

E-commerce development: Prospects and legal challenges of business digital transformation amidst economic de-shadowing



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Abstract The development of e-commerce is becoming a decisive factor in the transformation of the global economy, opening up new opportunities for business. The purpose of the study is to identify strategies that allow companies to effectively use the potential of e-commerce to ensure sustainable growth and competitiveness at the international level. In this scientific article, the characteristics of the shadow economy and its impact on the economies of Ukraine and EU countries are highlighted. Approaches and tools used to combat the shadow economy in EU countries are examined. It has been established that the European Parliament adopts a series of legal acts aimed at addressing the causes and consequences of the shadow economy's impact on the development of EU countries. Based on the analysis of modern scientific research and the study of practical cases from different countries, the main legal and economic aspects affecting the development of electronic commerce were identified. The study highlights the importance of legal regulation as a means of addressing international commercial challenges, including intellectual property protection, cyber security and consumer protection in the digital space. Special attention is paid to the role of diplomatic initiatives in the creation of joint projects and the development of international standards that contribute to the harmonization of trade relations and the support of innovative development. The results of the study indicate the need for a holistic approach to the development of e-commerce, which includes technological innovation and the development of legal infrastructure. The article highlights the factors of introducing digital technologies into commercial activities, the impact of globalization on e-commerce, and strategies for business adaptation to international challenges. Recommendations for optimizing the use of e-commerce in the global economy, taking into account current trends and future development prospects, are offered.

Keywords: online business, business digitalization, international trade, retail markets, regulatory frameworks

1. Initial Considerations

In today's world, investment in e-commerce has a leading role in strengthening retail trade and facilitating the globalization of business processes. A study of Stuchlý et al. (2023) highlights the complexities, related to digital identity in e-commerce, and the need to develop universal verification mechanisms to protect against fraud. The growth of digital technologies and Internet infrastructure opens up new horizons for companies, allowing them to enter international markets with lower costs and greater efficiency compared to traditional methods. The trend towards commercialization increases the competitiveness of companies, provides consumers with a wider choice of goods and services, which stimulates further investment in innovation and technological development. The globalization of e-commerce contributes to the leveling of economic opportunities between different countries, giving small and medium-sized enterprises the tools to compete effectively in the world market. The existence of a shadow economy in any country causes numerous problems, which require immediate and effective solutions. The goal of de-shadowing the economy is to implement advanced technologies and work on the legal framework to combat illegal and semi-legal economic activities. These activities result in significant losses to the state budget, distort the competitive environment, and hinder economic development. In this regard, ensuring the legal framework for the de-shadowing of the economy is a highly relevant issue in modern society.

The legal factor of e-commerce becomes especially relevant due to the digital transformation of business. The need for unification of legal norms and standards at the international level is becoming increasingly obvious to ensure fair and transparent business conditions. The variety of jurisdictions and legal regimes creates certain difficulties for companies operating on a global scale in the areas of intellectual property protection, personal data processing, consumer rights and



electronic payments. Studies (O'Leary, 2022; O'Leary, 2023) analyzes the level of influence of digital platforms on international trade and local markets, with existing changes in legislation to new business conditions. Solving legal issues requires states and international organizations to actively work on creating flexible, effective legal frameworks that can adapt to rapid changes in technology and market conditions. Efforts include the development of international conventions, the standardization of e-commerce norms, the promotion of cross-jurisdictional dialogue and the exchange of best practices between countries.

The development of diplomatic relations and the creation of joint commercial projects are of leading importance in overcoming the challenges associated with the globalization of electronic commerce. Research of Deng et al. (2023) highlights how innovative technologies are transforming traditional business models, providing companies with benefits in the form of optimizing supply chains and personalizing customer experiences. Cooperation at the international level promotes the harmonization of trade and investment legislation and the development of common technological standards, which is important for ensuring the interoperability of digital platforms and the security of online transactions. Relevant cooperation includes sharing experience and knowledge in the field of the digital economy, supporting innovative start-ups and promoting the development of digital infrastructure in developing countries. Studying various approaches and strategies of EU countries in this field helps identify optimal regulatory models that can be adapted to the specific conditions and needs of each national economy. Continued cooperation and experience sharing between countries are essential for further improving anti-corruption policies and ensuring a stable financial environment. Adopting advanced EU methods and practices can be a significant step toward ensuring sustainable economic growth and enhancing international competitiveness.

The purpose of the study is to analyze the development of e-commerce and identify the main trends, perspectives and legal challenges arising in the process of digital transformation of business at the international level. The main task is to identify the factors that contribute to the growth of e-commerce, to develop recommendations for solving the identified legal gaps in the aspects of data protection, intellectual property and international trade. The practical value of the study lies in providing a comprehensive analysis of the current state of the e-commerce market, which allows businesses to adapt to rapid changes in the digital environment, taking into account legal aspects and international norms. The problem of the research is focused on the determination of legal barriers and opportunities that arise before companies in the conditions of globalization. The study is aimed at expanding the understanding of the aspects of retail trade, which forms the formation of business development strategies in the conditions of the digital economy.

The development of e-commerce is closely related to the digital transformation of business and is the focus of academics and the business community in the field of digital economy (Kedah, 2023; Kniaz et al., 2023). The author Cristofaro et al. (2023), analyzing the dynamics of the growth of electronic commerce, determined that the most promising direction would be the integration of international payment systems. The scientist Alabi and David (2023) examines the peculiarities of jurisdictions that adapt to the rapid development of electronic commerce in the direction of taxation, as it is an incentive for the functioning of international business. An important contribution to the study of cyber security issues is made by Hafiani and El Abbadi (2023), emphasizing the need to develop global data protection standards to counter growing threats.

The expansion of e-commerce has been well-documented in recent literature, with organizations such as the OECD (2024) reporting significant growth in global online trade, driven by the digitalization of businesses and increasing consumer reliance on digital platforms. Emerging technologies, including artificial intelligence (AI) and blockchain, play a critical role in enhancing e-commerce efficiency, offering personalized customer experiences and secure transaction systems. Recent studies highlight the importance of regulatory frameworks GDPR (2022), which governs data protection in the EU. The issue of cybersecurity remains pivotal, as businesses face rising risks associated with digital fraud and data breaches, which vary regionally in their impact and regulatory responses. These aspects emphasize the need for a more nuanced approach to understanding e-commerce development and the legal hurdles in digital transformation.

According to Spitzer (2021), predictions for the future development of the e-commerce market focus on the impact of digitalization on consumer relationships and new business models as a result of constant technological innovation. An analysis of Povna and Olyfirenko (2022) on regulatory measures indicates the need to adjust national legislation to international standards to facilitate cross-border trade and protect consumer rights in the digital environment. The scientist Marchenko (2023) reveals the potential of blockchain technologies to create transparent and secure supply chain management systems, as their integration is available for a wide range of business activities. The study of Simandan (2023) provides valuable insights into the current state and future of e-commerce, highlighting the key technological, economic and legal aspects shaping the global landscape of digital business transformation. According to Asante et al. (2023), the international community is actively working on building a flexible legal environment and opportunities for conducting transnational business. The scientist Goldman et al. (2021) points to the need to harmonize international standards in the field of digital commerce to reduce legal barriers and simplify cross-border interaction between enterprises. The author Rahmawati (2023) explores the impact of digital transformation on consumer relations, pointing to changing shopping patterns and challenges related to the protection of consumer rights in the online space. The work of Nahr and Heikkilä (2022) emphasizes the importance of integrating the technologies of modern jurisdictions into the digital format to ensure the smoothness of e-commerce processes.

A scholar of Shyaa and Al-Zubaidie (2023) examines the regulatory aspects of using blockchain in e-commerce, analyzing the potential for security of transactions and transparency of supply chains. An important aspect of the development of digital

assets and their impact on e-commerce is considered in the work of Kaningini et al. (2023), which emphasizes the need to regulate cryptocurrencies and tokenized assets to ensure financial stability and protect investors. A study Ruslijanto (2021) finds that the adoption of cloud technologies can optimize customer interactions and personalize advertising campaigns. The article Munoz et al. (2023) discusses in detail the potential of modern technologies to create decentralized e-commerce platforms that provide a higher level of security and transparency of financial transactions. Thus, the conducted literature review demonstrates the variability of approaches in the field of electronic commerce, covering technological innovations, legal challenges and development prospects, emphasizing the importance of a comprehensive approach to the adaptation of business and legislation to the conditions of the digital economy.

2. Materials and Methods

To conduct a study of the potential for the development of e-commerce in the legal and technological direction, a methodology was developed for the purpose of in-depth analysis of the current state and trends of the development of e-commerce in the global market, with a special focus on the largest leading countries. The primary stage was the collection and analysis of statistical data, information on market shares, innovative approaches to digitalization of business, as well as the specifics of legal regulation of e-commerce in countries with high development potential in this field. Open sources of information, reports of international organizations and scientific publications were used. The next step included a detailed characterization of jurisdictional issues and challenges related to the construction of digital infrastructure, an analysis of legal aspects affecting the development of e-commerce, and an assessment of current needs in digital infrastructure with partial forecasting. The article uses the methods of comparison applied to compare various legal acts regarding the regulation of legal aspects of digitalization of business and its functioning in the electronic environment. The final stage involved forecasting the development of the e-commerce market based on the data obtained, using the method of scenario modeling, which made it possible to identify key trends, opportunities, risks for the further development of the industry and outline potential prospects. The article analyzes existing and potential regulatory measures at the international and national levels that may affect the dynamics of the e-commerce market, including legislative initiatives, data protection policies, customs regulations and cyber security standards in the context of increased geopolitical confrontations. A comprehensive approach allows you to provide a deep understanding of the current state of e-commerce and identify key factors affecting its development in the future. Therefore, the collected and analyzed data based on quantitative and qualitative methods, along with the predicted assessments, became the basis for developing recommendations for further actions for industry stakeholders, aimed at overcoming existing challenges and optimizing opportunities for the development of e-commerce and the corresponding legal environment.

3. Results and Discussion

The development of e-commerce has become one of the most noticeable phenomena in the global economy, changing the usual approaches to doing business, consumer behavior and corporate strategy. Combating the shadow economy is essential for creating a transparent competitive environment where all market participants follow the same rules. The most effective means of this fight are based on legislative initiatives that support equal conditions for business development, investment attraction, and economic growth stimulation. De-shadowing also helps protect workers' rights, as labor rights and social guarantees are often violated in the informal sector. E-commerce contributes to the globalization of markets, allowing small and medium-sized enterprises to go international and compete with large corporations. It stimulates innovation, optimization of production and marketing processes, and improves the quality of customer service. Changes are transforming traditional production chains, introducing new models of delivery of goods and services that build chains of interconnected digital platforms that integrate sellers and buyers from around the world into one economic ecosystem. The impact of e-commerce on the economy and society is difficult to overestimate, as it promotes economic growth and opens up new opportunities for entrepreneurship and creates jobs.

The intensification of competition between the largest participants in the e-commerce market - China, the United States of America and the countries of the European Union - is one of the key factors shaping the modern space of the global economy. Economic and political competition stimulates technological innovation, the development of new business models and the search for effective strategies for attracting customers. Reducing the scale of the shadow economy increases tax revenues, allowing the state to fund infrastructure projects, education, healthcare, and other social sectors. Shadow economy also strengthens national security, as undeclared income is often used to finance criminal activities. Implementing effective legal frameworks for de-shadowing the economy enhances international cooperation in combating financial crimes and money laundering. Overall, fighting the shadow economy is crucial for ensuring economic stability, strengthening state institutions, and improving citizens' welfare. The experience of EU countries can serve as a valuable resource for developing effective de-shadowing strategies in other nations. Companies operating internationally have to adapt to existing differences, which leads to increased costs of legal support and complexity of doing business. There is a challenge in the form of digital barriers in terms of data localization requirements and restrictions on cross-border information transfers, which complicate interoperability

between different legal systems and create potential risks for international trade. Effectively managing complexities in international jurisdictions requires a deep understanding of international law among the e-commerce market leaders depicted in Figure 1.

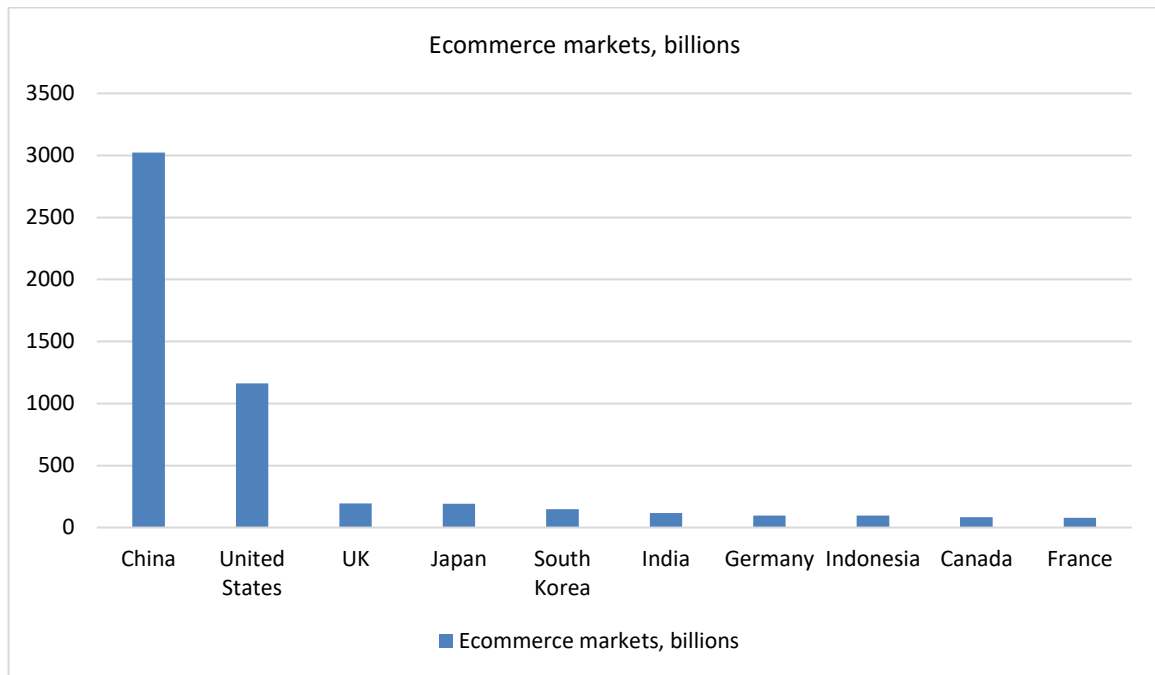


Figure 1 TOP-10 world's largest e-commerce markets in 2023. *Source:* Oberlo (2023).

Construction of digital infrastructure, optimization of logistics routes and efficiency of transportation are critical aspects for modern business, especially in conditions of rapid development of e-commerce and globalization of markets. The development of cloud technologies plays a key role in the creation of intelligent logistics systems capable of monitoring the movement of goods in real time, forecasting demand, optimizing routes and automating warehouse operations. Blockchain technologies ensure transparency and security of supply chains, allowing all participants in the chain to track the history of the movement of goods and guarantee their authenticity. The presence of a shadow economy in any country is a challenge, irrespective of its economic development level or specific national traits. According to researchers, the main issue lies not in its mere existence, but in the significant share of the shadow sector within the GDP. This is often driven by large corporations developing and actively employing various tax avoidance schemes. Such activities cause substantial damage to the national budget and undermine the country's economic stability. While adopting the experiences of other countries is crucial for addressing these challenges, it often proves insufficient on its own.

The complexity of jurisdictions becomes a significant obstacle to the digitalization of business due to the variability of cultural and global approaches to taxation and protection of one's own markets. The diversity of legal systems and tax regimes in different countries creates difficult conditions for companies seeking to export products abroad. The countries of the European Union operate under general GDPR data protection rules, while the US has a fragmented state-by-state privacy protection system, and China is implementing strict regulations on cybersecurity and data localization specifically in Chinese data centers. Differences in taxation, corporate tax and duties create additional barriers, requiring companies to have a deep understanding of local legislation to optimize tax obligations and avoid double taxation. The primary factors that negatively impact the budget and inflict serious damage on the economy include various forms of shadow activities. These encompass the use of joint ventures to transfer financial assets abroad, the operation of intermediaries who monopolize markets and conceal profits by artificially inflating company expenses. Commercial entities dealing in highly liquid goods, such as excisable products, frequently engage in transfer pricing to move profits out of the country.

The increased digitalization of money and electronic assets opens up new perspectives for e-commerce, offering innovative approaches to doing business through the introduction of cryptocurrencies, blockchain technologies and smart contracts. Modern technologies simplify and make transactions cheaper, provide a higher level of security and transparency of operations. Along with new opportunities come new challenges in the field of digital currency regulation and consumer protection. The authorities of many countries have not yet had time to adapt their legislation to the realities of the digital economy, which creates legal uncertainty for businesses and investors. Issues of cyber security and personal data protection are becoming more and more relevant in the context of digital payments and e-commerce during geopolitical confrontations and the sanctions policy of most countries of the European Union (Ranti et al., 2023; Khan et al., 2021). The policy of supporting informal workers in developing countries not only aims to combat poverty but also to protect fundamental rights, such as

preventing forced labor, child labor, and discrimination. Women, children, migrants, and elderly workers are particularly vulnerable to exploitation and abuse in the shadow economy.

Governments in EU countries are working to implement systems that address the consequences of the shadow economy. These systems foster disciplined behavior through a combination of penalties and incentives. Reducing corruption and bureaucracy in public administration helps build citizens' trust in governmental institutions, thereby promoting appropriate behavior among economic actors. Punitive measures and tools for detecting the shadow economy should be focused on areas most linked to organized crime, such as human trafficking and smuggling. The global retail market is growing at a rapid pace, as can be seen in the constructed Figure 2.

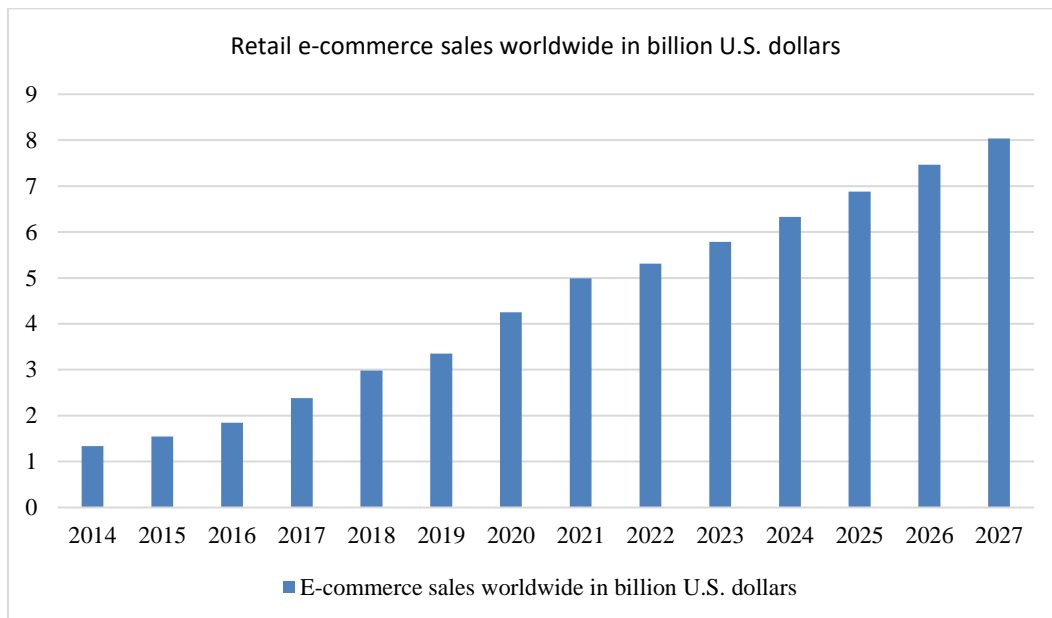


Figure 2 Retail e-commerce sales worldwide from 2014 to 2027, billion dollars. *Source:* Statista (2023).

The value of digital assets and the building of new types of businesses on them open up vast opportunities for innovation and growth in an increasingly digital economy. Cryptocurrencies, tokenized assets, NFTs, and other forms of digital value are creating the basis for new business models, including decentralized finance (DeFi), digital art, virtual real estate, and more. Legal systems focus on regulating existing assets to protect investors, ensure financial stability and prevent malicious activities such as money laundering or terrorist financing. Legal regulation in the electronic sphere is not yet sufficiently developed, and many jurisdictions are only beginning to implement laws and regulations relating to digital assets. There is therefore some uncertainty for businesses and investors looking to use the new tools and seeking legal clarity and protection. At present, a rational balancing act between stimulating innovation and ensuring proper regulation is critically important.

The EU's public policy in combating the shadow economy should be grounded in several key measures. First and foremost, reducing costs for legitimate businesses is crucial. This can be achieved by lowering regulatory burdens and decreasing tax obligations, making official business operations more appealing. Additionally, increasing the cost of operating in the shadow economy by raising risks for illegal businesses through enhanced tax oversight and substantial fines is essential. Tackling corruption is a key factor in combating the shadow economy. The main regulatory measures that are most popular in countries and regions with developed economies are shown in Table 1.

Legal challenges are becoming one of the biggest barriers to digital transformation in connection with protectionist politics and the presence of bureaucracy in it. Regulatory requirements in the areas of data protection, cyber security and intellectual property vary greatly from country to country and can significantly complicate the global operations of companies. GDPR regulations in the European Union, data protection laws in the US, and strict cyber security laws in China require businesses to implement sophisticated data protection and privacy measures. Purging corruption from government institutions is a critical success factor. It is also important for officials to be held accountable for the proper use of public funds, ensuring transparency before taxpayers. Furthermore, raising public awareness and providing education on the importance of official business registration and tax payments are necessary. This can be done through media campaigns, government portals, and other communication channels. The state must demonstrate effective use of taxpayers' money, which will increase public trust in government and encourage greater participation in formal economic activities. The table 1., highlights regulatory measures for digital business transformation, focusing on countries with advanced legislative frameworks in data protection, cybersecurity, and e-commerce regulation. The criteria for selecting these countries include their global economic influence,

the maturity of their digital ecosystems, and the comprehensiveness of their regulatory approaches. This selection ensures relevance to the article's scope by providing diverse perspectives on legal challenges and digital transformation practices.

Table 1 Regulatory measures of digital business transformation at the international level.

Country	Legal purpose	Regulatory and legal support
European Union	Comprehensive requirements for the protection of personal data, rights of data subjects, processing and transfer of data outside the EU.	General Data Protection Regulation (GDPR)
USA	Distinction between state cybersecurity regulations, protection of consumer information, liability for data breaches.	Critical Infrastructure Cybersecurity Improvement Act (CISA), Various state consumer protection laws.
China	Strict rules on data storage in the country, control over international data transfers, cyber security requirements.	Law on cyber security; Data Security Act.
India	E-commerce regulation, consumer data protection, cybersecurity obligations.	Information Technology Act (IT Act), Consumer Protection Rules (E-Commerce).
Brazil	Requirements for the processing and protection of personal data, the rights of data owners, international data transfer.	General Data Protection Law (LGPD).
Australia	Digital identity management, personal data protection, cyber security regulations for business.	Draft law on digital identification, Privacy Act.
Japan	Digital governance, protection of personal data in government and private sectors, international cooperation in the field of cyber security.	Law on Digital Administration, Law on Protection of Personal Data.

The prospects of digital transformation, despite the existing challenges in political and economic relations, remain extremely encouraging. Innovation and technological progress open up new opportunities to optimize processes, enter new markets and create value for customers of the global market. Integrating with regulatory requirements will serve as an incentive to improve internal procedures, improve cyber security and data protection, which will increase consumer confidence and strengthen brand reputation. Ultimately, success in digital transformation requires technological innovation, strategic planning with new means of project management, and the development of new partnerships that together form a solid foundation for future development.

Blockchain and cloud technologies hold significant promise for transforming digital innovation by enhancing transparency, efficiency, and data management capabilities. However, the implementation of these technologies is often met with regulatory challenges that vary across jurisdictions. For instance, blockchain's decentralized nature raises questions about accountability, data security, and compliance with existing legal frameworks. Highlighting specific cases where regulatory barriers have delayed or hindered the adoption of blockchain, such as restrictions on cryptocurrency or the lack of standardized guidelines for its use in financial systems, could shed light on the complex interplay between innovation and regulation.

Similarly, cloud technologies face substantial regulatory scrutiny, particularly regarding data protection and cross-border data transfers. Stringent laws like the GDPR in the European Union emphasize the importance of data sovereignty, requiring organizations to ensure compliance with privacy and security standards when utilizing cloud services. Exploring such legal constraints and their implications on cloud adoption could provide a deeper understanding of the challenges businesses face in leveraging these technologies. A balanced perspective on these regulatory hurdles would contribute to a more comprehensive discussion of the global digital transformation landscape.

Munoz et al. (2023) emphasize that the development of e-commerce necessitates comprehensive legal frameworks to ensure data protection and regulatory compliance. This is particularly important in light of global digitalization and the surge in online trade volumes, which create additional enforcement challenges. On the other hand, Oberlo (2023) and Nahr and Heikkilä (2022) highlight that the rise in e-commerce sales across different countries requires businesses not only to adapt to new market conditions but also to consider specific regulatory aspects within each jurisdiction. As O'Leary (2023) notes, these changes demand a deeper understanding of digitization and digital transformation concepts, which significantly impact e-commerce operations, including accounting and supply chain management. Thus, while digital transformation opens new opportunities for businesses, it simultaneously calls for legal innovation to effectively protect the interests of all market participants.

As e-commerce continues to evolve, the interplay between technology and law becomes increasingly critical. Povna and Olyfirenko (2022) discuss the role of digital marketing in enhancing national enterprises within the e-commerce framework, emphasizing that adapting marketing strategies to digital platforms is essential for maintaining competitiveness. Similarly, Shyaa and Al-Zubaidie (2023) explore the application of lightweight ciphers in securing e-commerce transactions, underscoring the importance of robust cryptographic methods to protect consumer data and build trust in online transactions. Additionally, Ruslijanto (2021) addresses the legal standing of digital signatures as evidence in e-commerce, highlighting their validity as crucial for legal transactions and contract enforcement in digital marketplaces. These perspectives reflect the growing need

for both technological advancements and corresponding legal safeguards in supporting secure, trustworthy, and efficient e-commerce environments.

Regarding the development of e-commerce, the results correlate with the findings of Mamakou et al. (2023), which indicates the importance of digital platforms for international trade and the strengthening of the legal environment. Research (Arriagada, 2023) underlines the assertion of the obtained results that innovative technologies contribute to the globalization of e-commerce. According to Janšto (2023), harmonization of international standards is critical for reducing legal barriers, own analysis indicates the need for detailed legal mechanisms according to local market conditions. Comparison of results with data of Vuță et al. (2022) reveals similar trends in changing consumer relations, as the e-commerce market becomes international and rapidly develops, creating new conditions for conducting business activities. The hypothesis of Wang (2023) is confirmed by own findings, which add to the understanding of the potential risks associated with automation and personalization, so the first task is to build a digital infrastructure. Research of Heikkilä (2022) on regulatory aspects in e-commerce is reflected in our results, which indicate the need to develop specific regulatory boundaries to ensure effective and safe integration of digital technologies. Observations of Velentzas et al. (2022) regarding digital identity in e-commerce are in line with scientific trends, as the retail market expands and creates new challenges for the international economy. According to Holsapple (2023), the analysis of the development of digital assets indicates a smooth transformation of conducting e-commerce to international standards with the provision of the appropriate legal field of world jurisdictions. The obtained results confirm the study (Ellitan, 2023), which indicates the difficulties of harmonizing international legal norms in the areas of consumer protection and cross-border trade. According to Giardino (2023), the need to adapt the legal framework to the digital era is becoming increasingly important to support the sustainable development of global e-commerce and ensure fair competition. The development of e-commerce opens up new horizons for business, providing opportunities for global expansion and personalization of offers for consumers. Digital transformation is accompanied by a number of legal challenges, including data protection, copyright and cross-border trade, requiring businesses to be flexible in meeting the changing legal framework. The prospects of electronic commerce are inseparably connected with the development and implementation of innovative legal mechanisms that would ensure the balanced development of digital business in the conditions of globalization and digitization of the economy.

4. Conclusion

Thus, the development of e-commerce is one of the most vivid examples of the impact of digital transformation on modern business and the global economy. The shift from traditional forms of commerce to the online space has opened up vast opportunities for businesses of all sizes, allowing them to expand markets, optimize supply chains, and provide greater customization of products and services. Digital technologies in the form of blockchain and big data have become catalysts in the process of business globalization, contributing to the creation of innovative approaches to conducting commercial activities. To curb the spread of the shadow economy in Ukraine, it is essential to implement a series of measures, including fostering a conducive business environment, intensifying the fight against illegal activities and corruption, and supporting the revitalization of key economic sectors. The growth of shadow economic relations leads to a severe violation of the rule of law, resulting in macroeconomic imbalances and structural changes in socio-economic development, posing a threat to Ukraine's national security. A crucial step in de-shadowing the national economy should involve legalizing business activities by creating favorable conditions for their operation.

The problems and global challenges associated with the development of e-commerce cover a wide range of issues, from technical to legal. One of the main challenges is ensuring cyber security and protecting customer data, which is becoming more and more important as the number of online transactions grows. The legalization of business activities through the creation of favorable conditions is a crucial step in the de-shadowing of the economy. The challenge of developing effective measures to combat the shadow economy has become even more pressing amid the war with Russian aggression. The increase in the shadow economy's share negatively impacts economic efficiency, erodes trust in the government, and hinders integration into the international economic space. There is a challenge in the form of a digital divide and unequal access to digital technologies among different regions and segments of the population, which can exacerbate social inequality and limit opportunities for economic growth in less developed countries.

In response to the modern legal issues of digital business transformation, it is necessary to develop a comprehensive approach that includes technological and legal aspects. Companies need to invest in the development of internal cyber security infrastructure and data protection systems, ensuring a high level of security of customer information. This is essential to improve social standards and guarantees, such as minimum wages, adequate social protection, and a realistic subsistence level. The expansion of the shadow economy undermines the rule of law, creates macroeconomic imbalances, and poses threats to Ukraine's national interests. It is necessary to stimulate innovation and support the development of digital literacy among the population to ensure equal access to digital resources and the opportunities they open up. The proposed multifaceted approach will allow to overcome the existing challenges of legal development of digital commerce and ensure its sustainable development for the benefit of all participants of the global market.

Ethical Considerations

Not applicable.

Conflict of Interest

The authors declare no conflicts of interest.

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