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Digital Transformation in Logistics: Driving Sustainable Growth in International Commerce

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ABSTRACT:
Logistics and international trade are becoming simplified with the help of digital technologies that reduce costs, shorten process times and improve outcomes, especially in e-commerce, supply chains and ways that assist in commercial activities. The importance of global commerce and logistics processes for the digital economy has become more relevant due to the priority of sustainable development principles. The study focuses on monitoring the impact of the digital economy on the growth of digital logistics, as well as to explore the possibilities of the practical application of innovative digital solutions in these areas. The study conducts an empirical analysis of scientific publications on the digitalisation of international trade and logistics over the past 10 years. The article examines the logistics processes and international trade. It analyses the logistics efficiency and quality indicators in 139 countries in 2023. Based on the correlation analysis of the relationship between the Logistics Performance Index (LPI) and the leading logistics efficiency indicators (global data), as well as between economic growth, international trade development and digital transformation, the author establishes the closeness of dependence. The principal risks of consumers in international transactions and proposals for neutralisation are identified. The calculated approximation equation allowed us to forecast global e-commerce (retail sales) until 2028. Proposals for forming standard rules for digital trade between countries are identified. Practical strategies for developing digital transformation of logistics and international trade are outlined, including the introduction of common standards, support for innovation in logistics and the formation of a global digital trade ecosystem. The article's main conclusions are that the digitalisation of logistics helps reduce costs, speed up deliveries and improve the transparency of international trade.

Keywords: logistics processes, digital transformation, digital logistics, digital economy, green entrepreneurship, international trade

1. Introduction

Modern international trade is integrated, with the digital economy playing an increasingly important role. Digital technologies create the conditions for optimising trade

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processes and logistics, which helps to reduce costs and increase the speed of operations. In logistics, partial or full automation of processes is now commonplace, both within the digital marketplace and communication process, as well as in logistics corridors and supply chains. It is estimated that modern logistics technologies can save up to 16-28% of the time spent on delivery and customs clearance (Lehmacher, 2021).

In line with the development of digitalisation, various business sectors are gradually adopting digital paradigms through software systems in their operations. Researchers worldwide seek to identify potential differences in technology adoption, depending on the socio-economic development of the territory, and provide information that can contribute to a more balanced and accelerated technological evolution (Prokopenko et al., 2021; Ndiapa, 2024). Digital logistics is becoming increasingly necessary due to the growth in turnover, especially in e-commerce. Innovative approaches to logistics in the digital dimension allow us to optimise the components of the overall process of international trade development, such as transportation, inventory management, etc. (Liu, 2024; ThankGod, 2024; Desyatnyuk et al., 2024).

At the same time, the digital economy makes it easier for companies to access global markets, which contributes to more transparent supply chains and prevents delays and risks associated with fraud or inaccuracies in the supply process. E-commerce is rapidly gaining popularity and is a fast-growing industry in the global economy. With the help of information technology, Internet companies open up opportunities for developing new markets, providing the online consumer with great potential for product research (Tovma et al., 2020; Krysovatyy et al., 2024). Integration processes of logistics digitalisation contribute to developing international trade and creating new jobs in the IT sector. Scientists from around the world (Poland, Germany, and the United States) note that people – highly skilled, motivated, and dedicated – are an essential component of the success of digitalisation in the logistics services sector. At the same time, a well-formed vision and goals of logistics digitalisation play a crucial role (Cichosz et al., 2020)

In such circumstances, the issue of cybersecurity and process standardisation is becoming more acute. The study will assess which regulatory tools and approaches can help protect data and strengthen security in digital networks. Scientists are concerned about the growing cybersecurity risks for business companies going through this process (Saeed et al., 2023). The ISMS ISO 27001 standard defines the principles of information security, cybersecurity and privacy protection, as well as the operation of information security management systems. The requirements of the standard contribute to the effective implementation of information security management systems, as the IT sector deals with a huge amount of online data that needs to be protected from any interference or loss (Podrecca et al., 2022). Standardising a company's digital optimisation efforts can improve change management, configuration management, and the lifecycle of a product or service. As Putra et al. (2021) argue, this has a positive impact on the company's position compared to competitors and allows for a scientific approach to achieve the desired results. To continue, scientists from the UK and Finland highlight current trends in digitalisation in logistics(Wang et al., 2021).

In this regard, the study is timely and in demand, as it provides a comprehensive understanding of how the digital economy affects international trade and logistics processes, identifying new opportunities for the digitalisation of the global economy.

2. Literature review

Analytical logistics studies for a large sample of countries show a statistically significant and positive impact on logistics productivity (Gani, 2017). Logistics is becoming increasingly important in international trade today. At the same time, some researchers pay special attention to the Logistics Performance Index (LPI), which synergises components such as logistics costs, customs procedures, and infrastructure quality. The results of scientific research by a number of scholars (Martí et al., 2014; Shikur, 2022) convincingly show that optimising each LPI component boosts trade flows not only at the regional level but also globally.

Researchers from Central and Eastern Europe (CEE) and the Western Balkans have used the example of their region to study the impact of the (LPI) for the period 2007–2018. The results confirmed the point of view of previous researchers (Katrakylidis & Madas, 2019; Bugarčić et al., 2020). Other researchers have noted that LPI has differentiation of inflows on the processes of interaction in trade (Zaninović et al., 2020).

At the same time, there is concern about international logistics risks, including logistics losses and additional costs, timeliness risks, environmental risks and logistics information risks. Scholars in China have used the methods of fuzzy comprehensive evaluation (FCE) and analytical hierarchical process (AHP) to show that, in general, international logistics risks are mainly risks (Yan et al., 2022).

The researchers emphasise the systematic and complex relationship between the efficiency of the logistics system and the nature of the development of the field of international trade processes, which serves as the basis for strategic management in the industry at the regional or national level (Song & Lee, 2022; Rockwell, 2024). The dynamic impact of international logistics on foreign trade should be taken into account (He et al., 2021; Shibasaki et al., 2021).

Several publications have explored the role of digitalisation in the pace of global economic development and international trade, identifying it as a decisive factor (Ahmedov, 2020). Scholars highlight the main points of digitalisation: Internet connectivity increases trade for countries with different income levels; digital provisions in the PTA increase trade for high-income service exporters. It is believed that Internet access is more effective for economic development than digitalisation (Wang et al., 2021). Factors such as the rapid growth of digital commerce with companies, businesses, and households; the emergence of a new generation of science related to the regulation of commercial relations in the cross-border virtual space; and new changes in international trade regulation have been studied (Ahmedov, 2020). Using China as an example, the study found that the development of the global digital economy opens up new opportunities for international trade and new challenges for exports. This study provides a framework for strengthening China's own DED, deepening international exchanges and cooperation, guiding the transformation and modernisation of enterprises (Fan Xin, 2021).

3. Methods

This study aims to explore the possibilities of effective use of digitalisation to improve the economic efficiency of operators on the example of analogues around the world. The study used scientific publications of scientists over the past 10 years, which are sufficiently representative to analyse the place of IT in logistics and supply chains. The method of empirical analysis was used to study the current theoretical and empirical data. In particular, statistical analysis was used to study the indicators of digitalisation and the degree of impact of technology on reducing costs and/or increasing the efficiency of international trade. This article presents the results of a comparative analysis to describe the levels of digital transformation in logistics in some countries in a simplified way, to examine the correlations between the LPI and key logistics performance indicators (global data for 2010–2023), economic growth, as well as international trade and digital transformation (EU-27 data for 2010–2023). The approximation method was used to characterise changes in retail sales in global e-commerce (2014–2027) (Chevalier, 2024). The method of synthesis and analysis allowed us to formulate our vision of the issue, taking into account both regional and global aspects, as well as to find compromises between the different interests of countries.

4. Results

Digitalisation is driving significant dynamics in the global economic environment with the aim of growth, innovation and economic integration. Thanks to digital technologies such as automation, cloud services and big data, companies optimise operating costs, speed up processes and increase overall efficiency. An assessment of the impact of the development of the economy directly through digitalisation on GDP per capita was made using the example of OECD countries (2019), differentiating them into groups by level of development (Gomes *et al.*, 2022).

The ranking indicators of the Logistics Performance Index (LPI) and logistics quality in 139 countries in 2023 were determined (Figure 1).

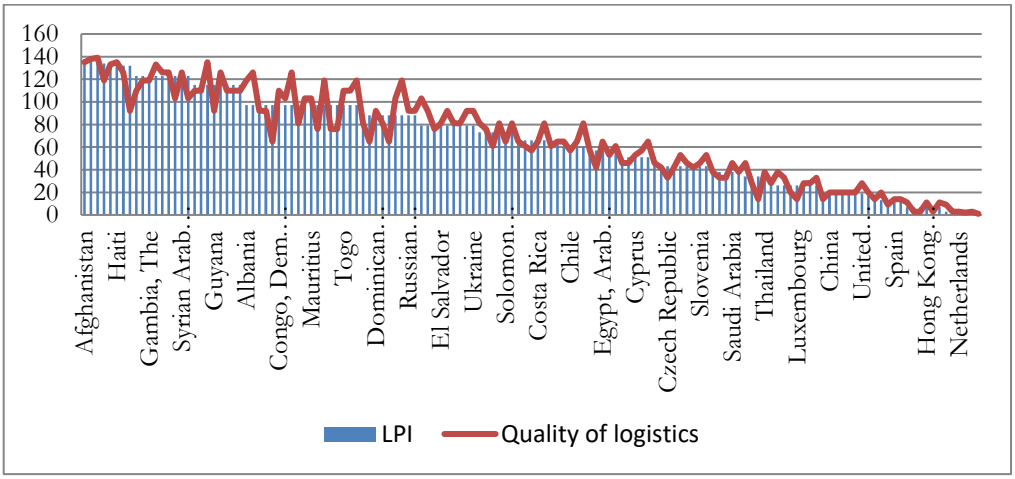

Figure 1: Rating indicators of the Logistics Performance Index (LPI) and logistics quality in 139 countries, 2023
Source: The World Bank (2024)

Based on the data analysis results, the correlation between the Logistics Performance Index (LPI) and the main aspects of logistics efficiency (transport infrastructure, customs and border management; quality of logistics services, ability to track goods, availability of international shipments at competitive prices, timeliness of shipments) was determined (Table 1).

Table 1: Matrix of correlation between the Logistics Performance Index (LPI) and the leading indicators of logistics efficiency (world)

	LPI	Customs	Infrastructure	International shipments	Quality of logistics	Timeliness of shipments
LPI	1					
Customs	0.9524	1				
Infrastructure	0.9364	0.9251	1			
International shipments	0.9122	0.8332	0.8270	1		
Quality of logistics	0.9587	0.9047	0.9051	0.8496	1	
Timeliness of shipments	0.9344	0.8562	0.8462	0.8391	0.8907	1

Source: calculated by the authors

Analysis of the correlation coefficients shows a close relationship between the Logistics Performance Index and customs clearance by 95.2%, infrastructure support by 93.6%, international shipping system by 91.2%, logistics quality by 95.9%, and timeliness of shipments by 93.4%. At the same time, it should be noted that there is a relationship between specific indicators; in particular, the quality of logistics depends on customs and infrastructure development by 90.5% and international shipments by 84.9%.

It has been established that the traditional judicial system cannot protect consumer rights in large volumes and small international transactions in practice (Pálfi, 2024). Each country has laws that protect consumer rights in different jurisdictions and define dispute resolution terms for online transactions that pose a risk when using the Internet to engage in international trade. In the United States, such a law was adopted in 2006 (Federal Trade Commission Act), which protects consumers (FTC Act, 2006). On 25 October 2022, the European Union adopted Directive 2011/83, which considers similar restrictions and attempts to mitigate them, providing standards for the return of goods and transparency of information (EUR-Lex, 2011). In developing countries, similar legislation has not yet been adopted or is in the process of being developed, which indicates a low level of legal protection of international trade in the context of digitalisation. Not all digital platforms currently offer receptive dispute-resolution mechanisms. For example, eBay or Amazon do not always offer alternative dispute resolution (Dal Pubel, 2018; Carrel *et al.*, 2019). The leading consumer risks in international transactions and proposals for their neutralisation are shown in Figure 2.

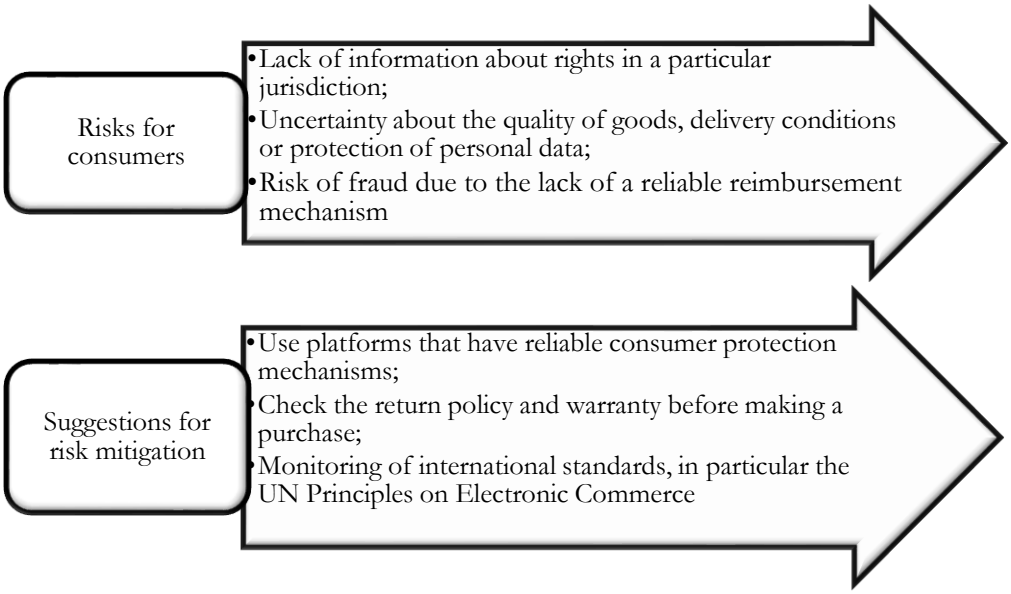

Figure 2: Main consumer risks in international transactions and proposals for their neutralisation
Source: compiled by the authors

The peculiarity of international trade is the lack of complete information, which requires international business counterparties to select business partners carefully. According to American scientists, online platforms facilitate efficient export and import operations and optimise logistics costs (Carballo *et al.*, 2022). Modern digital solutions in the context of artificial intelligence technologies and blockchain can significantly reduce information asymmetry, ensuring transparency and trust between business partners. Particularly noteworthy are the identified benefits of blockchain for protecting information in logistics systems and gaining additional management capabilities. Blockchain guarantees clear user identification, the ability to create registries, and ensures the reliability, transparency, and security of financial transactions (Steininger et al., 2022).

Today, more and more scholars from different regions of the world are proposing measures to reduce the digital divide, stimulate digitalisation and develop ICT skills. Modern digital platforms facilitate fast analytical data processing, optimising costs and reducing the risk of international trade transactions. Researchers in Thailand have found that digital transformation can help SMEs access LiVEx and new investments. Digital literacy is essential (Tanapaisankit *et al.*, 2024). To confirm this thesis, we conducted a correlation analysis of the relationship between economic growth, international trade development, and digital transformation using the example of the EU-27 (Table 2).

Table 2: Matrix of correlation between economic growth, international trade development and digital transformation, EU, 2010–2023)

	Imports	Exports	Fixed broadband subscriptions (per 100 people)	Individuals using the Internet (% of the population)	Mobile communication (for 100 people)	GDP growth (annual %)
Imports	1					
Exports	0.9942	1				
Fixed broadband subscriptions (per 100 people)	-0.0325	-0.0175	1			
Individuals using the Internet (% of the population)	0.3108	0.3143	0.5909	1		
Mobile communication (for 100 people)	-0.323	-0.3072	0.7047	0.1906	1	
GDP growth (annual %)	0.4693	0.4683	0.0762	0.2221	0.1132	1

Source: calculated by the authors

The analysis shows a close relationship between GDP growth and imports, which increased by 46.9%, exports by 46.8%, the number of fixed broadband subscribers (per 100 people) by only 7.6%, the share of the population using the Internet by 22%, and mobile communications (per 100 people) by 11.3%.

The digital economy supports innovation in new technologies and practices, including fintech, edtech, and digital health (Fernandes *et al.*, 2022). This creates a fertile ground for new solutions to transform outdated industries and emerging new industries. The growth of the digital economy contributes to job creation in IT, digital marketing, and other technology industries. This drives GDP growth, stimulates investment, and improves people's well-being. While the digital economy has brought new benefits and efficiencies, cybersecurity, data protection, the digital divide, and regulatory challenges come with the territory. International standards and regulatory harmonisation are becoming increasingly important. The digital economy is paving the way to support the imperative of sustainability in global economic processes by increasing innovation and prosperity (World Bank Group, 2024a, 2024b).

In 2022, the United States and China were recognised as leaders in introducing digital technologies in trade, with GDP growth driven by digitalisation (OECD, 2022). This growth includes increased labour productivity, expanded market access, and increased competitiveness through digital innovation. The share of the digital economy in China's GDP increased to 41.5% in 2022 (UNDP, 2024).

According to PwC, automation and digitalisation of processes in the supply chain can reduce logistics costs by 5-10% in large companies that use digital technologies to track and manage supplies (Schrauf & Berttram, 2016). IoT and AI have a direct impact on reducing costs in supply chains and create new business opportunities. The use of IoT capabilities for effective monitoring and management in logistics and trade has a number of advantages, as it is characterised by the following functionality

- Integration and support of an automated system for collecting, accumulating, analysing and summarising information data through the creation of a digital data bank;
- effective assessment of performance indicators;
- forecasting the dynamics of individual processes and the overall situation;
- formulation of a sound management strategy for sustainable business development.

The scientific world notes that the global economy reoriented from Industry 4.0 to the Digital ecosystem in 2023. The main direction of this digitalisation will be the virtualisation of logistics processes and the customer interface, where the critical factor will be the concentration of cooperation in the global market within specific industries (Schrauf & Berttram, 2016).

Today, the popularity of online shopping is growing steadily. In 2023, global online retail sales totalled USD 5784 million; by the end of 2024, this figure is expected to exceed USD 6 trillion. The trend line determined based on the data analysis for 2014–2024 is linear with an approximation coefficient R2 = 0.9904. Since the coefficient is close to 1, this indicates the reliability of the approximation and means that the analysis considers almost all the main factors that affect the dependent variable, and random or unaccounted-for factors have little impact (Figure 3).

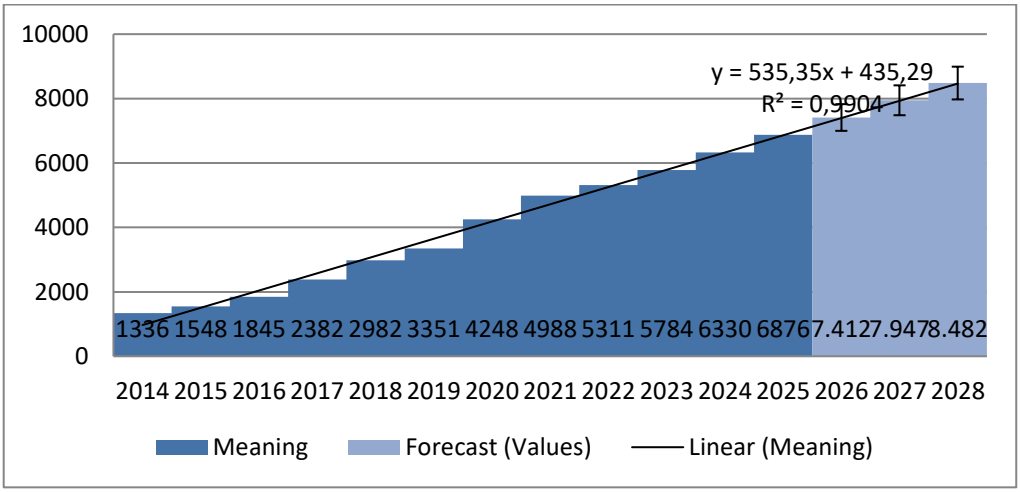

Figure 3: E-commerce retail sales worldwide (2014–2028), USD billion
Source: Statista (2024)

Based on the approximation equation, the forecast value of e-commerce retail sales in the global perspective for 2025–2028 is calculated (respectively, 6877, 7412.7947 and 8482 billion USD). Implementation of digital solutions, the average international delivery time has decreased by 17% over the past 5 years in companies that have implemented IoT and artificial intelligence in their supply chains (SN, 2024).

The steady growth in the interest of small and medium-sized businesses in adopting digital technologies is facilitating access to international markets. The use of digital platforms enhances this process. It is crucial to look at examples of their use in certain countries and regions of the world (Table 3).

Table 3: Digital platforms for SMEs to facilitate international trade

Digital platform	Characteristics
SME AgrodatAi (Colombia)	Launched in 2019, it brings together participants in the logistics of agricultural products, using mobile applications, chatbots and other digital tools to provide information on industry offers, technologies, credit and financial instruments, and insurance. The goal is to unite producers to create value for agri-food products through a single agricultural market. The task is to commercialise agricultural products and the purchase of raw materials.
Mitigram (Sweden)	A leading digital platform for global trade finance. SMEs can work with leading banks and financial institutions around the world. Facilitates access to new markets. Uses API-based connections to connect with trade counterparties via the Internet and email.
Tre-e Consortium (Italy)	B2B technology providers founded by 18 SMEs in the lift sector. The platform enables traditional SMEs to increase productivity through more efficient monitoring. Digitalisation enables logistics to be coordinated along the entire supply chain, which improves efficiency and service quality.
DIGITAL SME Alliance (Europe)	The leading association in Europe that brings together entrepreneurs and small digital companies. Its activities are aimed at promoting small digital market players and exclusive solutions, creating competition for large-scale technology companies. This platform provides SMEs with access to digital solutions (intelligent tools, e-learning and AI modelling technologies, video conferencing, 3D printing).

Source: OECD (2021), OECD (2022), OECD (2023), OECD (2024), Mitigram (2024), DIGITAL SME (2024)

Thanks to digitalisation, small and medium-sized enterprises (SMEs) exporting goods outside their home countries increased by 25% from 2019 to 2023 (Patterson-Waites, 2023). According to the WEF, SMEs account for 90% of all companies and are responsible for about 70% of jobs and GDP worldwide (WEF, 2022). They drive economic growth in local economies and contribute to employment. Large enterprises in Canada have a higher digital intensity (86%) compared to small and medium-sized enterprises (81%) of exports in 2023 (WEF, 2024; Statistics Canada, 2024).

In developing countries, especially in Latin America and Southeast Asia, the number of companies using digital platforms to export increased by 40% from 2018 to 2022, contributing to GDP growth and job creation (OECD, 2022; UNDP, 2023). Thus, the digitalisation of logistics has a positive impact on the economic potential of national economies, increasing productivity, expanding access to international markets for businesses, and contributing to the creation of new industries and jobs.

5. Discussion

The study confirms that the digital economy is vital in developing digital logistics and international trade. This issue is discussed at international forums and conferences, in particular, at the World Trade Organisation MC13 Ministerial Conference at the TradeTech Forum (Abu Dhabi), the issues of shaping the future of trade finance, green

trade, logistics, supply chains, and trade facilitation through digitalisation were discussed (WEF, 2024).

Richard Mulenga and Moses Mayondi recommend that governments of countries that lag in trade in digital services compared to other groups should increase investment in digital infrastructure. This will allow more people to access digital services. The priority should be to provide a stable, fast and affordable Internet. This study also extends the literature on digital trade and economic growth (Mulenga & Mayondi, 2022).

Studies (Yang *et al.*, 2021) show that the use of digital tools leads to significant changes in the construction of supply chains, helps reduce costs, and improves order processing speed. The researchers argue that technological intelligence and collaboration in the supply chain are key factors and recommend implementing digital technologies for supply chain management by developing business strategies at different levels of digitalisation.

The modern era of information technology is aimed at globalising communications. Scientists note that the modern technological world requires the development and use of sound industry standardisation, close device interoperability and product compatibility to promote innovation and competition (Zekos, 2021; González & Kaynak, 2023). Digitalisation brings government closer to citizens by breaking down bureaucratic barriers. The e-government services are more efficient and transparent. Today, businesses are interested in whether digital technologies can offset economic imbalances between countries with different levels of development. When Europe faces geopolitical turbulence, global terrorism, and economic disparities, Stojanović *et al.* (2024) examine the dependence between development and digitalisation as a mirror and rely on structural equation modelling (SEM) to find solutions to bridge the gap. The study highlights the need to promote social justice and build global consensus.

Scientists at Haarlem University of Applied Sciences (the Netherlands) have studied companies that have successfully undergone digital transformation from an ethical perspective (HUAS, 2023). As a result, it was found that digital transformation encompasses improving customer experience and opening up new opportunities for growth. Gonzalez Vazquez *et al.* (2024) note that digital technologies allow for institutional data management, increasing professionals' productivity and literacy while increasing their workload and autonomy. However, they can also worsen the well-being of employees and increase psychosocial risks.

Thus, establishing common rules and protocols for digital trade between countries requires a comprehensive combination of technical, legal, administrative, and international standards (Callebaut, 2024) (Table 4).

Table 4: Critical positions for the formation of standard rules for digital trade between countries

Direction	Characteristics
Harmonisation of legislation and standards	Develop international universal data protection standards; make legislation transparent and secure (e.g. ISO 27001 information security management); publish ISO 20400 (sustainable procurement); harmonise e-commerce and digital signatures by adapting legislation to international standards
Coordination between states	Financial support for multilateral initiatives (e.g. WTO and UN/CEFACT to promote intergovernmental cooperation)

	Establishment of regulatory compliance bodies at the regional level, e.g. within the EU or ASEAN.
Setting technological standards	Establishing standard protocols for data exchange, whether an API or a file format (technology frame name), for the international trade process. Standardising blockchain and artificial intelligence technologies in global supply chain processes.
Cybersecurity	To create a global system for monitoring and preventing cyber threats related to international trade, using encryption and authentication mechanisms to protect communications and transactions.
Capacity-building and awareness-raising	Develop training modules for businesses/government agencies on how to comply with the standards; conduct information campaigns on the need to comply with international standards;
International trade agreements	Digital trade provisions should be incorporated into bilateral and multilateral agreements, starting with the emergence of Digital Economy Partnership Agreements (DEPAs).

Source: ISO (2019), ISO (2022), WTO (2024)

Ning and Yao (2023) found that there is a growing need for logistics supply chains in a digitised and global marketplace. However, when different teams in different locations use different systems, how can they work quickly and efficiently, mainly when information is scattered and hard to find? The development of universal API (Application Programming Interface) or data exchange protocols can solve the problem of integrating fragmented systems for more efficient global supply chain management. The expansion of open banking is the result of the introduction of a concept that allows third parties to access the financial data of bank customers with their consent via APIs. These changes stimulate competition in the market and lead to the emergence of new innovative products. Fintech technologies are mainly focused on APIs, chatbots, cloud services and AI tools.

A next-generation digital ECM solution means much more than just storing and retrieving a growing archive of data; it consolidates the company's separate data sources for a holistic view of what's happening in the business. Accurate data from a single source allows for an accurate map of all processes and ensures that business leaders stay true to data management practices so that compliance and customer expectations are not compromised.

In its latest report, Springer Nature (SN, 2024; Katsinis *et al.*, 2024) examines digital transformation, which is focused on improving the efficiency of research and development (R&D) in the face of current challenges and threats. The issues addressed aim to deepen understanding of the challenges and opportunities associated with the digital transformation of logistics and international trade, allowing for effective development strategies (Figure 4).

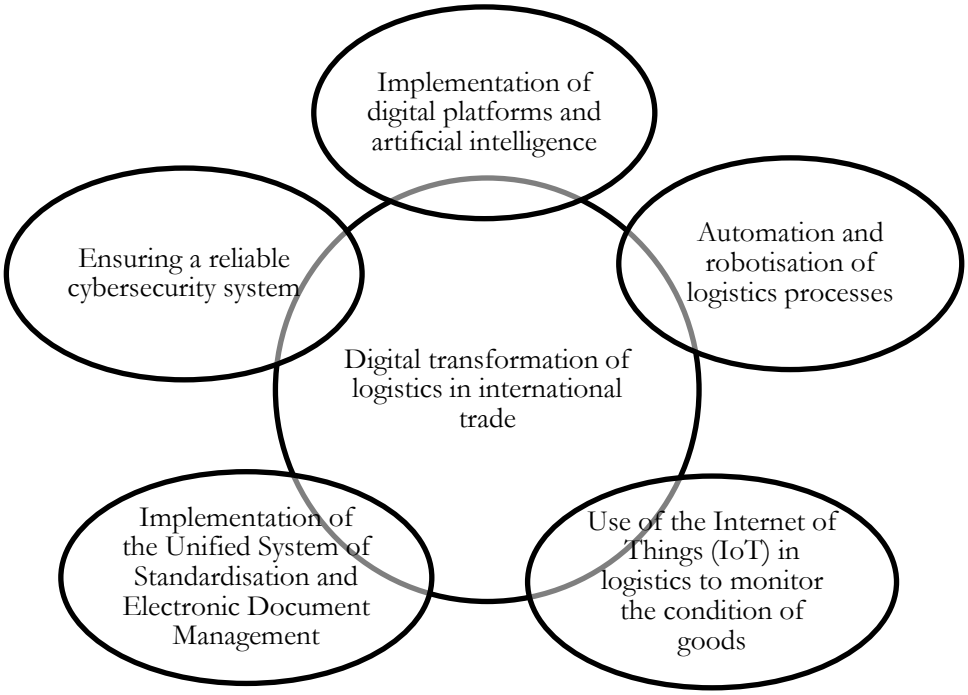

Figure 4: Practical strategies for the development of digital transformation of logistics and international trade
Source: compiled by the authors

Unified digital platforms for international logistics can help minimise operational costs and increase efficiency. For example, automating document flow and risk management with the Mitigram or TradeLens platform or real-time cargo tracking. AI is well suited for demand forecasting, route optimisation, and inventory management. Automated warehouses, self-driving cars and robots are used to eliminate the human factor and increase the accuracy and speed of operations. IoT sensors allow real-time monitoring of what is happening to goods (temperature, humidity... location). This is critical mainly for the delivery/transportation of food/dietary supplements. This aims to save administrative costs and reduce processing time through electronic waybills and invoices. It also reduces the risk of errors affecting the electronic document system. There is an increase in digital transactions and the prosperity of cybercriminals (Juneja *et al.*, 2024). At the same time, cyber defence mechanisms and recovery systems are becoming investments and forming an information database for criminals. Training employees to effectively use new technologies by investing in their digital competence and understanding the role of business transformation with digital tools is crucial. They are helpful for businesses of all sizes and serve to improve the ease of international trade and logistics so that the current dilemmas of globalisation can be addressed.

6. Conclusion

The digital economy is the primary source of transformational changes in global economic processes. This technological mechanism allows for innovation in everything from logistics to international trade. Digital platforms and process automation have increased the efficiency of logistics operations. Studies have shown that the digitalisation of logistics procedures allows for better optimisation of supply chain management and reduced costs or even transparency. Improved coordination between logistics chain participants, reduced risks, and accelerated international trade are expected to be achieved through blockchain, artificial intelligence (AI), and big data.

Based on the use of economic and mathematical methods (approximation and correlation), this research establishes that the development of the digital economy expands international trade by creating new business models (e-commerce, digital market) that contribute to the faster and smoother development of developing countries. This helps to reduce transaction time and customs administration and increases the security of international payments through innovative digital solutions. The study also reveals critical challenges in the digitalisation process, such as unequal access to digital technologies across countries, lack of interoperability in digital logistics, cyber threats, and reforming legislation for new contexts. In the context of developing countries, there is uneven access to digital technologies, which significantly affects their progress. This fact forms the limitation of the current study. The existence of socio-political and socio-economic barriers to digital optimisation requires the development of potential strategies to bridge the gap.

The formation of standard rules for digital trade between countries is proposed. The main directions for implementing an integrated system of technical, legal, administrative and international rules for the best development of the digital economy by integrating its logistics system are specified. The article provides strategies for developing effective digital transformation of logistics and international trade to increase economic productivity and sustainable development between countries in the global economy. The study proves that the digital economy is crucial in creating new opportunities for international trade and logistics, opening up prospects for innovative development and overcoming traditional barriers in global economic interaction. In the context of traditional industries, digital transformation serves as a tool for creating sustainable competitive advantages, increasing business profitability, and entering new digital foreign markets. Future research should focus on the impact of digitalisation on the dynamics of employment in manufacturing, providing a more balanced view of the economic impact of innovative digital development in logistics and international trade.

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