overcoming the consequences of the COVID-19 pandemic and the European integration process.

Keywords: digital transformation, global trends, labor market, innovation, digitization.

DOI: 10.32434/2415-3974-2022-17-1-165-172

Introduction and formulation of the problem

The process of digital transformation is a continuation of the penetration of information and communication technologies, a large array of data and cloud technologies into society, which led to the creation and development of a modern socio-economic model that optimizes the structure of the economy and increases labor productivity. Such a transformation has a direct impact on the functioning of national economic systems, while changing approaches to the formation of their competitiveness.

At the heart of digital transformation are three main aspects, among them: technology, data sets and business models. In turn, the framework of digital transformation includes seven closely related dimensions: access; using; innovativeness; social welfare; labor market; trust; market openness. Therefore, the relevance of the research topic is due to the development of the digital economy, which causes transformative transformations in all segments of the financial market, stimulating the transition to a new technological system.

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The impact of digital transformation on modern global labor market trends

The further development of digital transformation at the global level is promising, which will be based on the construction of a "smart society", "smart enterprises" and the transformation of the state into a digital one, which together will contribute to the formation of an integral array of quality services in various spheres of activity. Such a model should adapt to the operational implementation of innovations; increasing the level of financial literacy; effective functioning of new paradigms of public administration; active penetration of citizens to influence the processes of digital transformation and control their actions by the state.

Analysis and research of publications

Despite the fact that the level of interest in the topic of digital transformation began to grow noticeably only in the first decade of the 21st century, the concept of digital transformation dates back to the end of the 20th century with the appearance of the first published research. The study of the problem of the digital economy is a topical topic in the works of domestic and international scientists. Various approaches to defining the concept of "digital transformation", which generally do not contradict each other. Such scientists as: S. Brennan, D. Kreiss, M. Hammer, D. Chambi, S. Berman, G. Westerman, S. Kalme, D. Bonnet, D. Mazon and others. In their works, scientists offer an expert view on the exact definitions of the concept of «digital business» and its general characteristics, however, the cited studies, based on the fact that the transformation process is quite fast, do not always fully reveal the full essence of these concepts.

The analyzed works have high practical significance and are relevant for the study of transformational processes at the global level, however, scientists lack the concept of digital transformation of the enterprise, digital business processes, etc. This is due to the anticipatory nature of the digitization process, which confirms the relevance of the chosen topic and the need to research advanced trends in this issue.

Purpose of the article

The purpose of the article is related to a practical generalization of the aspects of digital transformation in the context of its influence on the world trends of the modern market by conducting a statistical analysis with correlation-regression forecasting, followed by a systematization of the identified features and a study of their place among national economic systems.

Presentation of the main material

The basis of the development of the process of digital transformation and virtual assets is the

blockchain – a multifaceted technology that at the current stage of development continues to find its effective application in various industries, as decentralization and transparency form a platform for the creation of a new economic model "from person to person" (P2P economy). At the state level, blockchain eliminates or significantly modernizes such institutions as tax and customs declaration, business certification and licensing, voting and referendums, etc. At the interstate level, such technology will make it possible to make a qualitative leap in the functioning of supranational integration associations, building a common social and work environment for citizens, including the provision of a common pension, labor, tax space, identification of subjects, formation of free trade zones.

Thus, one of the areas in which the blockchain stimulates transformational changes is the distribution of energy, because it becomes possible to completely decentralize its production and consumption. For example, Australian company Power Ledger, through its blockchain-based distributed energy platform, allows energy to be bought and sold without a centralized utility provider. MyBit, a blockchain-based platform that "connects" investors to future projects, allows for the "democratization" of ownership of machines and the income associated with these streams, instead of allowing them to be controlled by centralized financial institutions. The platform applies to drones, smart homes, autonomous cars, 3D printers, and more. Another platform, Slock.it, has developed a «universal public access network» based on blockchain technology, which includes a set of mobile and desktop applications for finding, buying and managing any intellectual property from anywhere in the world.

The above companies act as market makers (active market participants), accelerating the processes of transformational development, giving it an impetus to move to a qualitatively new level. Based on the complexity of this technology, it can be concluded that it will take a long time for most of these and other innovative solutions to become widespread, but today it is possible to assess the blockchain as a potential for modernizing the economy.

One of the main reasons that had a significant impact on the further development of the digital transformation process was the COVID-19 pandemic, which accelerated the digitization of enterprises several times. Europe experienced the highest growth rates, where the growth rate in 2020 compared to 2019 was 71.9% compared to Asia Pacific (65.6%) and North America (58.4%). In

general, the corresponding growth rate worldwide was 61.1%, which indicates that the progress of digital transformation due to the COVID-19 crisis accelerated by an average of 3 years. Currently, 51% of digital transformation efforts are related to business growth opportunities. In turn, 75% of the world’s enterprises, thanks to the implementation of digital technologies during the COVID-19 pandemic, had the opportunity to fill technical vacancies [1].

Despite the higher rate of growth in the aspect of active digitization of companies in Europe, it is more difficult for European companies that had a low level of implementation of digital technologies in their activities to reach a new level of digitization, which is confirmed by the statistical information shown in Fig. 1. First of all, this is due to the significant level of costs faced by organizations implementing digital transformation tools in their activities. 28% of European companies consider digital transformation to be expensive based on the fact that approximately 40% of enterprise technology costs are accounted for by digital transformation [1].

In September 2020, the European Commission published a draft regulation on crypto-assets, the so-called regulation of markets for crypto-assets (MiCAs). As a regulation, MiCA will have direct effect in all EU member states, while creating a single EU-wide set of rules for cryptocurrencies and other digital assets. It contains measures to achieve objectives such as transparency, disclosure, authorization and oversight of transactions for the distribution, issuance and trading of crypto and digital assets. This aims to create comprehensive consumer protection while at the same time establishing measures against criminal activities such as market

manipulation, money laundering and terrorist financing in all European countries.

MiCA sets strict rules for the authorization and licensing of financial intermediaries and will therefore have the greatest impact on issuers, service providers and trading platforms, which, however, serves the interests of achieving a secure crypto-financial market throughout Europe. Measures such as increased information requirements to inform potential buyers about the characteristics, functions and risks of crypto-tokens and digital assets are detailed.

MiCA also contains rules on capital requirements for holding assets and a mandatory complaints procedure available to investors. Issuers of cryptocurrencies backed by significant assets will be subject to stricter requirements, such as capital requirements, investor rights and oversight. For small companies and fintechs, these provisions can cause certain disadvantages. In Europe, where the market has been largely unregulated to date, companies face high costs, for example through the acquisition of licenses or costs incurred in relation to reporting requirements or secure IT infrastructure. Therefore, it can be predicted that the regulation will make it difficult for cryptocurrency issuers to enter the market.

Spending on digital transformation technologies and services around the world continues to grow annually (Fig. 2). The global digital transformation market is forecast to grow to \$1009.8 billion by 2025. Investments in digital transformation will reach \$7 trillion in 2023 as companies develop new approaches to digitize their products and services [1]. Thus, by 2025, \$100 trillion is projected to be added to the economy through digital transformation, which is likely to account for more than 50% of GDP.

At the same time, the profitability trend in the

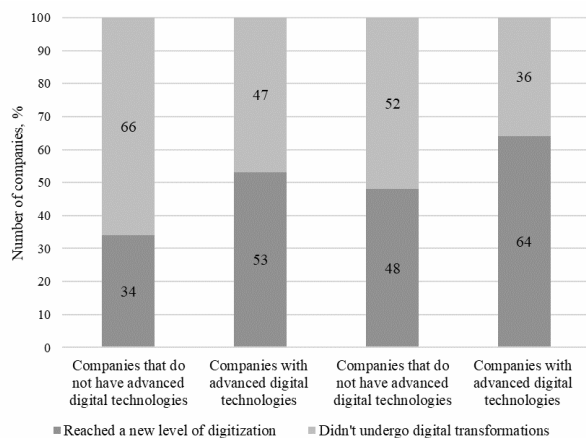


Fig. 1. The impact of the COVID-19 crisis on the digitization of various types of companies

Source: [2]

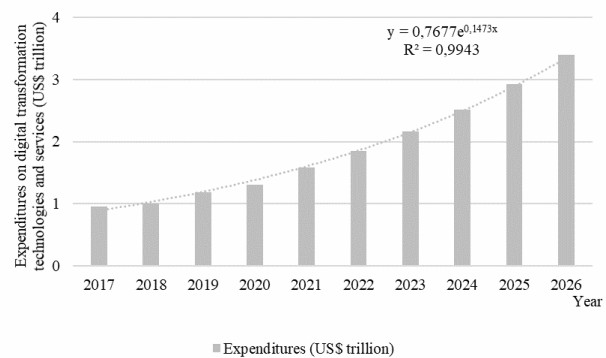


Fig. 2. Forecasting the costs of digital transformation technologies and services

Source: [1]

industry under consideration is also subject to changes. The average revenue per user in the digital asset segment will be \$134.40 in 2023 [3]. In terms of global comparison, the highest revenue will be achieved in the United States (\$23,720.00 million in 2023). The revenue of the digital assets segment is expected to reach \$46,240.00 million in 2023, with a CAGR of 15.07% (CAGR 2023-2027), leading to a forecast total of \$81,080.00 million until 2027. In 2020, there is a sharp increase in the income of both cryptocurrency (up to 478.1%) and NFT (up to 2,160.7%). The highest value of income is observed in 2021 with an increase of 7.466%. The trend shown in Fig. 3 also reflects the impact of the Russian-Ukrainian war on the market. So, in 2022, there is a decline in the income of both cryptocurrency and irreplaceable tokens to 5.2%.

The development of the process of digital transformation, the change in trends in generating income and incurring costs in the relevant industry allow us to come to a conclusion about the change in the number of users involved in the processes of digital transformation and virtual assets, which is also influenced by the level of digital development of the country where the users are located. Estimates of crypto asset adoption in each country show that the largest share of crypto asset users and owners are found in countries such as Nigeria (31.9%), Vietnam (21.1%), Philippines (19.8%). In such developed countries as the USA, Switzerland, the Netherlands, the UAE, Canada, Great Britain, the share of users reaches only 5.1-10%. This type of asset was the least popular among residents of Denmark, Sweden and Japan, where the share of such users reaches 4.5% [3].

According to data from the European Investment Bank, from 2021 Finland and Malta are

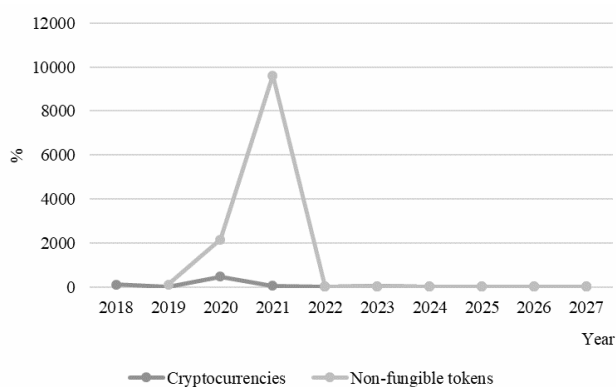


Fig. 3. Change in revenues in the digital assets segment, 2018 – 2027

Source: [3]

considered to be the most digital countries. Denmark, Austria, the Netherlands and Sweden also have high indicators [3]. According to EIBIS indexing of corporate digitization, among the EU countries, the Czech Republic had the best indicators for certain categories of development (for the use of advanced digital technologies); Finland (for digital infrastructure and use of strategic business monitoring); Austria (for the spread of digitalization during the pandemic); Cyprus (for investment in software); Sweden (for investing in digital technology training for employees) [4].

User penetration will be 4.5% in 2023 and is expected to reach 5.2% by 2027. It is also expected that by 2027, the number of users in the digital assets segment will reach 412.18 million people. Since 2018, the number of cryptocurrency users has been growing: in 2019, the increase is 75.5%, in 2020 – 65.2%, in 2021 – 38.2%. At the beginning of 2023, 293.67 million cryptocurrency users were registered, and by 2027, their number is predicted to grow by 18.5% to 348 million [3]. If up to 1 million NFT users were registered by 2021, then in 2021 there is a sharp increase to 36 million, and in 2023 their number reached 50 million (Fig. 4). At the same time, a slight increase of 3-10% is predicted over the next four years. The increase in users can be attributed to improved financial literacy of the population in developed countries, greater access to digital resources and tools, and digitization.

Despite a number of advantages and the need to implement digital technologies in the work of modern enterprises, digitization does not guarantee companies success. According to statistics, 70% of digital initiatives of enterprises are not implemented, which is mainly due to the unsuccessful management of such strategies. Therefore, it is important to have a professional management policy in the middle of the organization, which should be based on business

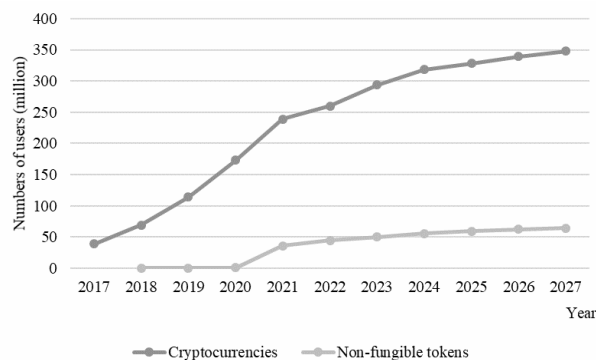


Fig. 4. Number of users of digital assets, 2018–2027

Source: [3]

strategy, customer experience, employee suggestions, etc. [5]. In addition, the key to the implementation of a digital strategy is having the expertise to lead digitalization initiatives. Currently, 78% of CIOs say that engagement with the board of directors has increased several times, and 67% of CIOs say that creating new profitable initiatives is their job responsibility.

Thus, the ability of enterprises to implement digital transformation technologies in their activities is influenced by: the size of the company; its current technical equipment, as well as the level of development of digitalization at the state level. Larger organizations are more likely to digitize their business. Therefore, government assistance to European companies to expand their business and ensure accessibility regarding the possibility of implementing digital transformation tools in various types of enterprises is becoming relevant. At the same time, the activity of implementing digital transformation is also influenced by the industry in which the company operates. Another difficulty that organizations may face in the process of digitization is the fact that some technologies are quite complex and bulky, which causes the process of adapting to changes to be longer and more difficult. Sometimes, digital technologies also affect the company's human resources sector [6]. For example, during the pandemic, 93% of companies were forced to switch to remote work, changing and reorganizing the usual mode, and 62% faced an increase in customer demand for online purchases and services, which challenged enterprises to not lose the customer base, track and fulfill orders in time. At the same time, 20% are unable to quickly adapt to technological failures [2].

It is impossible to say unequivocally that digital transformation has a positive or negative effect on the labor market. On the one hand, the implementation of digital transformation tools is only possible if there are qualified specialists with a certain set of digital skills. On the other hand, digitalization is changing the labor market, replacing some vacancies with artificial intelligence work or requiring people to acquire new skills and knowledge that require a certain period of time to acquire (Fig. 5).

According to research by the European Commission, 90% of jobs will require digital skills in the next 5 years. 68% of managers are sure that successful interaction of people with AI will be the key to the future of business [4]. At the same time, 44% of people of working age in European countries do not have basic digital skills, which indicates the urgency of implementing relevant educational

programs and involvement for target groups, since the lack of this can cause a shortage of jobs. According to a survey of company leaders conducted by HBR in 2021, 84% of them are sure that new opportunities for business have appeared after the implementation of digital transformation of their activities [7]. According to a report from MIT Sloan Management, 81% of companies that have already developed digital technologies cite innovation as a top organizational strength. In turn, 43% of companies that have reached the level of financial maturity usually have a higher rate of net profit compared to other companies in the corresponding industry [8].

Digital transformation includes a number of advantages, among which the main ones can be considered the improvement of work efficiency, the ability to meet the changing expectations of customers, faster entry into the market and improvement of the quality of new products [5]. Digital companies exceed their business goals three times more often, which applies even to start-up projects (Fig. 6).

Thus, the main trends of digital transformation during 2022 – 2023 include hyper-automation, hybrid experience, distributed environment and working with big data. The process of digital transformation of Ukraine is progressing, strengthening its relevance in the conditions of European integration. According to the results of the Global Skills Report 2022 study, Ukraine took 21st place out of 100 countries in the world in the rating of technological skills, and in the rating of technological competences it took eighth place [9], which indicates that Ukrainians are gaining leadership positions at the world level in terms of work with computer networks, operating systems, databases, security engineering, programming, web development, cloud computing, and more.

An important aspect that will contribute to the further promotion of Ukraine in international

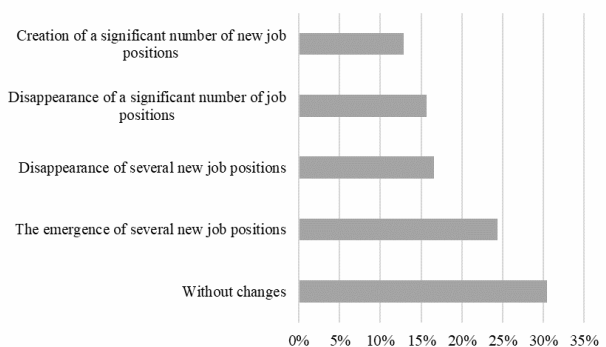


Fig. 5. The impact of accelerated digital transformation on the European market, 2021

Source: [2]

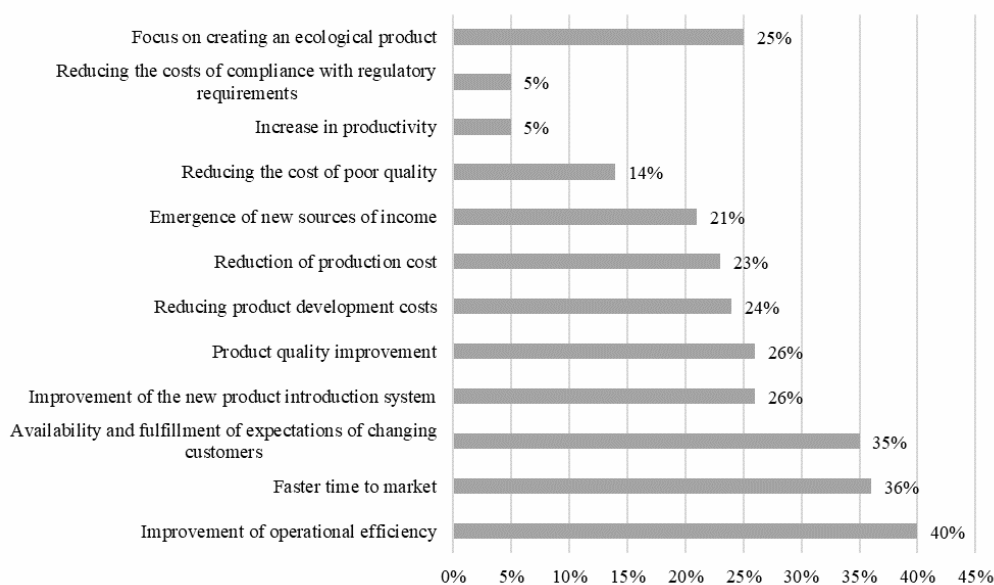


Fig. 6. Advantages of digital transformation

Source: [2]

development ratings is the level of digital literacy of the population of Ukraine. According to the data of the Ministry of Digital Transformation of Ukraine, 15.1% of Ukrainians have no digital skills at all; 37.9% have “below average” digital skills; 53% possess digital technologies at an “average” level [10]. Digital literacy of the population directly depends on the infrastructure component. The Ministry of Digital Transformation of Ukraine promotes the work to improve the literacy of the population. In addition to educational tests and recommendations, the Ministry of Digitization has issued a Digital Competence Framework for Ukrainian citizens, which contributes to the creation of state policy in this matter, helps to more specifically plan educational initiatives, which will be mainly aimed at the ability of Ukrainians to practically use IT tools and services in accordance with their personal and professional needs.

Conclusions

Digital transformation and virtual assets play an important role in the development of the modern world. Due to the rapid development of technology and changing consumer demands for products and services, companies must quickly adapt to these changes in order to remain competitive. One of the key elements of digital transformation is the use of virtual assets, such as cryptocurrencies, tokens, virtual items and others. These assets provide new opportunities to store and transfer large amounts of information, reduce transaction costs, and provide greater security for financial transactions. However,

the use of virtual assets also has its risks. Lack of regulation and lack of transparency in this sector can lead to financial fraud and loss of confidence in these assets. Therefore, it is necessary to take measures to ensure the safety and protection of investors in this sector. In general, digital transformation and virtual assets are integral elements of the development of the modern world, but they also require a responsible and careful approach to their use.

The conducted research confirmed its scientific novelty, which consists in a practical study of the impact of blockchain technologies, artificial intelligence, and the Internet of Things on the global labor market through the analysis of empirical data for the formation of global trends, opportunities and threats arising as a result of the implementation of such technologies by companies and consumers. The perspective of further research is to continue studying this topic over time, as the change and innovation of digitalization tools is quite prompt.

REFERENCES

1. Pipartners. (2021). Digital Transformation Statistics: How Businesses are Using Digital to Drive Growth in 2021 and Beyond. *www.pipartners.com*. Retrieved from <https://www.pipartners.com/digital-transformation-statistics/> [in English].
2. Finances Online. Digital Transformation Statistics: Spending, Adoption, Analysis & Data. *financesonline.com*. Retrieved from <https://financesonline.com/digital-transformation->

statistics/ [in English].

3. Statista. Digital Assets – Worldwide. www.statista.com. Retrieved from <https://www.statista.com/outlook/dmo/fintech/digital-assets/worldwide> [in English].

4. European Investment Bank. Indexing of corporate digitization. *EIB Investment Survey (EIBIS)*. www.eib.org. Retrieved from <https://www.eib.org/en/publications-research/economics/surveys-data/eibis/about/index.htm> [in English].

5. Verhoef, P. C., Broekhuizen, T., & Bart, Y. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889-901. DOI: <https://doi.org/10.1016/j.jbusres.2019.09.022> [in English].

6. Plekhanov, D., & Franke, H. (2022). Digital transformation: A review and research agenda. *European Management Journal*. DOI: <https://doi.org/10.1016/j.emj.2022.09.007> [in English].

7. Harvard Business Review (2021). What does it mean to be a manager today? hbr.org. Retrieved from <https://hbr.org/2021/04/what-does-it-mean-to-be-a-manager-today> [in English].

8. MIT Sloan School of Management. Five building blocks of digital transformation. mitsloan.mit.edu. Retrieved from <https://mitsloan.mit.edu/ideas-made-to-matter/5-building-blocks-digital-transformation> [in English].

9. Coursera. (2022). Global Skills Report. www.coursera.org. Retrieved from <https://www.coursera.org/skills-reports/global> [in English].

10. Ministerstvo tsyvrovoi transformatsii Ukrainy [Ministry of digital transformation of Ukraine]. thedigital.gov.ua. Retrieved from <https://thedigital.gov.ua/> [in Ukrainian].

Received 08.04.2023.

ВПЛИВ ЦИФРОВОЇ ТРАНСФОРМАЦІЇ НА СУЧАСНІ СВІТОВІ ТЕНДЕНЦІЇ РИНКУ ПРАЦІ

Тищенко В.Ф., Іванова Д.С.

У статті розглянуто сучасні тенденції цифрової трансформації на державному та міждержавному рівнях та виокремлено застосування блокчейн-технології в різних економічних моделях. Проаналізовано вплив пандемії COVID-19 на процес оцифровки підприємств та доведено, що темпи цифровізації збільшились у декілька разів, змінивши структуру ринку праці. Охарактеризовано основні загрози впровадження інструментів цифровізації, що пов'язані із значними витратами на технології, ризиком невдалої імплементації професійної політики менеджменту, недостатнім урядовим сприянням, рівнем конкуренції, тощо. Досліджено тенденції змін витрат, доходів і кількості користувачів послугами та інструментами цифрової трансформації шляхом виконання кореляційного аналізу та створення регресійної моделі. Розглянуто основні переваги цифрової трансформації, серед яких: покращення якості продукції та орієнтування на створення екологічного продукту; адаптування до мінливості; прискорення проникнення на ринок; підвищення операційної ефективності, тощо. Наукова новизна полягає у дослідженні впливу технологій блокчейну, штучного інтелекту, Інтернету речей на світовий ринок шляхом аналізу емпіричних даних для формування глобальних тенденцій, можливостей та загроз, що виникають у результаті впровадження таких технологій компаніями та споживачами, що також прокоментовано дослідити соціальні наслідки, серед яких: вплив технологій на працевлаштування, конфіденційність та безпеку, вивчення практичних способів пом'якшення негативних наслідків цифровізації, максимізуючи її користь для світової спільноти. Практична цінність дослідження полягає у сприянні модернізації цифрової діяльності українських підприємств із урахуванням світових тенденцій та прогнозів в умовах воєнного стану, подолання наслідків пандемії COVID-19 та євроінтеграційному процесі.

Ключові слова: цифрова трансформація, світові тенденції, ринок праці, інноватизація, діджиталізація.

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The article examines the current trends in digital transformation at the state and international levels and highlights the use of blockchain technology in various economic models. The impact of the COVID-19 pandemic on the process of digitalization of enterprises was analyzed and it was proved that the pace of digitalization has increased several times, changing the structure of the labor market. The main threats to the implementation of digitization tools were characterized, which are associated with significant costs for technology, the risk of unsuccessful implementation of professional management policy, insufficient government support, the level of competition, etc. Trends in changes in costs, revenues and the number of users of digital transformation services and tools were studied by conducting a correlation analysis and creating a regression model. The main advantages of digital transformation were considered, including: improving the quality of products and focusing on the creation of an ecological product; adaptation to variability; acceleration of market penetration; improvement of operational efficiency, etc. The scientific novelty consists in the study of the impact of blockchain technologies, artificial intelligence, the Internet of Things on the world market by analyzing empirical data to form global trends, opportunities and threats arising from the implementation of such technologies by companies and consumers, which also provokes the study of social consequences, among which: the impact of technology on employment, privacy and security, exploring practical ways to mitigate the negative effects of digitization while maximizing its benefits for the global community. The practical value of the research lies in the promotion of the modernization of the digital activities of Ukrainian enterprises, taking into account world trends and forecasts in the conditions of martial law, overcoming the consequences of the COVID-19 pandemic and the European integration process.

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REFERENCES

1. Pipartners. (2021). Digital Transformation Statistics: How Businesses are Using Digital to Drive Growth in 2021 and Beyond. *www.pipartners.com*. Retrieved from <https://www.pipartners.com/digital-transformation-statistics/> [in English].
2. Finances Online. Digital Transformation Statistics: Spending, Adoption, Analysis & Data. *financesonline.com*. Retrieved from <https://financesonline.com/digital-transformation-statistics/> [in English].
3. Statista. Digital Assets – Worldwide. *www.statista.com*. Retrieved from <https://www.statista.com/outlook/dmo/fintech/digital-assets/worldwide> [in English].
4. European Investment Bank. Indexing of corporate digitization. *EIB Investment Survey (EIBIS)*. *www.eib.org*. Retrieved from <https://www.eib.org/en/publications-research/economics/surveys-data/eibis/about/index.htm> [in English].
5. Verhoef, P. C., Broekhuizen, T., & Bart, Y. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889-901. DOI: <https://doi.org/10.1016/j.jbusres.2019.09.022> [in English].
6. Plekhanov, D., & Franke, H. (2022). Digital transformation: A review and research agenda. *European Management Journal*. DOI: <https://doi.org/10.1016/j.emj.2022.09.007> [in English].
7. Harvard Business Review (2021). What does it mean to be a manager today? *hbr.org*. Retrieved from <https://hbr.org/2021/04/what-does-it-mean-to-be-a-manager-today> [in English].
8. MIT Sloan School of Management. Five building blocks of digital transformation. *mitsloan.mit.edu*. Retrieved from <https://mitsloan.mit.edu/ideas-made-to-matter/5-building-blocks-digital-transformation> [in English].
9. Coursera. (2022). Global Skills Report. *www.coursera.org*. Retrieved from <https://www.coursera.org/skills-reports/global> [in English].
10. Ministerstvo tsyfrovoi transformatsii Ukrainy [Ministry of digital transformation of Ukraine]. *thedigital.gov.ua*. Retrieved from <https://thedigital.gov.ua/> [in Ukrainian].