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NEW TRENDS IN ECONOMICS: DIGITIZATION

Abstract. The article analyzes new trends in the economy, focusing on digitization and digitalization. It explores the concepts of digitization and digitalization in the context of their impact on the economy. The study identifies that digital technologies penetrate all aspects of life, transforming traditional sectors such as the economy, education, healthcare, and culture. The developmental stages of the digital economy – automation, digitization, and digital transformation – are outlined. The article characterizes the prospects of forming a digital economy, including the widespread use of artificial intelligence, the decline of low-skilled labor, and the potential for autonomous technological work. Emphasis is placed on both the advantages and risks of the digital economy. Advantages include increased labor productivity, cost reduction, the creation of new jobs, and the transition to electronic document management. On the other hand, risks encompass information leakage, an increase in fraud, and the use of personal data. The role of digital development in stimulating the economic growth of countries is discussed, highlighting that traditional factors of economic growth are giving way to digital technologies. The integration of digital technologies into the economy contributes to the creation of new income sources and improves the quality of life for the population. The author also draws attention to the dual nature of digital development, generating both potential risks and progressive opportunities. The article addresses the uneven process of economic digitization in different countries and identifies three groups of countries that make a significant contribution to the global potential of digital development. The first group includes leaders in digitization, such as the United States, Germany, France, and Japan, demonstrating substantial growth potential in digital technologies. The second group comprises "small" European countries, such as Belgium, Estonia, Denmark, and Finland, characterized by high digitization indicators. The third group consists of countries that rely more on their domestic



markets, such as Brazil, Australia, Canada, and India. The crucial role of the public sector in stimulating growth and supporting digital transformation is emphasized. The importance of creating conditions for digital innovations, supporting startups, and developing the education system in the field of digitization is highlighted. In conclusion, active participation from all stakeholders is emphasized as crucial for the effective implementation of digitization scenarios and achieving high indicators of digital development in the economy.

Keywords: economy, digitization, digitalization, technological progress, economic entities.

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НОВІ ТРЕНДИ В ЕКОНОМІЦІ: ЦИФРОВІЗАЦІЯ ТА ДІДЖИТАЛІЗАЦІЯ

Анотація. У статті проводиться аналіз нових трендів у економіці, цифровізації та діджиталізації. Висвітлено поняття цифровізації та діджиталізації в контексті їх впливу на економіку. Визначено, що цифрові технології входять у всі сфери життя, трансформуючи традиційні галузі економіки, освіти, медицини та культури. Визначено етапи розвитку цифрової економіки: автоматизацію, цифровізацію та цифрову трансформацію. Дана характеристика перспективам формування цифрової економіки, які включають широке використання штучного інтелекту, відмову від низькокваліфікованої робочої сили та можливість автономної роботи технологій. Підкреслено, що цифрова економіка має як переваги, так і ризики. Переваги включають підвищення продуктивності праці, зниження витрат, створення нових робочих місць та перехід до електронного документообігу. З іншого боку, ризики охоплюють витік інформації, збільшення кількості шахраїв та використання персональних даних. У статті розглянута роль цифрового розвитку в стимулюванні економічного зростання країн та наголошено, що традиційні фактори економічного зростання уступають місце цифровим технологіям. Впровадження цифрових технологій в економіку сприяє створенню нових джерел доходу та покращенню якості життя населення. Автор також звертає увагу на двоїстий характер цифрового розвитку, що породжує як потенційні ризики, так і прогресивні можливості. Вказано на нерівномірний процес цифровізації економіки у різних країнах та визначено три групи країн, які вносять суттєвий внесок у глобальний потенціал цифрового розвитку. До першої групи віднесені лідери цифрові-



зації, такі як США, Німеччина, Франція, Японія, що демонструють значний потенціал зростання в галузі цифрових технологій. Другу групу складають «невеликі» європейські країни, такі як Бельгія, Естонія, Данія, Фінляндія, що відзначаються високими показниками цифровізації. Третю групу становлять країни, які спираються на свої внутрішні ринки, такі як Бразилія, Австралія, Канада, Індія. Зазначено на важливій ролі державного сектору в стимулюванні зростання та підтримці цифрової трансформації. Наголошується на важливості створення умов для цифрових інновацій, підтримці стартапів та розвитку системи освіти у сфері цифровізації. В заключенні підкреслено, що активна участь всіх зацікавлених сторін є ключовою для реалізації ефективного сценарію цифровізації та досягнення високих показників цифрового розвитку в економіці.

Ключові слова: економіка, цифровізація, діджиталізація, технічний прогрес, суб'єкти економіки.

Problem Statement. All processes, whether carried out at an individual or collective level, presuppose the presence of input elements based on which the achievement of defined goals is anticipated as a result. Over time, society and the economy undergo constant evolution under the influence of various internal and external factors. To secure competitive positions, different countries actively focus on identifying key potential factors that may influence their development. Economic growth, closely tied to development, unquestionably stands as one of the key priorities for various nations. The consistent rise in interest in resources that can shape economic growth becomes a mandatory condition for advancement. On the other hand, technological progress has revolutionized from narrow spheres of activity to entire industries, contributing to the development of related areas. Digital transformation has gradually taken place over the last decades, becoming a real necessity during the COVID-19 pandemic, defining more dynamic, and in some cases, even forced rates of progress. The fact that digital progress holds significant potential in economic evolution was foreseen long before the pandemic; however, the crisis itself turned out to be a catalyst for activating digital initiatives and rethinking development strategies. The economy is transforming, defining new directions of development, where digital transformation proves to be a key factor in ensuring resilience and competitiveness in the conditions of the modern world. Thus, a detailed study of this phenomenon is an important component of scientific and practical analysis of economic development.

The article aims to study and analyze the impact of digital transformation on economic development in the conditions of the constant evolution of society and the economy.

Main Material Presentation. In a general sense, digitization is defined by the implementation of digital technologies in all aspects of life. This encompasses



the transformation of traditional economic sectors to the use of technologies in the fields of education, healthcare, and culture. On the other hand, digitalization involves the transition from traditional methods of information processing to the use of digital technologies. It affects all aspects of economic activity, from customer service to business process management.

In the context of our research, the consideration of the digital economy is crucial. The concept of the "digital economy" is closely related to the notions of digitization and digitalization. The term "digital economy" was introduced in 1995 by N. Negroponte, after which various interpretations of the term emerged, but the concept's content remains vague [1]. Most definitions enumerate services, technologies, and devices associated with the concept of the "digital economy," without explicitly specifying which part of the economy can be attributed to the digital realm.

The digital economy, in its development, undergoes several stages. In the first stage, existing processes are automated through their transformation into information technologies. The second stage involves actual digitization, which enhances business processes through optimization. Initially, there is a modernization of business solutions aimed at process optimization, followed by the transition to the digital realm. Finally, the third stage is digital transformation, which changes existing business models into new ones [2; 9].

Current trends aim to shape the digital economy, characterized by essential features such as:

- the widespread use of artificial intelligence capabilities;
- the abandonment of low-skilled labor;
- the potential for modern technologies to operate without human intervention [4; 5; 6].

Overall, the essence of the digital economy lies in the dynamic processing of information, freeing some organization employees from routine work. However, it is crucial to consider the associated risks, including information leaks, an increase in scams, the use of personal data, the disappearance of obsolete professions, workforce reduction due to production automation, and a lack of competencies among personnel to work with new technologies [5; 8].

Highlighting the advantages of the digital economy, it is important to note increased labor productivity, cost reduction, the creation of new jobs, the transition to electronic document flow, the reduction of bureaucratic procedures, and the elimination of the human factor (errors induced by the emotional and physical state of a specialist), as well as the shift to remote work.

The implementation of digital technologies in the economic sector has propelled the economy to an entirely different level. Internet-based businesses, electronic payments, and online banks have experienced widespread development, becoming key components of the economic system. Additionally, digital economy



eliminates intermediaries during transactions, making e-commerce attractive [3; 4; 9].

It is important to note that modern digital technologies play a crucial role in stimulating the economic growth of countries. The digital economy grows much faster than traditional economies, and a significant portion of this growth is based on and supported by contemporary technologies.

The potential economic benefits of digitizing industrial and economic activities are substantial. This includes the formation of new income sources and the expansion of a country's economic opportunities. Such economic upliftment leads to increased global competitiveness and improvement in the living conditions of the population.

The digital development of the economy has a dual nature. On one hand, it creates potential risks in the form of qualitative changes in society, production structure, and the economy as a whole, requiring economic entities to take effective measures to reduce costs. On the other hand, it establishes a mechanism to minimize these risks, based on progressive opportunities provided by the digitization process.

Traditional factors of economic growth are increasingly giving way to digital technologies for several reasons.

Firstly, before the advent of the digital economy, economic growth was determined by various factors, including traditional industries, dynamic exports, foreign investments, cost advantages of labor, and funding from international funds. However, in the era of digitization of the economy, these factors are being leveled.

Secondly, countries and economically integrated regions that are efficiently interconnected are the most attractive for investments. This allows developing countries to partially narrow the economic gap compared to developed countries and significantly increase the standard of living and quality of life for their populations.

Thirdly, the cost of labor is also increasing due to rising demands for education and professional skills, which can become a serious problem given limited resources. Nevertheless, the digitization of education addresses this issue by creating conditions for the preparation of highly skilled professionals and "engaging" them in economic activities, thus reducing unemployment.

Fourthly, the use of digital technologies leads to high labor productivity growth across all sectors of public production.

The characteristic feature is that the process of economic digitization is uneven across different societies. Three groups of countries contributing to the global potential of the digital economy can be identified.

The first group includes leaders in the digitization of the economy, such as the USA, Germany, France, Austria, Japan, and some Asian states. These countries form the core of this process and demonstrate significant growth potential in the field of digital technologies.

The second group comprises "small" European countries with very high indicators of economic digitization, including Belgium, Estonia, Denmark, Finland,



Ireland, the Netherlands, Norway, and Sweden.

The third group encompasses countries that usually rely more on their large internal markets for economic growth, such as Brazil, Australia, Canada, and India. In these countries, digitization indicators are also high but do not exceed the figures of the leaders in digital technologies.

To implement an effective scenario of digitization in the context of challenges in adopting digital technologies, all stakeholders in the economy must actively participate in the digital transformation of economic and business relations. The following innovations represent digital technologies:

- Artificial Intelligence and Neurotechnologies;
- Quantum Technologies and Robotics;
- Industrial Internet that connects equipment in production lines and factories into a unified system;
- Distributed Ledger Systems – Blockchain;
- Wireless Data Transmission and Exchange Technologies;
- Big Data from Internet Users in search engines and social networks;
- Virtual and Augmented Reality Technologies.

In this way, businesses could expand the use of digital tools to enhance labor productivity and profits, frequently leveraging digital solutions to attract new consumers and clients for entry into regional and global markets. This export potential is particularly relevant in countries where the size of domestic markets limits growth opportunities.

The public sector can also play a role in transforming production and stimulating growth by using digital technologies to build faster and more efficient service delivery processes for both companies and citizens.

Of course, the state (government bodies at all levels) should support this process across a wide range of directions, including:

- Creating conditions for digital innovations (e.g., regulatory framework or a digital environment for practical testing of production activities).
- Facilitating their implementation, improving the ecosystem for startups.
- Ensuring the development of an additional education system in the field of digitization, including support for scientific and educational institutions implementing relevant retraining and qualification enhancement programs.

People should also be proactive. Investments in lifelong learning promote increasing career flexibility and open up new opportunities in the job market. Such citizen "behavior," under equal conditions, helps minimize common problems for many countries, such as the "brain drain" or emigration of skilled professionals.

Conclusions. Thus, the digital economy emerges as a factor of economic growth, representing a distinct system of digitization. Current trends in the development of the global economy are largely shaped and will continue to be influenced by the future evolution of the global electronic network, information



intelligence, and digital technologies. In this regard, the study of digital economy issues remains highly relevant.

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