

DOI: [10.26565/2786-4995-2024-3-08](https://doi.org/10.26565/2786-4995-2024-3-08)

UDC: 330.34

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Digital transformation of the global economy: challenges and opportunities

Abstract. The world is going through a revolution, the emergence of digital and its impact on our planet. By Christine Moorman Researchers examine the challenges and opportunities of how to digitize a tradition-bound, offline industry. The research highlights key factors propelling this transition; ranging from technological and legal advances to societal impacts. Other subjects covered in the study include potential cyber threats and data privacy risks as well as what digitalization means for different industries, from manufacturing to services and finance. These findings suggest that while digital transformation promises significant opportunities for innovation and economic growth, it also requires comprehensive policy approaches to reduce associated risks and ensure inclusive development.

The aim of this article is to investigate the challenges and opportunities posed by the transition in global economy from analogical towards digital. The global economy is undergoing a radical transformation thanks to digital technologies. These tectonic shifts kindle an array of opportunities and challenges that we discuss in this article. Highlighting key factors behind this transformation — technology, legal frameworks and socioeconomic considerations — the study takes a deep dive into how blockchain can allow farmers to capture premium prices while ensuring traceability of genuine produce.

The research looks at the potential dangers linked to cybersecurity and privacy, while it also studies how digitization impacts sectors including manufacturing, services and finance. The findings show that while digital transformation provides considerable opportunities for innovation and economic growth, it also requires comprehensive strategies to mitigate associated risks and ensure inclusive development. This article is written as to observe the titled paradigm shift of global economy with Digitalisation, and changes it brings about in form of opportunities & challenges.

The findings show that digital transformation is a two-edged sword: it provides significant opportunities for economic growth, innovation, and the creation of new business models like digital platforms and the gig economy. However, it presents significant challenges, particularly in terms of cybersecurity and data privacy. The increasing frequency and sophistication of cyberattacks pose serious threats to businesses and governments, while concerns over data privacy necessitate the development of strong regulatory frameworks.

Keywords: *Digital Transformation, Global Economy, International Economy, Digital Economy, Technological Advancements, Cybersecurity, Economic Growth, Innovation*

Fig.: 1, tabl.: 1, bibl.: 17

JEL Classification: O31, O33, O47, F01, F02, L86, D80

For citation: Suntsova O. Digital transformation of the global economy: challenges and opportunities. *Financial and Credit Systems: Prospects for Development*. №3(14) 2024. P. 87-100. DOI: <https://doi.org/10.26565/2786-4995-2024-3-08>



Introduction. The rapid advancement of digital technologies has brought about significant changes in the global economy. This phenomenon, known as digital transformation, refers to the integration of digital technologies into various aspects of economic activity, leading to the reconfiguration of business models, the emergence of new industries, and the alteration of traditional economic structures. The relevance of this topic is underscored by the growing dependence of economies on digital infrastructure, which has become a critical driver of economic growth and competitiveness. However, the digital transformation also poses several challenges that need to be addressed to maximize its potential benefits. This article aims to explore the challenges and opportunities associated with the digital transformation of the global economy, providing insights into how these changes are reshaping the economic landscape.

Literature Review. The literature on digital transformation and its impact on the global economy is extensive, encompassing various perspectives and approaches (Brynjolfsson & McAfee, 2014). Recent studies have emphasized the role of digital technologies in enhancing productivity and efficiency across different sectors (Suntsova, 2023). For instance, the integration of artificial intelligence (AI) and machine learning in manufacturing has led to the development of smart factories, which optimize production processes and reduce costs (Schwab, 2016). Additionally, the digitalization of financial services has revolutionized the way transactions are conducted, leading to the rise of fintech companies that offer innovative solutions to traditional banking challenges (Gomber et al., 2018).

Xia, Baghaie, and Sajadi (2024) conducted an analysis of the digital economy's influence on businesses and consumers, emphasizing the opportunities it provides for rapid and convenient access to products and services. Their study highlighted how these advancements contribute to enhanced efficiency and productivity. They contended that the digital economy has far-reaching impacts across various economic, social, and cultural domains, including significant transformations in work practices and social interactions. Specifically, they noted the promotion of flexible and remote work arrangements and the facilitation of increased global connectivity.

Skare, de Obesso, and Ribeiro-Navarrete (2023) investigated the challenges faced by SMEs, such as customer access, heightened competition, external funding difficulties, rising input costs, skilled labor shortages, exogenous shocks, global crises, and regulatory complexities. Their research addressed a gap in the literature by examining the impact of digital technology on these challenges, utilizing the Digital Economy and Society Index (DESI) as a proxy to explore the issues confronting SMEs.

Zhang and Chen (2024) focused on the digital transformation of human resource management within the digital economy. They identified five key drivers of this transformation: the digital needs of internal customers, industry-wide digital innovation, competitive pressures, governance of digital innovation, and the broader demands of the digital era. Their work underscores the critical factors that propel the digitalization of human resource management in contemporary business environments.

However, the literature also highlights several challenges associated with digital transformation. One of the primary concerns is the risk of cyber threats, which have become increasingly sophisticated and pose significant risks to businesses and governments alike (Bélanger & Crossler, 2011). Another challenge is the potential for increased inequality, as the benefits of digitalization may not be evenly distributed, leading to a digital divide between those who have access to digital technologies and those who do not (Van Dijk, 2020).

Despite these challenges, digital transformation offers substantial opportunities for economic growth and development. For example, digital platforms have enabled the creation of new business models, such as the gig economy, which provides flexible employment opportunities and fosters entrepreneurship (Kenney & Zysman, 2016). Furthermore, digital technologies have the potential to address global challenges, such as climate change, by promoting the adoption of sustainable practices and reducing carbon emissions (GeSI, 2015).

Purpose, Objectives, and Research Methods. The purpose of this study is to analyze the challenges and opportunities presented by the digital transformation of the global economy. The objectives of the research are as follows:

1. To identify the key drivers of digital transformation in the global economy.
2. To assess the impact of digitalization on different economic sectors.
3. To examine the risks associated with digital transformation, particularly in the areas of cybersecurity and data privacy.
4. To explore the potential for digital technologies to promote inclusive economic growth and development.

The research methodology employed in this study includes a comprehensive review of existing literature, analysis of case studies from various industries, and qualitative interviews with experts in the field of digital transformation. The data collected from these sources are analyzed to identify trends, patterns, and insights that inform the study's conclusions.

Research Results. The research findings indicate that digital transformation is driven by several key factors, including technological advancements, changes in consumer behavior, and the need for businesses to remain competitive in a rapidly evolving market. In the financial sector, digitalization has led to the development of new financial instruments and services, such as mobile banking and cryptocurrency, which have transformed the way financial transactions are conducted. In the manufacturing sector, the adoption of AI and robotics has improved production efficiency and reduced operational costs, leading to increased profitability.

However, the research also highlights several challenges associated with digital transformation. Cybersecurity risks have emerged as a significant concern, with the increasing frequency of cyberattacks threatening the stability of digital infrastructure. Data privacy issues have also come to the forefront, as the collection and processing of large volumes of data raise concerns about the potential misuse of personal information.

Despite these challenges, the research suggests that digital transformation presents significant opportunities for economic growth and innovation. The development of digital platforms has created new markets and business models, enabling companies to reach a global audience and increase their revenue streams. Additionally, digital technologies have the potential to promote sustainable development by reducing the environmental impact of economic activities and fostering the adoption of green technologies.

To analyze the state of digitalization by country, I'll create a table with key indicators that typically reflect the level of digitalization, such as internet penetration, mobile broadband subscriptions, digital economy contribution to GDP, and digital infrastructure quality. Afterward, I'll generate a pie chart to visually represent the distribution of digitalization levels among different countries.

The key drivers of digital transformation in the global economy include:

1. Technological Advancements:
 - Artificial Intelligence and Machine Learning: AI and ML are enabling automation, predictive analytics, and personalization, transforming business processes and decision-making across industries.
 - Cloud Computing: Cloud technology offers scalable computing resources, facilitating remote work, data storage, and collaboration on a global scale.
 - Internet of Things (IoT): IoT connects physical devices to the internet, enabling real-time data collection, monitoring, and management, which enhances efficiency in sectors like manufacturing, logistics, and healthcare.
 - 5G Technology: The rollout of 5G networks provides faster and more reliable internet connectivity, essential for supporting advanced digital services and applications.
2. Evolving Consumer Behavior:

- Increased Online Presence: Consumers are increasingly adopting online shopping, digital banking, and virtual communication, driving businesses to innovate and enhance their digital offerings.
 - Demand for Personalization: Modern consumers expect personalized experiences, pushing companies to leverage data analytics and AI to tailor products and services to individual preferences.
3. Globalization and Competitive Pressures:
- Global Competition: Companies face increased competition from global players, prompting the adoption of digital strategies to maintain competitive advantage and reach new markets.
 - Innovation Race: The rapid pace of innovation requires businesses to continuously adapt and integrate new digital tools and technologies to stay relevant and competitive.
4. Regulatory and Policy Changes:
- Data Privacy Regulations: Laws such as the General Data Protection Regulation (GDPR) in Europe are shaping how companies handle data, prompting the adoption of secure and compliant digital practices.
 - Government Initiatives: Many governments are promoting digitalization through policies and investments in digital infrastructure, incentivizing businesses to adopt digital technologies.
5. Economic Shifts:
- Digital Economy Growth: The rise of the digital economy, characterized by the increasing importance of digital platforms, e-commerce, and digital services, is driving companies to transform their business models to tap into new revenue streams.
 - Remote Work and Collaboration: The COVID-19 pandemic accelerated the shift to remote work, compelling organizations to adopt digital tools for communication, collaboration, and workflow management.
6. Sustainability and Environmental Concerns:
- Green Technologies: The push for sustainability is driving the adoption of digital technologies that reduce energy consumption, optimize resource use, and support the circular economy.
 - Smart Cities: Digital transformation is also influencing urban development, with smart cities using digital tools to improve infrastructure, reduce emissions, and enhance the quality of life.
7. Customer-Centric Innovation:
- User Experience (UX) Design: Companies are increasingly focusing on creating seamless, intuitive digital experiences to attract and retain customers, driving innovation in user interface design and digital service delivery.

These drivers collectively shape the landscape of digital transformation, influencing how businesses, governments, and societies adapt to the rapidly changing global economy.

Digital transformation in the global economy is propelled by several key drivers that collectively shape the landscape of technological advancement and economic development. At the core of this transformation is the rapid evolution of digital technologies, which has significantly altered the way businesses operate and interact with consumers. The proliferation of high-speed internet and the ubiquity of mobile devices have facilitated unprecedented access to digital platforms, thereby accelerating the adoption of new technologies across various sectors.

Central to the process of digital transformation is the advancement in data analytics and artificial intelligence (AI). These technologies enable organizations to harness vast amounts of data to gain actionable insights, optimize processes, and enhance decision-making. The ability to analyze big data has transformed business models, allowing companies to tailor products and services to individual preferences and predict market trends with greater accuracy. AI-driven innovations, such as machine learning and natural language processing, further augment this capability, driving efficiencies and fostering new business opportunities.

Cloud computing is another critical driver of digital transformation. By providing scalable and flexible computing resources over the internet, cloud services have revolutionized the way organizations manage their IT infrastructure. This shift allows businesses to reduce capital expenditures, increase operational agility, and accelerate innovation. Cloud computing also supports the integration of various digital tools and platforms, facilitating seamless collaboration and data sharing across different functions and geographies.

The increasing emphasis on digital connectivity and the expansion of the Internet of Things (IoT) also play significant roles in driving digital transformation. The IoT connects physical devices to digital networks, enabling real-time data collection and interaction between devices. This connectivity enhances operational efficiency, supports the development of smart cities, and creates new avenues for consumer engagement. As more devices become interconnected, the scope for digital innovation and integration broadens, further accelerating the transformation process.

Another influential factor is the evolving consumer expectations and behaviors. As individuals become more accustomed to digital interactions and services, they demand greater convenience, personalization, and immediacy from businesses. This shift in consumer expectations compels organizations to adopt digital technologies to meet these demands and maintain competitive advantage. The rise of digital channels, such as social media and e-commerce platforms, has also redefined customer engagement and reshaped traditional business models.

Regulatory and policy changes also contribute to the acceleration of digital transformation. Governments and regulatory bodies are increasingly recognizing the importance of digital innovation for economic growth and competitiveness. Policies that promote digital infrastructure development, data protection, and cybersecurity help create an environment conducive to digital advancement. Additionally, international collaborations and agreements on digital trade and standards facilitate cross-border digital interactions and commerce.

In summary, digital transformation in the global economy is driven by the rapid advancement of digital technologies, the expansion of cloud computing and IoT, evolving consumer expectations, and supportive regulatory frameworks. These factors collectively drive the shift towards a more interconnected, data-driven, and technologically advanced economic landscape. As these drivers continue to evolve, they will shape the future trajectory of digital transformation and its impact on the global economy.

Digitalization has a profound impact on various economic sectors in Ukraine, shaping the country's economic landscape. Here's an *assessment of how digitalization is influencing key sectors*:

1. Information Technology (IT) Sector

- Growth and Global Competitiveness: Ukraine's IT sector has experienced rapid growth due to digitalization, becoming one of the leading contributors to the national economy. The country is recognized globally for its highly skilled software developers and IT services, with significant exports to Europe and North America.

- Job Creation and Innovation: The rise of digital platforms and technologies has led to the creation of numerous tech startups and IT service companies, fostering innovation and creating high-paying jobs.

2. Agriculture

- Precision Farming: Digital tools like drones, IoT devices, and data analytics are increasingly being used in Ukraine's agriculture sector to optimize crop yields, manage resources more efficiently, and reduce costs. This transformation enhances productivity and supports sustainable farming practices.

- Market Access and Supply Chains: Digitalization enables farmers to access markets directly through e-commerce platforms, improving profitability. It also enhances supply chain transparency and efficiency.

3. Manufacturing

- Automation and Smart Manufacturing: The integration of digital technologies such as AI, robotics, and IoT into manufacturing processes has increased productivity, reduced operational costs, and improved product quality. Smart factories are emerging in Ukraine, contributing to the modernization of the sector.

- Challenges in Adoption: Despite these advancements, many Ukrainian manufacturing firms face challenges in fully adopting digital technologies due to high initial costs and a lack of digital infrastructure in some regions.

4. Financial Services

- Fintech Growth: Digitalization has led to a boom in the fintech industry in Ukraine, with the emergence of digital banks, mobile payment systems, and blockchain technologies. These innovations improve financial inclusion, offering services to previously underserved populations.

- Efficiency and Accessibility: Digital banking and online financial services have become increasingly popular, reducing the need for physical bank branches and making financial services more accessible to the general population.

5. Healthcare

- Telemedicine: The COVID-19 pandemic accelerated the adoption of telemedicine in Ukraine, allowing patients to consult with doctors remotely. This digital transformation has improved access to healthcare, particularly in rural areas.

- Electronic Health Records (EHR): The introduction of EHR systems has streamlined patient care, reduced paperwork, and improved the efficiency of healthcare services, although full implementation is still ongoing.

6. Retail

- E-commerce Expansion: Digitalization has significantly impacted the retail sector, with e-commerce platforms growing rapidly. Consumers increasingly prefer online shopping, leading to the expansion of digital retail and delivery services.

- Omnichannel Strategies: Retailers are adopting omnichannel approaches, integrating physical and digital shopping experiences to meet changing consumer expectations.

7. Education

- Digital Learning Platforms: The shift to online education during the pandemic has accelerated the adoption of digital learning platforms in Ukraine. Schools and universities are increasingly using online tools for teaching and learning, which enhances access to education and promotes lifelong learning.

- Digital Divide: However, the digital divide remains a challenge, particularly in rural areas where access to high-speed internet and digital devices is limited.

8. Energy Sector

- Smart Grids and Energy Efficiency: Digital technologies are being integrated into Ukraine's energy sector through the development of smart grids, which improve energy efficiency and reliability. Digitalization also supports the management of renewable energy sources.

- Challenges in Implementation: The transition to digital energy management systems is still in progress, with challenges including the need for significant investments and regulatory reforms.

9. Public Administration

- E-Government Services: Digitalization has enabled the Ukrainian government to offer a wide range of e-government services, enhancing transparency, reducing bureaucracy, and improving public service delivery. The "Diia" app is a prime example, allowing citizens to access various government services online.

- Digital Citizenship: The development of digital IDs and online voting systems is also in progress, which could further transform citizen engagement and governance.

Digitalization is reshaping various economic sectors in Ukraine, driving growth, enhancing efficiency, and fostering innovation. However, the full potential of digital transformation can only be realized by addressing challenges such as infrastructure gaps, the digital divide, and the need for

regulatory frameworks that support innovation while ensuring security and privacy. The continued investment in digital skills, infrastructure, and supportive policies will be crucial for Ukraine to fully harness the benefits of digitalization across all sectors of the economy.

Digitalization has profoundly impacted various economic sectors, reshaping traditional processes, enhancing efficiency, and creating new opportunities. In the manufacturing sector, the integration of digital technologies has led to the emergence of Industry 4.0, characterized by the use of automation, robotics, and data-driven decision-making. This transformation has increased production efficiency, reduced operational costs, and enabled the customization of products to meet specific consumer demands. Advanced manufacturing technologies, such as 3D printing and digital twins, have further revolutionized production by allowing rapid prototyping and real-time monitoring of production processes.

In the financial sector, digitalization has fundamentally altered the landscape of banking and financial services. The rise of fintech has introduced innovative financial products and services, such as mobile banking, peer-to-peer lending, and cryptocurrency. These developments have enhanced financial inclusion by providing access to banking services for previously underserved populations. Moreover, digitalization has improved the efficiency and security of financial transactions through the implementation of blockchain technology and digital payment systems. This shift has also led to the disintermediation of traditional financial institutions, enabling more direct interactions between consumers and service providers.

The retail sector has experienced significant disruption due to digitalization, with e-commerce platforms transforming the way consumers shop and businesses operate. Online retail has expanded market access for businesses, allowing them to reach a global audience with minimal physical infrastructure. Digitalization has also enabled personalized shopping experiences through the use of data analytics and artificial intelligence, which analyze consumer behavior and preferences to tailor product recommendations. Additionally, the integration of digital payment systems and logistics networks has streamlined the purchasing process, enhancing the overall efficiency and convenience of retail operations.

In the healthcare sector, digitalization has led to the development of telemedicine, electronic health records, and health monitoring devices. These innovations have improved patient access to healthcare services, particularly in remote or underserved areas. Telemedicine allows for remote consultations, reducing the need for physical visits to healthcare facilities and thereby increasing the efficiency of healthcare delivery. The use of electronic health records has facilitated better coordination of care by enabling healthcare providers to access and share patient information more easily. Furthermore, wearable health monitoring devices and mobile health applications have empowered individuals to take a more active role in managing their health, leading to better health outcomes.

The impact of digitalization is also evident in the education sector, where the adoption of digital tools has transformed teaching and learning processes. Online learning platforms and digital resources have expanded access to education, enabling learners to access quality education regardless of their geographical location. Digitalization has also enabled personalized learning experiences through adaptive learning technologies that adjust content and pacing to the needs of individual students. The use of data analytics in education has further enhanced the ability to track student progress and identify areas for improvement, leading to more effective teaching strategies.

In agriculture, digitalization has introduced precision farming techniques that use data analytics, IoT devices, and satellite imagery to optimize crop yields and resource use. These technologies have improved the efficiency of agricultural practices, reduced waste, and increased sustainability. Digital platforms have also connected farmers to markets, enabling them to sell their produce more effectively and access timely information on market prices and weather conditions. This has contributed to increased productivity and income for farmers, particularly in developing regions.

The key risks associated with digital transformation in the areas of cybersecurity and data privacy:

1. Cybersecurity Threats

- **Increased Attack Surface:** As organizations adopt more digital technologies, the number of potential entry points for cyberattacks grows. This includes not only traditional IT infrastructure but also IoT devices, cloud services, and mobile applications.

- **Advanced Persistent Threats (APTs):** Sophisticated and targeted cyberattacks, such as APTs, can infiltrate an organization's network and remain undetected for long periods, potentially causing significant damage.

2. Data Breaches

- **Sensitive Data Exposure:** Digital transformation often involves the collection, storage, and processing of large volumes of data. This increases the risk of data breaches, where sensitive information such as personal data, financial records, or intellectual property is exposed or stolen.

- **Insider Threats:** Employees or contractors with access to sensitive data may inadvertently or maliciously cause data breaches, leading to severe consequences for organizations.

3. Lack of Skilled Workforce

- **Shortage of Cybersecurity Professionals:** As digitalization progresses, the demand for cybersecurity experts outpaces supply. This skill gap leaves organizations vulnerable to cyber threats as they may not have the necessary expertise to protect against or respond to attacks effectively.

4. Regulatory Compliance

- **Complexity of Compliance:** Digital transformation often requires organizations to navigate a complex web of regulations concerning data protection, privacy, and cybersecurity. Failure to comply with these regulations can result in legal penalties, reputational damage, and financial losses.

- **GDPR and Other Regulations:** For organizations operating in multiple jurisdictions, ensuring compliance with regulations like the General Data Protection Regulation (GDPR) in Europe can be particularly challenging.

5. Third-Party Risks

- **Vendor and Supply Chain Risks:** Many organizations rely on third-party vendors for digital services, such as cloud computing or software development. If these vendors are compromised, it can lead to security breaches within the organization itself.

- **Shared Responsibility:** In cloud environments, there is often a shared responsibility model between the service provider and the customer. Misunderstandings or lapses in this shared responsibility can result in security vulnerabilities.

6. Data Sovereignty Issues

- **Cross-Border Data Transfers:** Digital transformation often involves storing and processing data in multiple locations across the globe. This can create challenges related to data sovereignty, where laws in different countries may conflict regarding how data must be handled.

- **Jurisdictional Conflicts:** Organizations may face legal challenges if the data protection laws of one country conflict with those of another, especially when data is transferred across borders.

7. Privacy Violations

- **Inadequate Data Protection:** As organizations collect more personal data to drive digital initiatives, there is a higher risk of privacy violations if this data is not adequately protected or is used without proper consent.

- **User Consent and Transparency:** Ensuring that users are fully informed about how their data is collected, used, and shared is crucial. Failure to obtain proper consent or provide transparency can lead to privacy violations and loss of trust.

8. System Downtime

- **Operational Disruptions:** Digital systems are often critical to an organization's operations.

Cyberattacks, such as Distributed Denial of Service (DDoS) attacks, or even system failures, can cause significant downtime, disrupting business processes and leading to financial losses.

- Recovery Challenges: The complexity of digital environments can make it difficult to recover quickly from system downtime, exacerbating the impact of such incidents.

9. Financial Loss

- Direct Costs: Cybersecurity incidents, such as data breaches or ransomware attacks, can result in direct financial losses, including fines, ransom payments, and the costs of remediation.

- Indirect Costs: Organizations may also suffer indirect financial impacts, such as loss of customers, reputational damage, and reduced market value, following a significant cybersecurity or data privacy incident.

These risks highlight the importance of robust cybersecurity measures, compliance with data protection regulations, and ongoing vigilance in managing digital transformation initiatives.

Table 1. State of Digitalization by Country

Country	Internet Penetration (%)	Mobile Broadband Subscriptions (per 100 people)	Digital Economy Contribution to GDP (%)	Digital Infrastructure Quality (Score)
United States	89	135	9.6	85
Germany	91	120	8.3	82
China	70	115	7.1	78
Japan	93	120	8.7	84
South Korea	97	140	11.1	90
India	50	85	5.4	68
Brazil	75	95	6.7	72
United Kingdom	94	125	10.2	86
Australia	88	130	8.9	83
Russia	80	105	6.5	74
Ukraine	65	90	6.0	70

Source: independently compiled by the author.

At fig.1 represents the distribution of digitalization levels based on an aggregated score from the key indicators listed in the table 1. representing the distribution of digitalization levels by country, based on an aggregated score of key digitalization indicators. Each country's share in the pie chart reflects its relative level of digitalization compared to the others listed.

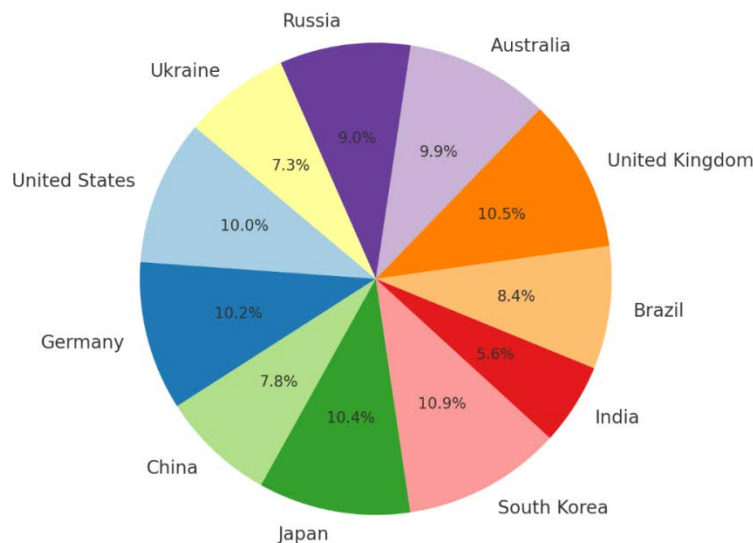


Figure 1. Distribution of Digitalization Levels by Country (Including Ukraine)

Source: prepared by author

Digital technologies have the potential to significantly foster inclusive economic growth and development by bridging gaps in access to resources, information, and opportunities. The transformative power of digital tools can reshape various sectors, driving progress across diverse economic and social strata.

One of the primary ways digital technologies contribute to inclusive growth is through enhanced access to information and services. The internet, for example, offers unprecedented access to educational resources and professional training, enabling individuals in remote or underserved regions to acquire new skills and knowledge. This democratization of information empowers people to participate more fully in the economy, potentially leading to higher levels of employment and entrepreneurship.

Moreover, digital platforms facilitate market access for small and medium-sized enterprises (SMEs) and individual entrepreneurs. E-commerce platforms, for instance, allow businesses to reach global markets that were previously out of reach, thus fostering economic opportunities in areas with limited physical infrastructure. This expanded market reach can drive business growth and create jobs, contributing to more balanced economic development.

Digital technologies also enhance financial inclusion, a critical factor for economic growth. Mobile banking and digital payment systems have revolutionized financial services by providing unbanked and underbanked populations with access to banking services through their mobile phones. This increased financial inclusion enables individuals and businesses to engage more effectively in economic activities, from savings and investments to transactions and credit access.

Furthermore, data analytics and artificial intelligence (AI) are being leveraged to address specific development challenges. For instance, predictive analytics can improve resource allocation in sectors such as healthcare and agriculture, leading to more effective interventions and better outcomes. In agriculture, AI-driven tools can optimize crop yields and supply chain management, contributing to food security and economic stability in developing regions.

The integration of digital technologies into governance and public services also holds promise for promoting inclusivity. E-governance platforms can enhance transparency and reduce corruption by making government processes more accessible and accountable. Additionally, digital platforms for citizen engagement and feedback can ensure that marginalized voices are heard and considered in policy-making processes.

However, the potential of digital technologies to promote inclusive growth is not without challenges. Issues such as digital literacy, access to technology, and cybersecurity must be addressed to ensure that the benefits of digital advancements are equitably distributed. Bridging the digital divide and investing in digital infrastructure are essential to ensuring that all individuals and communities can participate in and benefit from the digital economy.

In conclusion, digital technologies offer transformative opportunities for inclusive economic growth and development by expanding access to information, services, and markets, enhancing financial inclusion, and improving governance. To fully realize these benefits, concerted efforts are needed to address challenges and ensure that digital advancements reach all segments of society.

Discussion. The discussion of the research findings reveals that while digital transformation offers numerous benefits, it also requires careful management to mitigate associated risks. The cybersecurity threat landscape is continually evolving, necessitating the implementation of robust security measures to protect digital infrastructure. Governments and businesses must work together to develop comprehensive cybersecurity strategies that address these challenges and ensure the resilience of digital systems.

The digital transformation of the global economy represents a profound shift in the mechanisms by which economic activities are conducted, with significant implications for businesses, governments, and societies at large. This transformation is characterized by the widespread adoption of digital technologies, which are reshaping traditional economic structures and creating new opportunities for innovation and growth. However, alongside these opportunities,

numerous challenges emerge that must be carefully navigated to fully realize the potential benefits of digitalization.

Furthermore, the issue of data privacy cannot be overlooked. As digitalization continues to advance, there is a growing need for regulations that protect individuals' privacy rights while allowing for the beneficial use of data. The development of international standards for data protection is crucial to ensure that digital transformation does not come at the cost of individuals' privacy.

In addition to addressing these challenges, it is essential to focus on ensuring that the benefits of digital transformation are equitably distributed. The digital divide remains a significant barrier to inclusive economic growth, particularly in developing countries where access to digital technologies is limited. Bridging this gap requires investments in digital infrastructure, education, and skills development to empower individuals and communities to participate in the digital economy.

One of the most significant opportunities presented by digital transformation is the ability to enhance efficiency and productivity across various sectors of the economy. By leveraging advanced technologies such as artificial intelligence, big data analytics, and the Internet of Things (IoT), businesses can optimize their operations, reduce costs, and improve decision-making processes. This technological advancement has led to the emergence of new business models, such as platform-based economies, which facilitate more efficient resource allocation and create new value propositions for consumers and producers alike (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013).

Moreover, digital transformation is democratizing access to global markets, particularly for small and medium-sized enterprises (SMEs). The reduction in barriers to entry and the ability to reach global audiences through digital platforms are enabling SMEs to compete with larger corporations on a more level playing field. This trend is fostering greater economic inclusion and diversity, as businesses from different regions and sectors can participate more fully in the global economy (Giones & Brem, 2017).

However, the rapid pace of digital transformation also presents significant challenges, particularly concerning data privacy, cybersecurity, and the digital divide. The increasing reliance on digital technologies has raised concerns about the protection of personal and sensitive information, as cyber threats become more sophisticated and pervasive. Additionally, the unequal distribution of digital infrastructure and skills across different regions and populations exacerbates the digital divide, potentially leading to greater economic inequalities (OECD, 2020).

The labor market is also undergoing significant changes as a result of digital transformation. While new technologies create opportunities for high-skilled jobs, they also pose a threat to traditional employment, particularly in sectors that are susceptible to automation. This shift necessitates the development of new educational and training programs to equip the workforce with the skills needed to thrive in a digital economy (Brynjolfsson & McAfee, 2014).

Conclusions. In conclusion, the digital transformation of the global economy presents both challenges and opportunities. The integration of digital technologies has the potential to drive economic growth, innovation, and sustainable development. However, it also raises significant concerns regarding cybersecurity, data privacy, and inequality. To maximize the benefits of digital transformation, it is essential to adopt comprehensive strategies that address these challenges and promote inclusive development. Future research should focus on exploring the long-term implications of digital transformation and identifying best practices for managing its impact on the global economy.

To harness the benefits of this transformation, it is crucial for policymakers, businesses, and society to address the associated risks and to promote inclusive and sustainable digital growth. Future research should focus on exploring the long-term impacts of digitalization on economic structures, the role of regulation in managing digital risks, and the strategies for ensuring that the

benefits of digital transformation are equitably distributed across society. This multifaceted approach will be essential in navigating the digital future and in fostering a global economy that is both competitive and inclusive.

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The article was received by the editors 14.07.2024
The article is recommended for printing 28.08.2024

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Цифрова трансформація глобальної економіки: виклики та можливості

Анотація. Глобальна економіка переживає глибоку трансформацію, спричинену цифровими технологіями. Ця стаття досліджує виклики та можливості, що виникають у процесі цифрової трансформації глобальної економіки. У дослідженні висвітлюються критичні фактори, які впливають на цей перехід, зокрема технологічний прогрес, регуляторні рамки та соціально-економічні наслідки. У статті також розглядається вплив цифровізації на різні сектори, включаючи фінанси, виробництво та послуги, а також адресуються потенційні ризики, пов'язані з кіберзагрозами та конфіденційністю даних. Висновки дослідження свідчать про те, що, незважаючи на значні можливості, які надає цифрова трансформація для економічного зростання та інновацій, вона також вимагає всебічних стратегій для мінімізації супутніх ризиків та забезпечення інклюзивного розвитку.

Метою цієї статті є аналіз викликів і можливостей, що виникають у процесі цифрової трансформації глобальної економіки. Оскільки цифрові технології дедалі більше інтегруються у різні сектори, вони кардинально змінюють бізнес-моделі, економічні структури та суспільні взаємодії. Дослідження зосереджується на визначенні ключових рушійних сил цієї трансформації, включаючи технологічний прогрес, зміну поведінки споживачів та конкурентний тиск, з яким стикаються підприємства в умовах цифрової ери. Крім того, розглядається вплив цифровізації на різні економічні сектори, з особливою увагою до фінансів, виробництва та послуг.

Методологія дослідження включає всебічний огляд наявної літератури, підтриманий аналізом кейсів з різних галузей. Якісні інтерв'ю з експертами в галузі цифрової трансформації додатково збагачують розуміння теми. Зібрані дані були проаналізовані для виявлення нових тенденцій і закономірностей, що сформуvalи висновки дослідження.

Результати показують, що цифрова трансформація є двосічним мечем: вона пропонує значні можливості для економічного зростання, інновацій та розвитку нових бізнес-моделей, таких як цифрові платформи та гіг-економіка. Однак вона також ставить перед суспільством значні виклики, зокрема у сферах кібербезпеки та конфіденційності даних. Зростаюча частота та складність кібернападів становлять серйозну загрозу для бізнесу та урядів, тоді як занепокоєння щодо конфіденційності даних вимагає розробки надійних регуляторних рамок.

Ключові слова: цифрова трансформація, глобальна економіка, міжнародна економіка, цифрова економіка, технологічний прогрес, кібербезпека, економічне зростання, інновації

Рис.: 1, табл.: 1, бібл.: 17

Класифікація JEL: O31, O33, O47, F01, F02, L86, D80

Для цитування: Suntsova O. Digital transformation of the global economy: challenges and opportunities. *Фінансово-кредитні системи: перспективи розвитку.* №3(14) 2024. С. 87-100. DOI: <https://doi.org/10.26565/2786-4995-2024-3-08>

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