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Digital Transformation in International Business: Current Trends and Strategic Guidelines

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ABSTRACT

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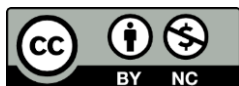
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The current stage of global economic development is characterised by the rapid growth of digital technologies, which is leading to a profound transformation of international business models. The transition from traditional approaches to digitally oriented forms of economic activity requires companies to review their strategies, improve management mechanisms and develop new tools for competitive interaction in global markets. In the context of increasing technological dynamics, the issue of adapting business structures to digital innovations capable of ensuring not only operational efficiency but also long-term sustainability is becoming increasingly relevant. The COVID-19 pandemic was a turning point, as it accelerated the adoption of digital communication channels, process automation, cloud technologies, and data analytics. This led to new requirements for the organisation of international business processes, as only companies with a high level of digital readiness were able to adapt to the crisis conditions. At the same time, the integration of artificial intelligence, 5G technologies, the Internet of Things, hyper-automation and contactless services accelerated, which determined the further development of the global market. At the same time, the problem of uneven digitalisation is becoming more acute around the world. In high-income countries, digital innovation has become the basis for business development, while countries with low levels of digital accessibility face constraints related to inadequate infrastructure and a lack of skills. This asymmetry creates risks of further deepening global disparities and slows down the integration of individual economies into digital value chains. The need for effective regulation of digital transformations, the formation of modern institutional mechanisms, the harmonisation of technical standards and state support for innovation are becoming key conditions for the sustainable development of international business. It is emphasised that digital transformation is one of the determining factors of future economic growth, and its strategic implementation ensures the competitiveness of companies and the adaptability of the global economy as a whole.



KEYWORDS

digital transformation, digital technologies, international business, digital infrastructure, digitalisation.



Цифрова трансформація в міжнародному бізнесі: сучасні тенденції та стратегічні орієнтири

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СТАТТЯ	АНОТАЦІЯ
Дослідницька DOI: 10.70651/3041-2498/2026.2.09 Отримана: 23.12.2025 р. Прийнята: 28.01.2026 р. Опублікована: 15.02.2026 р. Авторське право © 2026 авторів  Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).	Сучасний етап розвитку світової економіки характеризується стрімким зростанням ролі цифрових технологій, що зумовлює глибоку трансформацію моделей організації міжнародного бізнесу. Перехід від традиційних підходів до цифрово орієнтованих форм господарювання вимагає від компаній перегляду стратегій, удосконалення механізмів управління та формування нових інструментів конкурентної взаємодії на глобальних ринках. В умовах посилення технологічної динаміки все більш актуальним стає питання адаптації бізнес-структур до цифрових інновацій, здатних забезпечити не лише операційну ефективність, а й довгострокову стійкість. Пандемія COVID-19 стала переломним моментом, оскільки прискорила впровадження цифрових каналів комунікації, автоматизації процесів, хмарних технологій та аналітики даних. Це зумовило появу нових вимог до організації міжнародних бізнес-процесів, адже лише компанії з високим рівнем цифрової готовності змогли підтримати адаптуватися до кризових умов. Водночас, пришвидшилася інтеграція штучного інтелекту, технологій 5G, Інтернету речей, гіперавтоматизації та безконтактних сервісів, що визначило подальший розвиток глобального ринку. Паралельно з цим у світі загострюється проблема нерівномірності цифровізації. У країнах з високим рівнем доходів цифрові інновації стали основою розвитку бізнесу, тоді як держави з низьким рівнем цифрової доступності стикаються з обмеженнями, пов'язаними з недостатньою інфраструктурою та нестачею компетентностей. Така асиметрія формує ризики подальшого поглиблення глобальних диспропорцій та уповільнює інтеграцію окремих економік у цифрові ланцюги створення вартості. Необхідність ефективного регулювання цифрових трансформацій, формування сучасних інституційних механізмів, узгодження технічних стандартів і підтримки інновацій з боку держави стає ключовою умовою сталого розвитку міжнародного бізнесу. Підкреслюється, що цифрова трансформація є одним із визначальних чинників майбутнього економічного зростання, а її стратегічне впровадження забезпечує підвищення конкурентоспроможності компаній та адаптивності глобальної економіки загалом.



КЛЮЧОВІ СЛОВА

цифрова трансформація, цифрові технології, міжнародний бізнес, цифрова інфраструктура, цифровізація.

1. Introduction

The global economy is in a phase of deep technological transformation, which is due to the rapid development of digital tools, communication platforms, automation and artificial intelligence. In these conditions, international business is faced with the need to rethink the established models of organization of activities, management structure, approaches to interaction with partners and customers, as well as the principles of forming competitive advantages. Digital technologies cease to play the role of auxiliary optimization tools and instead become the basis for building new business ecosystems that can provide adaptability and resilience in a rapidly changing global environment. That is why the issue of digital transformation of international business acquires the status of strategically important and requires an in-depth scientific understanding.

However, the digitalization process is uneven and contradictory, which gives rise to several problems both at the level of individual companies and at the level of states and regional economies. Significant disparities are observed in access to digital infrastructure, digital literacy of the population, the level of institutional support and the volume of investments in technological innovations. In low- and middle-income countries, digitalization is often slow, leading to a widening global digital divide and making it difficult for these economies to participate in today's value chains. Such structural differences form heterogeneity in technological development and affect the ability of states to integrate into the digital economy on equal terms with developed countries.

An additional factor complicating digital modernization was the COVID-19 pandemic, which forced businesses to switch to digital channels of interaction in a short time. Companies that had a high level of digital readiness were able to ensure continuity of operations, while others faced significant losses, limited mobility, and deficits in technological competencies. This revealed the critical dependence of business structures on the level of their digital maturity and actualized the issue of the need for systematic implementation of technological innovations even in traditional sectors of the economy.

At the same time, digital transformation creates new challenges related to cybersecurity, data protection, integration of complex technological solutions, and harmonization of regulatory requirements at the international level. Companies faced the need to simultaneously modernize infrastructure, improve staff skills, optimize business processes, and form new digital competencies. However, the lack of a unified approach to the implementation of digital strategies and the insufficient level of methodological support makes it difficult to determine effective directions for digital transformations.

In the scientific plane, the problem is that the digitalization of international business is developing at a faster pace than conceptual studies that can explain its mechanisms, consequences and strategic prospects. There is a need for a systematic analysis of current trends in digital transformation, identification of its key technological drivers, identification of factors of uneven digital development and the formation of scientifically based benchmarks that can be used to build effective strategies for international business.

Thus, the problem underlying the study is the lack of a comprehensive approach to understanding the impact of digital technologies on international business and the need to identify areas of strategic development that can ensure the competitiveness of companies in the global digital environment.

2. Literature Review

Recent research in the Ukrainian scientific literature confirms that digital transformation is becoming the core of international business, changing its fundamental paradigms. Digital transformation encompasses not only the process of automation or digitalization of individual functions, but also a deep restructuring of the logic of global operations, which allows companies to adapt to new challenges, optimize supply chains, and improve interaction with customers and partners [1, p. 99].

Topalov reviewed the theoretical concepts of the concept of "digital business transformation" and analyzed the existing meanings in the literature, identifying key barriers: from personnel shortages to low levels of digital literacy [2, p. 383]. The author emphasizes that the transformation of international business should be based on the integration of technologies, reengineering of business processes and digital strategies that ensure competitiveness at the global level.

Authors such as Zaika and Zaika emphasize the global nature of changes: digital transformation not only technically improves companies, but also changes their way of thinking, attitude to innovations and willingness to rethink the value of business in the world wide web [3, p. 186]. They also draw attention to the fact that in international business, digital products, network communications, and flexibility of strategies are key [3, c. 186].

In turn, Kolomoiets notes that business digitalization takes place in several stages – from data digitization to radical change of business models through reengineering and the introduction of robotic process automation (RPA) [4, p. 75]. At the same time, digital tools, including SaaS solutions and platforms, contribute to the optimization of supply chains, increasing flexibility and speed of response to global shocks. Culture and competencies of personnel, since the lack of qualified personnel and resistance to change are the main transformation barriers [4, p. 75].

Summarizing current trends, recent publications demonstrate that digital transformation in international business is not only a technological modernization, but a strategic initiative that strengthens competitive advantages, forms new export-oriented business models and contributes to resilience in the face of global crises. Strategic guidelines are investments in digital literacy, building network structures, developing digital products and a corporate culture capable of rapid adaptations.

3. Problem Statement

The article is aimed at a comprehensive analysis of modern directions of digital transformation of international business, including key technologies, investment trends, the impact of the COVID-19 pandemic and the peculiarities of uneven digitalization, to determine their importance for the formation of strategic guidelines and increasing the competitiveness of companies in global markets.

4. Methods and Materials

The study employs a systematic literature review and comparative analysis of recent research, reports, and statistical data to examine digital transformation in international business. Key sources include academic publications, international organizations (World Bank, IMF, ITU, OECD), industry reports (PwC, KPMG, Statista), and empirical studies on the impact of COVID-19 on digital adoption. The methodology focuses on identifying current technological trends, investment priorities, and disparities in digital readiness across countries and sectors. Data were analyzed to determine strategic guidelines, key drivers, and barriers of digital transformation, with attention to cloud computing, automation, AI, IoT, hyperautomation, and other emerging technologies shaping international business competitiveness.

5. Results and Discussion

Thanks to intensive technological progress, international business has found itself in a phase of active digital transformation. This, in turn, has led to fundamental shifts in business operations and the formation of competitive advantages. Modern digital technologies are no longer just an auxiliary tool for optimizing operations. They are beginning to form new models for organizing business processes, mechanisms for creating value and strategies for entering world markets. In this context, digital transformation is increasingly appearing as a key factor not only in operational efficiency, but also in the long-term sustainability of international business structures.

At the same time, the course of business digitalization is also significantly influenced by external conditions: countries around the world are increasingly making efforts to implement digital transformation, striving to maximize the opportunities of digital technologies and reduce the risks of lagging in the global race for digital leadership. And this approach is aimed at ensuring social progress, economic prosperity and strengthening competitive positions in international markets. According to the International Telecommunication Union (ITU), about half of the world's countries have already adopted digital strategies covering various sectors of the economy [6]. Also, only nine states (less than 5% of the total number of countries in the world) have created comprehensive national frameworks for digital markets aimed at stimulating the development of digital economies and societies [7]. This framework provides for the coherence of policies, legislative norms and governance structures, which allows for

more effective implementation of digital technologies and supports the sustainable development of society and economy.

One of the catalysts for accelerated digital transformation was the COVID-19 pandemic. Its restrictions have significantly affected global economic processes [8, p. 5]. The quarantine measures introduced by the states stimulated the transition of business and the population to digital channels of interaction, which, in turn, accelerated the integration of innovative technologies into key areas of economic activity [9, p. 276]. However, the dynamics of digital changes turned out to be uneven: trends in the development of the digital economy demonstrate significant differences between countries, which determines the need to take them into account in the formation of international business strategies [10, p. 12]. It is these differences that have begun to shape the modern look of digital infrastructure, outlining strategic guidelines for companies seeking to be successful against the backdrop of competition in the global digital environment.

The readiness of international businesses to implement digital technologies and effective management practices before the COVID-19 pandemic significantly determined the ability of companies to quickly adapt and invest in digital solutions in the context of the global crisis. An analysis by Washington: World Bank showed that international companies with a high level of digital preparedness for the pandemic demonstrated a significantly higher share of sales during the crisis period, which was due to the active use of digital platforms to organize business processes, interact with customers, and ensure business continuity [9]. Accordingly, preparatory digital integration and systematic management practices have become key factors in ensuring business sustainability.

Also, for international businesses, the digitalization process has additional complexity due to the need to take into account various markets, regulatory requirements, and cultural characteristics. Therefore, companies seek to form business models that are both sustainable and adaptive, and capable of generating revenue. Digital transformation is becoming not only a tool for optimizing internal processes, but also a key factor of competitiveness and strategic development in international markets [10].

In general, the main directions of digital transformation in international business include [11; 12]:

- Customer Data Platform (CDP) is a centralized and unified source of customer data that allows companies to create personalized marketing campaigns, increase customer engagement and retention, and develop new products and services focused on specific market segments;
- Cloud architecture is a technological foundation that ensures the distribution of software and workloads between private, public, or hybrid clouds, allowing companies to increase scalability, flexibility and speed of response to changes;
- Automation – the implementation of automation processes allows you to speed up work and increase the efficiency of operations, at the same time reducing the risks of the human factor and ensures a more consistent execution of business processes;
- Analytics and data processing – the active use of data by various departments of the company allows you to find solutions to complex business problems, predict customer behavior, optimize supply chains, increase the efficiency of sales funnels and strategic planning;
- Transition to contactless solutions and digital payments – the implementation of these innovative methods of interaction with customers requires a reliable digital infrastructure that provides secure and fast service, stimulating the acceleration of digital transformation processes at the global level.

Thanks to the integration of these areas, businesses can not only optimize internal operations, but also form new development strategies, and increase their competitiveness [12].

According to Statista, by 2026, global spending on digital transformation is expected to reach \$3.4 trillion. This shows the growing role of technology in the functioning of business as a whole. Accordingly, companies' investments in digital technologies reflect the strategic priorities of business models, improving operational efficiency and adapting to dynamic conditions.

Among the main areas of spending on digital transformation are [13]:

- 5G and the Internet of Things (IoT) – technologies that provide high-speed mobile communication and the ability to connect a large number of devices, which contribute to the creation of smart production systems, optimization of logistics and the development of innovative services;
- Zero Trust Security is a security concept based on the principle of complete distrust by default and strict control of access to any system resources, which is especially important for international companies with an extensive structure and a large number of remote employees;

- Software 2.0 – tools that automatically generate source code based on formalized requirements, which allows you to reduce development time, improve the quality of software solutions and quickly adapt them;
- Hyperautomation is an integrated approach to business and IT process automation that streamlines operations, reduces costs, and increases company agility;
- Total Experience is a concept that combines customer, collaborative and user experience to transform business models, increase the level of protection of customers and employees;
- Generative artificial intelligence (AI) is a technology that uses existing content in the form of texts, images, audio, or video to create new, original, and structured material, opening up new opportunities for product personalization, marketing communications, and internal company processes;
- AR Cloud (augmented reality cloud) is a digital three-dimensional copy of the real environment, created taking into account spatial characteristics, which allows international companies to introduce innovative services, optimize training and production processes, as well as increase the efficiency of interaction with customers and partners.

The integration of these technologies into the digital transformation strategies of international business not only accelerates operational efficiency but also creates strategic guidelines for the formation of innovative business models that can ensure long-term competitiveness in global markets [13]. Growing investments in these areas reflect the strategic importance of technology for the development of international companies and increasing their ability to adapt in a dynamic economic environment.

According to international research organizations, over the next decade, up to 70% of the world's newly created economic value will be formed on the basis of digital platforms [14]. The e-commerce segment is already growing at a particularly fast pace, the expected volume of which will almost double by 2025, becoming one of the key drivers of the global economy [15, p. 336].

Thus, digital transformation is becoming a strategic vector for the development of international business. But at the same time, its influence is heterogeneous and manifests itself differently in different countries and regions. In particular, the speed and depth of digitalization differ significantly depending on national and regional conditions [15, p. 335]. In some economies, digital innovations can be implemented quickly, which ensures that companies are more competitive, attract investment, and form new business models. At the same time, other countries may remain at the initial levels of digitalization due to limited infrastructure, low levels of digital literacy of the population, lack of qualified personnel, or institutional barriers that hinder the development of digitalization.

The key determinants of these differences are the economic potential of the state, political stability, the level of development of digital infrastructure, the quality of human capital, and the readiness of the state to create and implement an effective regulatory environment [14]. At the same time, investments in research, accessibility of technological platforms, and international partnerships in the field of innovation are important [15, p. 337]. Understanding these factors allows companies and government institutions to determine strategic guidelines for digital transformation, plan the adaptation of business models, and form competitive advantages. Accordingly, the digitalization of international business is not only a tool for improving the efficiency of operations, but also a factor in the formation of economic value and sustainable development.

Differences in the pace and intensity of digital technology adoption determine not only the growth potential of specific companies but also the overall strategic priorities of states. In high-income countries, the adoption of cloud technologies has already become one of the key areas of digitalization. Businesses in such economies are actively integrating cloud solutions into strategic and operational management, considering them not only as a technical tool for cost optimization, but also as a platform for scaling innovations and accelerating digital processes [16]. Back in 2021, according to a study by Pricewaterhouse Coopers, about 78% of surveyed business leaders in the cloud technology sector noted that cloud services are already used in most or even all functional areas of their companies [16].

This level of penetration of cloud solutions directly indicates that they have become the basis of modern businesses, as they allow companies to more efficiently manage large amounts of data, implement digital products, automate critical processes, and form more flexible and sustainable operating models [16]. And in leading countries, cloud services are becoming a driver of innovation in the areas of artificial intelligence, data analytics, cybersecurity, industrial IoT, and digital supply chains [16].

Thus, the spread of cloud technologies in high-income countries is shaping a new trajectory for international business development, where digital infrastructure is becoming a critical factor in global competitiveness.

But the concept of digitalization is broader. Thus, the KPMG report identifies a range of technologies that, according to experts, have a high potential for radical modernization and rethinking of business models in the coming years [17]. Analysts emphasize that today's investment priorities of companies are mainly focused on solutions such as the Internet of Things (IoT) and robotic process automation (RPA). These technologies are already being actively integrated into production and management systems, ensuring the optimization of operations, increasing the accuracy of business processes and reducing costs due to the automation of routine tasks. Along with them, artificial intelligence and robotics, which are increasingly used to create intelligent decision support systems, autonomous production complexes, and personalized services, continue to strengthen their positions.

At the same time, the companies' strategic plans for the next three-year perspective reflect the growing interest in several technologies that are at the stage of active development, but already demonstrate significant innovation and economic potential [17]. We are talking about: blockchain (a universal tool for improving transaction security and transparency of supply chains), augmented and virtual reality (capable of transforming approaches to staff training, marketing, and customer interaction), biotechnology and on-demand platforms (opening up new opportunities for flexible business scaling, product customization, and building new digital ecosystems) [17]. Such investment dynamics indicate a high level of trust in these technologies and their key role in shaping strategic guidelines for digital transformation at the global level.

It is also worth noting that experts divide the technologies that determine modern development trajectories into three groups depending on their transformational potential and investment activity [16; 17]. The first group includes those who have the greatest ability to form long-term value and exert a systemic impact on economic and social processes. Among them, the Internet of Things (IoT), robotic process automation (RPA), artificial intelligence, blockchain, various areas of robotics, including autonomous transport systems, as well as augmented and virtual reality technologies stand out [5; 17; 19]. The same group includes social networks and digital collaboration tools, biotechnology, digital health, genetic technologies, and on-demand platforms that form new models of interaction between people, services, and infrastructure [17; 18].

The second group consists of technologies that are already the object of active investments and are being introduced into the practical activities of various sectors [16; 17]. These are the same areas as in the group with the greatest transformative potential, which indicates their high relevance and strategic importance. The Internet of Things, artificial intelligence, RPA, robotics, augmented reality, blockchain, digital communication platforms, biotechnology, digital health, genetics, virtual reality, and on-demand platforms are actively shaping the landscape of modern technological innovations [17; 18].

The third group includes technologies that are planned to be invested in the medium term. They cover a similar range of innovative solutions: Internet of Things, robotics, artificial intelligence, blockchain, RPA, virtual reality, as well as biotechnology, digital health, genetics, social media and collaboration platforms, on-demand platforms, and augmented reality [16; 17]. The sustainability of business interest in these areas demonstrates their key role in future technology changes.

Summarizing the characteristics of these three groups, it is worth noting the similarities between technologies that have a high potential for transformation and those that are already actively invested or planned for investment. This ratio indicates the awareness of the strategic importance of technologies, which will determine the further evolution of the global development of technologies.

The digital transformation of international business is increasingly manifested through the introduction of a number of key technological trends, among which cloud computing, process automation, and the use of artificial intelligence in marketing and operational processes occupy leading positions [9]. Along with the already formed trends, promising areas for further development are actively outlined, including 5G technologies, hyperautomation and Zero Trust architectures, which form strategic guidelines for digital transformation processes on a global scale [9]. These innovations not only change the technological platforms of business, but also structure organizational models, ways of creating value and competitive mechanisms in international markets in a new way.

Economic data show the significant impact of digitalization on global development. Thus, value added in the IT services sector steadily grew by an average of 8 % annually from 2000 to 2022, which is almost twice the rate of expansion of the global economy [11]. Employment indicators in the IT sector

show similar dynamics: the employment rate increased by about 7% annually, while the global employment growth was only 1% [11], which indicates a rapid increase in the importance of digital competencies and technology-intensive services.

In addition, IT services are increasingly being integrated into other sectors of the economy, acting as an important intermediate resource for optimizing production, logistics and management processes. The intensity of their use in 2000–2020 almost doubled in high- and upper-middle-income countries [9]. At the same time, starting from 2020, digital startups in low- and middle-income countries received significant injections of venture capital [9]. In particular, the largest share of investments was concentrated in the sectors of e-commerce, finance, healthcare, education and entertainment [9]. This indicates the rapid formation of new digital markets and their inclusion in global economic processes.

Digital transformation has significantly changed the nature of international trade, reducing transaction costs, simplifying communication between participants in global value chains, and accelerating the exchange of knowledge and technological innovations [19]. Thanks to digital solutions, global markets have become more accessible: companies have been able to scale their activities faster, expand their product range and reach a much wider audience of digital consumers. This transformation is especially noticeable for small and medium-sized businesses – digital tools allow you to bypass some of the traditional barriers to entering new markets, facilitate payments, facilitate remote coordination of partnerships, and reduce the need for capital-intensive investments through the use of cloud services and modern forms of financing, in particular crowdfunding [19].

At the same time, the deepening of digitalization actualizes the problem of digital inequality, which remains a serious challenge for global development. Despite the rapid evolution of digital technologies, back in 2022, about 2.7 billion people still did not have access to the Internet. The digital divide is especially significant in the group of least developed countries, where the share of network users was only 36% of the population compared to the world average of 66% [19]. Such a disparity leads to increased socio-economic differences and creates a risk of further marginalization of states that cannot integrate into the digital economy on equal terms.

The current stage of digital transformation of international business combines two opposite processes: on the one hand, digitalization is becoming a driving force for the creation of new markets, increasing the efficiency of business models and the formation of global competitiveness; On the other hand, there is a deep structural asymmetry in access to digital infrastructures and competencies, which deepens the gap between developed and developing countries. Accordingly, the further success of digitalization depends on the joint efforts of international business and national governments to align technological innovations with the development of institutional systems, educational programs and digital infrastructures.

6. Conclusions

Digital transformation is a determining factor in the development of international business, changing business organization models, business processes, and mechanisms for forming competitive advantages. The analysis shows that the key areas of digitalization – cloud technologies, automation, artificial intelligence, data analytics, contactless services, and cybersecurity tools – ensure an increase in the efficiency of companies and their adaptability in a dynamic global environment.

The COVID-19 pandemic has been a catalyst for the accelerated adoption of digital solutions, demonstrating the critical importance of the previous level of digital readiness of the business. At the same time, the digital divide between countries and regions is exacerbating the gap in opportunities to integrate into global digital markets.

Technologies with the greatest transformative potential are at the same time key areas of investment, determining the strategic guidelines of international business. Effective digitalization requires the alignment of technological innovations with the development of digital infrastructure, competencies, and regulatory mechanisms. This allows us to form sustainable business models and ensure long-term competitiveness in global markets.

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