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Electronic Commerce Worldwide: Trends, Key Indicators, and Implications for the Organization of Trade in Ukraine

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ABSTRACT

Digital transformation has increasingly altered the way global trade is organized, placing electronic commerce at the center of contemporary trading systems. Over time, e-commerce has evolved from a supplementary sales option into a structural component of trade, shaping value creation processes, competitive behavior, and transaction cost structures. In the case of Ukraine, where economic activity unfolds under wartime pressure and post-war uncertainty, the question of how global e-commerce models can be adapted to domestic conditions becomes particularly significant. This article explores the current patterns of e-commerce development at the global level and examines how key economic indicators reflect ongoing structural changes in trade. The analysis relies on a combination of comparative economic reasoning, logical structuring, and selected empirical illustrations, allowing macro-level trends to be connected with organizational adjustments at the level of trade enterprises. The findings highlight several dominant tendencies, including the growing role of digital platforms, the spread of omnichannel trade formats, the increasing integration of logistics through digital technologies, and the broader access of firms to international markets. While regional trajectories differ in scale and pace, the overall direction points to a steady expansion of e-commerce within retail trade. At the same time, the digitalization of trade reduces traditional market entry barriers while introducing new forms of dependency related to technological capacity and institutional settings of platform-based markets. Under conditions of economic instability, electronic commerce in Ukraine serves not only as a commercial mechanism but also as a factor of economic resilience. The study outlines practical orientations for trade organizations that emphasize integration into global digital ecosystems and greater flexibility.

KEYWORDS

electronic commerce; global trade; digital platforms; trade organization; global trends; economic indicators; digital transformation.

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Електронна комерція у світі: тренди, ключові показники та висновки для організації торгівлі в Україні

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СТАТТЯ

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АНОТАЦІЯ

Сучасні процеси цифровізації суттєво змінюють архітектуру світової торгівлі, що зумовлює зростання ролі електронної комерції у формуванні економічних результатів торговельної діяльності. За останні роки e-commerce перестала виконувати допоміжну функцію та набула статусу одного з ключових елементів організації торгівлі, впливаючи на структуру доданої вартості, характер конкурентної взаємодії та рівень транзакційних витрат. Для України, яка функціонує в умовах воєнної нестабільності та поступового післявоєнного відновлення, особливої актуальності набуває проблема адаптації глобальних моделей електронної торгівлі до національних економічних реалій. Метою статті є дослідження світових тенденцій розвитку електронної комерції, аналіз ключових показників її функціонування та обґрунтування напрямів трансформації організації торгівлі в Україні з урахуванням міжнародного досвіду. У роботі застосовано поєднання логіко-структурного та порівняльно-економічного аналізу, елементів системного підходу й аналізу практичних прикладів, що дало змогу поєднати макроекономічні чинники розвитку e-commerce з організаційними змінами на рівні торговельних підприємств. У ході дослідження визначено основні глобальні тренди електронної комерції, зокрема платформізацію торгівлі, поширення омніканальних форматів, цифрову інтеграцію логістики та зростання доступності міжнародних ринків для підприємств різних масштабів. Показано, що розвиток e-commerce характеризується нерівномірною регіональною динамікою за збереження загальної тенденції зростання її частки у структурі роздрібного товарообігу. Встановлено, що цифровізація торгівлі одночасно знижує традиційні бар'єри входу на ринок і формує нові обмеження, пов'язані з технологічними вимогами та інституційними умовами функціонування цифрових платформ. Обґрунтовано, що в умовах воєнного стану електронна комерція в Україні виконує не лише комерційну, а й стабілізаційну роль, забезпечуючи адаптацію торговельних підприємств до нестабільного зовнішнього середовища. Практична цінність отриманих результатів полягає у визначенні стратегічних орієнтирів розвитку торгівлі, спрямованих на інтеграцію українського бізнесу у глобальні цифрові екосистеми, підвищення ефективності логістичних рішень та удосконалення організаційних моделей у післявоєнний період.

КЛЮЧОВІ СЛОВА

електронна комерція; світова торгівля; цифрові платформи; організація торговельної діяльності; глобальні тенденції; економічні показники; цифрова трансформація.

1. Introduction

In recent years, e-commerce has ceased to be an additional sales channel in classic commerce. Its logic is increasingly reminiscent of an independent economic ecosystem, within which the interaction between the seller and the consumer is built differently, the role of intermediaries is changing, and approaches to the management of value chains are being revised. An important consequence of this transformation is a change in the structure of transaction costs and a redistribution of market power: digital platforms and marketplaces are actually becoming "nodes" of access to demand, and traditional trade formats are forced to adapt to new competition rules.

The need to comprehend global trends in the development of e-commerce is determined not only by the growth rate of online markets, but also by the difference in the trajectories of this growth in different regions. In countries with high digital maturity, there is a noticeable concentration of e-commerce around large ecosystem players; Instead, in other economies, e-commerce is evolving as a space of organizational experimentation, from social commerce to localized logistics solutions. This creates a simple but fundamental managerial problem: universal recipes for organizing e-commerce quickly "break" in the context, and therefore, the analysis of economic parameters that explain the effectiveness of different models and the limits of their scaling is of key importance.

For Ukraine, which is simultaneously integrating into global economic relations and operating under long-term macroeconomic and security restrictions, the development of e-commerce is not reduced to "digitalization for the sake of digitalization". The practical sense is different: to correctly interpret the structural characteristics of global e-commerce models and translate them into solutions compatible with national trade practices (taking into account infrastructure and logistics constraints, peculiarities of the payment environment and institutional rules). That is why it is important not to copy external formats mechanically, but to form adaptive strategies for the development of trade enterprises, which at the same time strengthen their sustainability and competitiveness in the medium and long term.

This article focuses on comparing global trends and key quantitative indicators of e-commerce development with organizational consequences for trade and determining the conditions and boundaries of adaptation of world experience to Ukrainian practice.

2. Literature Review

In the modern economic literature, e-commerce is considered not as a separate sales tool, but as a factor that changes the architecture of the trading system: from value formation mechanisms to models of market interaction and institutional business conditions [4; 7; 13]. Research on digital transformation emphasizes that the development of e-commerce is part of broader technological shifts that cover logistics, data management and restructuring of business processes, and therefore affect the effectiveness of trade activities no less than changes in sales channels [4; 7; 13]. At the same time, there is a different emphasis in the authors' approaches: some interpret e-commerce primarily as a technological expansion of sales tools, while others interpret it as an institutional restructuring of the market around platforms and digital ecosystems, where the rules of access to demand and competition mechanisms are changing [6; 13]. It is this difference in interpretation that sets the framework for further analysis of economic indicators and organizational consequences of the development of electronic commerce.

The theoretical basis for the analysis of e-commerce as an economic phenomenon is formed by the approaches of the platform economy and the theory of bilateral markets. The classic works of J.- C. Rochet and J. Tirole [18] explain why platforms are able to simultaneously reduce the transaction costs of participants and concentrate market power through the effects of network interaction and the specifics of pricing in multilateral markets. In further research, these ideas are developed through the interpretation of e-commerce as an infrastructure for organizing trade, which ensures business scaling and redistribution of functions between manufacturers, trading enterprises, and intermediaries [6; 11; 13]. At the same time, the issue of the limits of such "cost reduction" remains in the discussion: in practice, part of the costs does not disappear, but is redistributed – in particular, to the area of logistics, service and compliance with regulatory requirements, which manifests itself differently depending on the market and platform model [11; 13].

At the enterprise level, a significant array of publications is focused on the economic effects of trade digitalization: the introduction of electronic channels and digital management tools is associated with cost optimization, increased operational efficiency and adaptability of companies to an unstable external environment [1; 2; 7; 16]. At the same time, the studies emphasize that a sustainable economic result is not given by the "availability of an online channel" per se, but by the integration of digital solutions with logistics and management processes, in particular through the coordination of deliveries, order processing, and data analytics [3; 13]. At the same time, the empirical conclusions of the authors are not always unambiguous: for some sectors, the quality of digital marketing and demand management is decisive, while for others, the reliability of order fulfillment and stability of supply, i.e., the effects of e-commerce, significantly depend on the product category and operating model [3; 16].

Analytical reports of international organizations complement academic approaches with quantitative assessments of the development of e-commerce on a global scale. Materials from the OECD, UNCTAD, the World Bank, and the European Commission record a steady increase in the share of e-commerce in global trade turnover and, at the same time, demonstrate its impact on productivity, international trade, and the transformation of trade infrastructure [8; 14; 15; 21–23]. In these sources, e-commerce is interpreted as an institutional component of the digital economy, which requires adjustment of state trade policy and updating regulatory mechanisms in accordance with new models of interaction between market participants.

A separate area of research is focused on the organizational consequences of the development of e-commerce for trade enterprises. Scientific publications show that the digitalization of trade changes the configuration of supply chains, strengthens the role of data in managerial decision-making, and contributes to the spread of flexible models for organizing trade activities [9; 10]. At the same time, the authors emphasize that the practical effectiveness of such changes significantly depends on the stability of logistics systems and the ability of enterprises to adapt to external shocks, in particular in the context of crises and hostilities [10; 20].

In the Ukrainian scientific space, e-commerce is mainly studied through the prism of the digital transformation of the national economy and the adaptation of trade enterprises to war and post-war challenges. In the works of domestic authors, it is substantiated that e-commerce has become one of the key tools for maintaining trade activity in the context of the disruption of traditional sales channels and limited functioning of physical infrastructure [5; 12; 20]. At the same time, the presence of systemic barriers is emphasized: uneven development of digital and logistics infrastructure, dependence on global platforms, and limited access to investment resources necessary for scaling digital solutions [5; 12].

Studies on the adaptation of trade enterprises in Ukraine to the conditions of war focus on the need to transform organizational models and reorient to digital channels of interaction with the market [20]. At the same time, e-commerce in such conditions is considered not only as a commercial tool, but also as a stabilization mechanism that supports the economic viability of enterprises and their ability to keep in touch with the consumer.

Generalization of the results of scientific and analytical sources gives grounds to assert that, despite a significant number of publications, most of the research either focuses on certain technological aspects of e-commerce or is limited to the micro-level of enterprises. At the same time, the issues of a comprehensive analysis of global economic indicators of the development of e-commerce and their interpretation from the standpoint of trade organizations in the national context remain insufficiently systematized. It is this gap that necessitates further research of global e-commerce trends and the formation of reasonable conclusions for the development of the trade system of Ukraine.

3. Problem Statement

The purpose of the study is a comprehensive economic analysis of global trends in the development of e-commerce, key quantitative indicators of its functioning and substantiation of conclusions on the transformation of trade organization in Ukraine, taking into account world experience.

To achieve this goal, the work provides for the solution of the following scientific tasks:

– to systematize theoretical approaches to the interpretation of e-commerce as an economic phenomenon and an element of the platform economy;

– to analyze modern global trends in the development of e-commerce and determine their impact on the structure of world trade;

– summarize the key economic indicators of the functioning of e-commerce at the international level, in particular the dynamics of market volumes, the role of digital platforms, and institutional conditions for development;

– to investigate the organizational and economic consequences of the introduction of e-commerce for trade enterprises;

– to assess the peculiarities of the development of e-commerce in Ukraine in the context of war and post-war challenges;

– to substantiate the directions of using the global experience of e-commerce to increase the efficiency of trade organizations and the competitiveness of domestic trade enterprises.

The object of the study is the processes of development of e-commerce in the world and the national economy.

The subject of the study is economic relations that are formed during the functioning of electronic commerce and change as a result of its transformation into a form of trade organization.

The implementation of the defined tasks coordinates the structure of the study and allows us to substantiate conclusions about the prospects of e-commerce and its impact on the modernization of the trade system of Ukraine.

4. Methods and Materials

The methodological basis of the study is formed on a combination of a systematic approach, the provisions of economic theory and developments in the platform economy and management of digital processes. Within the framework of the work, e-commerce is considered as a multi-level phenomenon: at the macro level – as a segment of world trade with measurable volumes and shares; at the meso-level – as a set of digital ecosystems and platform models; at the micro level – as a set of organizational changes in the activities of trade enterprises. Such a framework allows you to link quantitative indicators of e-commerce development with qualitative changes in the organization of trade and explain why the same technological solutions give different effects in different institutional and logistical conditions.

To achieve the goal, a set of complementary methods was used, which provides the logic of transition from global trends to conclusions relevant to Ukrainian trade practice. Firstly, logical-structural modeling is used to build an analytical research scheme: development drivers (technologies, institutions, consumer behavior) → mechanisms of influence (platformization, change of sales channels, restructuring of logistics) → economic manifestations (market volumes, retail share, role of platforms) → organizational consequences for trade enterprises. Secondly, comparative economic analysis and elements of descriptive statistics are used to compare the dynamics of e-commerce development in certain geographical regions, as well as to assess the share of online sales in the total retail turnover. The comparison was performed at comparable time intervals, 2023–2025. Taking into account the differences in the methods of data presentation in primary sources (in particular, different approaches to the interpretation of “e-commerce sales” and “retail e-commerce share”).

Based on the generalization of statistical and analytical materials of international organizations and regulatory institutions, the regularities of the formation of digital trade ecosystems are identified and the role of leading platforms in the redistribution of trade flows and access to demand is clarified. To increase the correctness of interpretations, the indicators from the reports were compared not only in absolute values, but also in relative dimensions (shares, growth rates, structural changes), which reduces the risk of false conclusions in interregional comparisons.

The system-functional method is used to analyze changes in the structure of transaction costs and the transformation of the role of a trading enterprise in the digital economy. Within the framework of this approach, the processes of disintermediation and re-intermediation (the transition of intermediation functions to platforms), as well as the restructuring of supply chains under the influence of digital integration of logistics solutions and the use of data analytics, are considered. In addition, the organizational consequences of such changes were evaluated – in particular, the redistribution of functions between marketing, sales, fulfillment and customer service, as well as the dependence of performance on the sustainability of logistics.

The method of case analysis is used to study the practices of organizing trade on the example of leading international marketplaces and platform ecosystems. The selection of cases was carried out according to the following criteria: the scale of activities, the availability of public data on the monetization model and logistics, various types of platform interactions (B2C/marketplace/ecosystem), as well as the potential relevance of individual mechanisms for adaptation in Ukrainian conditions. Case analysis was used not as a "success story", but as a tool for highlighting repetitive management decisions (monetization, demand management, service standards, fulfillment) that can be postponed, taking into account the limitations of the national market.

The information base of the research consists of: scientific works of domestic and foreign scientists on the problems of digital transformation, platform economy and trade organization; official statistics and analytical reports of the WTO, UNCTAD, World Bank, OECD and European Commission for 2023–2025. [8; 14; 15; 21–23]; industry reviews and forecast materials of leading consulting and research companies [7; 13]. In cases where different sources offer different estimates of the same indicator, priority was given to official international statistical and regulatory reports, and discrepancies were interpreted taking into account methodological differences.

The use of these tools provided a careful consideration of e-commerce, from macro indicators of development to organizational consequences for enterprises, and gave grounds for the formation of reasonable conclusions on improving the efficiency of trade organizations in Ukraine in the context of global economic challenges.

5. Results and Discussion

To streamline the mechanisms of transformation of trade organization and show how global e-commerce trends are "translated" into consequences for the domestic economy, the paper builds a logical and structural scheme of the study (Fig. 1). It combines macroeconomic drivers of e-commerce development with manifestations at the level of trade enterprises and allows you to outline practical strategic guidelines relevant for Ukraine.

The architecture shown in Fig. 1 reflects the integrated model of E-commerce 3.0 and proceeds from the fact that e-commerce is a multi-level economic process. At the macro level, global factors shape the conditions for the development of digital trade, while key economic indicators act as indicators of structural changes that can be recorded and compared. The importance of the proposed scheme lies in the fact that it does not reduce the analysis to a list of trends: instead, it allows you to trace the cause-and-effect relationships between the dynamics of the global e-commerce market and changes in organizational models of trade at the enterprise level. Thus, the scheme creates an analytical basis for the transition from the description of global trends to the formulation of applied conclusions and guidelines for the development of e-commerce in Ukraine.

The current stage of development of world trade is characterized not so much by an increase in online sales as by a change in the logic of market interaction. In this context, e-commerce looks less and less like a "separate channel" for the sale of goods and services and more and more as a system-forming factor that affects the spatial configuration of markets, competition mechanisms and approaches to the formation of added value. The transition from a linear sales model to a networked trade organization is accompanied by a strengthening of the role of digital platforms that concentrate trade, logistics and information flows around themselves.

The key global trends in the development of e-commerce and the related economic consequences for the organization of trade are summarized in Table 1.

A key global trend in the development of e-commerce is the platformization of trade: digital platforms are gradually turning into central "entry points" in interaction between sellers and consumers. In the logic of bilateral and multilateral markets, the platform not only reduces supply and demand, but also sets the rules of coordination between the parties, affects information flows and changes the structure of costs – in particular, through the standardization of operations and the reduction of part of transaction costs [6; 18]. For enterprises, this means new opportunities for scaling: increasing market coverage is often achieved faster than the need for a proportional increase in capital investments, which, in turn, changes the economics of trade.

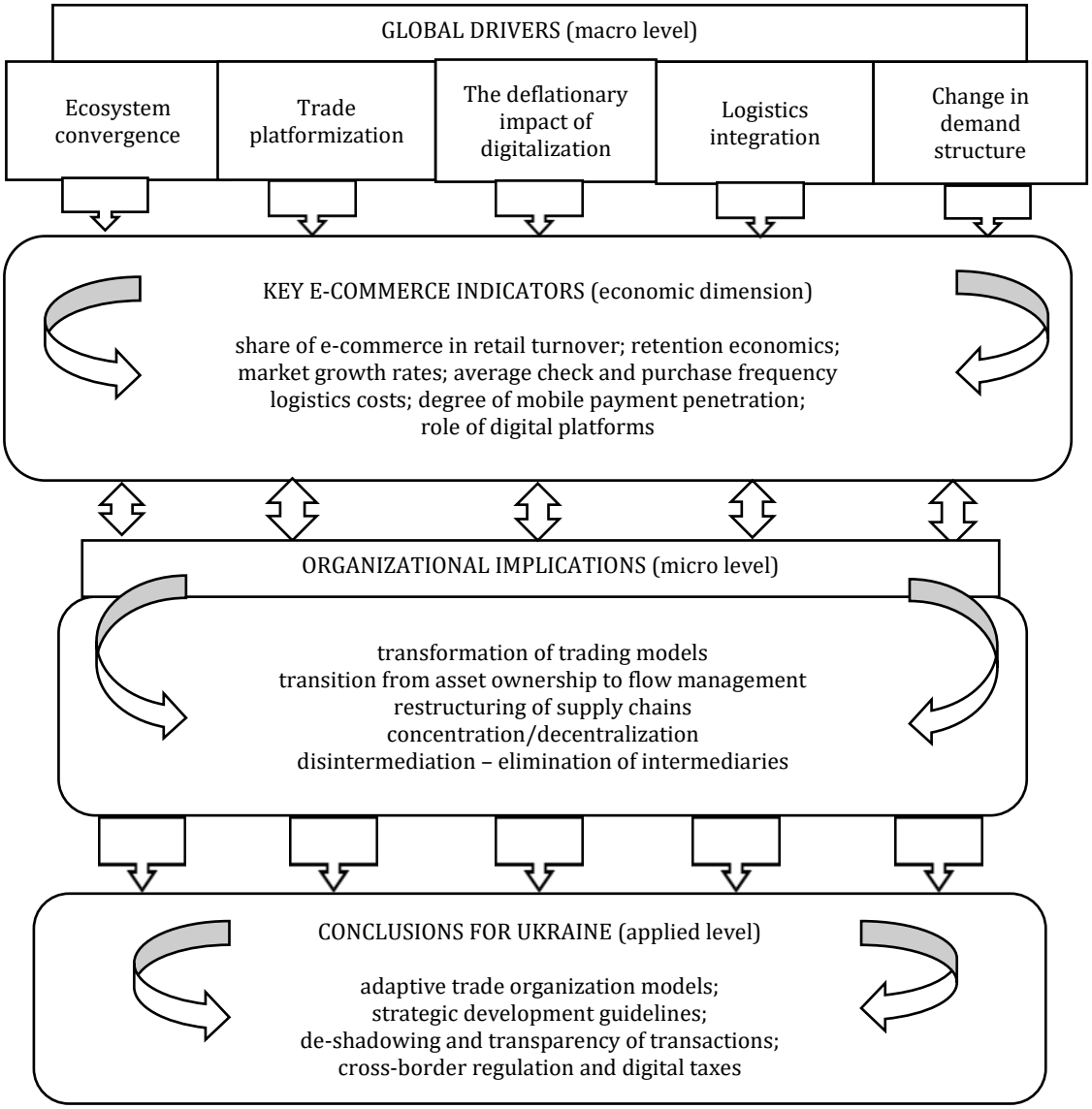

Figure 1. Logical and structural scheme of transformation of trade organization under the influence of global e-commerce drivers

Source: Compiled by authors.

Table 1. Key global trends in the development of e-commerce and their economic consequences

Global trend	Content and characteristics	Economic feasibility study	Consequences for the organization of trade
Trading platformization	The dominance of digital platforms and marketplaces as central nodes of trade interaction, integrating sales, payments, logistics and analytics within a single ecosystem.	The effect of network interaction and reduced transaction costs ensure business scaling without proportional cost growth.	Transition of merchants to platform models, increasing dependence on global digital ecosystems.
Omnichannel integration	Combining online and offline sales channels into a single system of interaction with the consumer.	Increase resource efficiency, increase sales conversion, and optimize customer journey.	Transformation of the organizational structure of trade, integration of IT systems, warehouses and physical points of sale.
Development of social commerce	The use of social networks as channels for direct trade and digital communication with consumers.	Reduce customer acquisition costs and increase the role of data-driven demand personalization.	Shifting the emphasis from traditional promotion channels to interactive digital environments.

Global trend	Content and characteristics	Economic feasibility study	Consequences for the organization of trade
Logistics digital integration	Automation and digital management of supply chains, development of fast and flexible delivery.	Reduction of capital turnover time, reduction of logistics costs and increase of reliability of supply.	Formation of new requirements for logistics infrastructure and partnership models in trade.
Globalization of market access	Expanding the opportunities for enterprises to enter international markets through digital e-commerce channels.	Reducing barriers to entry and increasing the participation of small and medium-sized businesses in international trade.	Increased competition and the need to adapt regulatory and customs mechanisms.

Source: Compiled by authors based on [2; 4; 6; 8; 11; 14; 15; 18; 21; 23].

Empirical generalizations of international organizations confirm that platform models are one of the main factors of high growth rates of e-commerce in the global dimension. At the same time, trade flows are increasingly concentrated around a limited number of transnational ecosystems that integrate marketing tools, logistics services, payment infrastructure, and elements of intermediation between suppliers and end consumers [4; 7]. The consequence of such concentration is the redistribution of market power: platforms receive additional leverage over access to demand and the conditions for interaction between participants, which forms an asymmetry between global platforms and local trading enterprises [2; 11; 14; 21].

A separate direction of transformation is the evolution of e-commerce formats. Along with classic online stores, the role of models that combine sales with services, communication and platform infrastructure, as well as expand the set of channels of interaction with the consumer, is increasing.

Along with classic online stores, there is a rapid development of social commerce and omnichannel models that integrate online and offline channels of interaction with the consumer. Within the framework of the E-commerce 3.0 concept, e-commerce acquires the features of a continuous digital environment, where mobile technologies, social networks and personalized services provide an interactive shopping experience in real time [2]. Such a shift changes the role of the trading enterprise – from the seller of goods to the coordinator of the complex service process.

Logistics integration is becoming a significant factor of competitiveness in global e-commerce. Speed, reliability and flexibility of delivery increasingly determine consumer choice, which stimulates enterprises to invest in digital tools for supply chain management, warehouse automation and the use of big data analytics [8; 23]. In this context, e-commerce acts as a driver for the modernization of global trade infrastructure.

An important economic consequence of the development of e-commerce is its impact on productivity and international trade. Digital sales channels reduce barriers to entry to foreign markets, which creates new opportunities for small and medium-sized businesses and contributes to the growth of participation of enterprises in global value chains [15; 22]. At the same time, the expansion of digital trade exacerbates the issue of institutional regulation, in particular in the areas of taxation, protection of intellectual property rights, data regulation and cybersecurity.

Thus, global trends in the development of e-commerce are forming a new architecture of global trade, in which the key efficiency factors are the ability of enterprises to integrate into digital ecosystems, adapt organizational models to platform formats and quickly respond to dynamic changes in global demand. These processes create a methodological basis for further analysis of quantitative indicators of e-commerce development and assessment of their consequences for the organization of trade at the national level.

The generalized dynamics of changes in the role of e-commerce in retail turnover by the main regions of the world in 2023–2025 are shown in Fig. 2.

As can be seen from Fig. 2, the most intense growth in the role of e-commerce is observed in the Asian region, while in North America and Europe, the dynamics are more moderate but stable. Latin American markets are showing a gradual increase, which rather corresponds to the stage of structural "catching up" development.

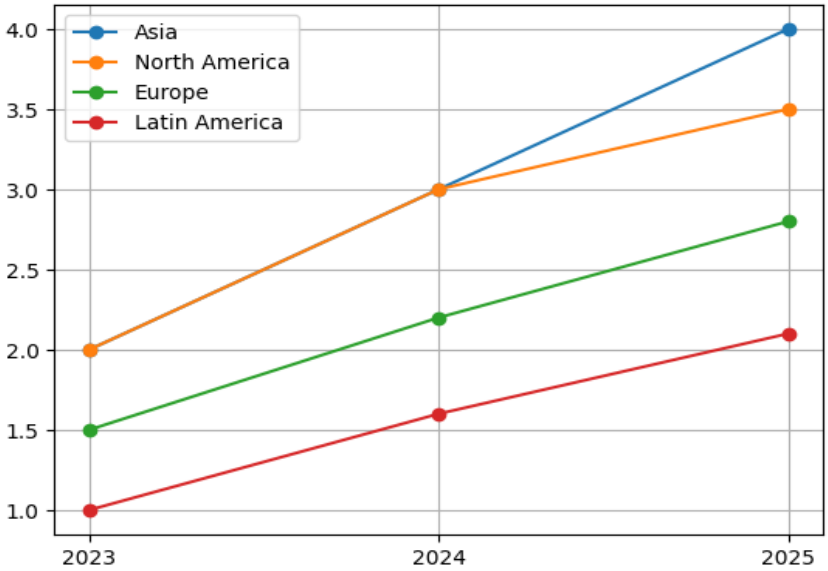

Figure 2. Dynamics of the share of e-commerce in retail turnover by regions of the world (2023–2025)

Note: The figure is analytical in nature and reflects the relative dynamics of the growth of the role of e-commerce in retail by regions of the world without the use of absolute statistical values.

Source: Compiled by authors based on [8; 14; 21].

The formed global trends in the development of e-commerce directly affect the conditions for the entry of enterprises into international trade, primarily due to changes in traditional barriers to participation in world trade processes. In practical terms, this means that competition is increasingly defined not only by having a physical presence in the market, but also by the ability to connect to digital ecosystems, work with data, and organize order fulfillment at scale. A generalized description of how e-commerce transforms barriers to entry and the economic consequences of such changes is presented in Table 2.

Table 2. The Impact of E-commerce on barriers to entry and participation of businesses in international trade

Barrier to entry	Traditional trade	E-commerce	Economic effect
Geographical remoteness	The need for a physical presence in the market	Remote access to global markets	Expanding export opportunities
Investment costs	High start-up capital	Lower initial investment	Attracting small and medium-sized enterprises
Information asymmetry	Limited market information	Data analytics and transparency	Improving the quality of management decisions
Regulatory barriers	Complex customs and contract procedures	Digital trading platforms	Simplification of international transactions
Marketing access	High promotion costs	Platform marketing tools	Reduced transaction costs

Source: Compiled by authors based on [6; 9; 14; 15; 21; 22].

As shown in Table 2, the development of e-commerce noticeably changes the conditions for the participation of enterprises in international trade. The reduction of certain barriers (primarily geographical, informational and marketing) expands the circle of participants in global trade processes and creates the basis for a more inclusive and competitive model of the world economy.

The analysis of the generalized data of Table 2 gives grounds to assert that the growth of e-commerce is not limited to the quantitative expansion of the market. It is accompanied by structural changes that affect the logic of the functioning of trading systems: entry conditions, competition mechanisms, and the role of digital intermediaries in access to demand are changing. In this context, the key indicators of e-commerce development are not only the dynamics of its share in the total retail turnover, but also the transformation of barriers to entry, the nature of enterprises' participation in international trade, and the redistribution of market power between participants in digital ecosystems.

On the one hand, the digitalization of trade contributes to a significant reduction in physical, geographical and informational barriers to entry into foreign markets. The use of the infrastructure of

digital platforms and marketplaces allows small and medium-sized businesses to integrate into global trade flows without the need for significant capital investments in physical presence, logistics facilities and extensive sales networks [6; 11]. This creates conditions for expanding the circle of participants in international trade and increasing its inclusiveness.

At the same time, the reduction of traditional barriers to entry to the market is accompanied by the formation of new, more complex restrictions. The effective functioning of e-commerce entities is less and less determined by the availability of an online showcase or basic digital infrastructure. Access to analytics tools for large data sets, the ability to personalize demand, the use of modern payment solutions, and integration with logistics systems are of key importance. As a result, economic and information power is concentrated within a limited circle of leading digital platforms, which leads to an increase in switching costs for trading enterprises and increases their dependence on ecosystem conditions for market functioning.

The transition from analyzing opportunities to assessing constraints and risks is becoming fundamentally important for understanding the current dynamics of e-commerce development. Despite the steady growth of the market, the e-commerce sector faces several systemic challenges that determine its long-term efficiency and sustainability. First of all, the institutional and regulatory environment is becoming more complicated: the intensification of state control over cross-border transactions, the emergence of special tax regimes for digital services, and the tightening of requirements for personal data protection and information flow management generate additional administrative costs for businesses. For small and medium-sized enterprises market participants, this often means an increase in the burden of compliance and an increase in the cost of compliance [15; 22].

The second block of problems is related to the economics of attracting and serving customers. Customer Acquisition Cost (CAC) in many segments demonstrates upward dynamics against the backdrop of oversaturation of advertising channels and increased competition for consumer attention. Additional pressure on financial results is created by an increase in the cost of logistics and operational components, which, other things being equal, narrows the margin of trading activities even with an increase in sales volumes [17; 19].

The vulnerability of global supply chains to geopolitical, economic and security shocks is manifested in the increase in uncertainty of delivery terms and costs. At the level of the organizational model of e-commerce, this is especially acute in the "last mile" segment, where high costs and increased expectations of consumers regarding the speed and reliability of service are combined [10; 23].

Summing up**,** the current phase of e-commerce development rather resembles a transition from the "pursuit of volume" to competition for the manageability and sustainability of the digital model. In some segments, operational discipline and logistics are decisive, in others, the ability to retain the client due to the increase in the cost of attraction and the tightening of regulatory requirements. Therefore, it is advisable to consider not only the macrodynamic of the market, but also how these factors rebuild the organization of trade processes at the level of enterprises.

The development of e-commerce has led to significant organizational changes in the activities of trade enterprises, which are manifested in the transformation of management models, the redistribution of functions in supply chains and the change in the role of intermediaries in the trade process. In modern conditions, the efficiency of trade activities depends less and less on the volume of ownership of tangible assets and physical infrastructure and is increasingly determined by the ability of the enterprise to manage information, logistics and financial flows in the digital environment.

The key organizational consequence of the development of e-commerce is the process of disintermediation, which consists in reducing the traditional intermediary links between the manufacturer and the end consumer. The use of digital platforms and marketplaces provides direct access for enterprises to the global consumer audience, reducing transaction costs associated with finding counterparties, coordinating transactions and exchanging information [6; 11; 18]. At the same time, the function of intermediation does not disappear completely, but is transformed: digital platforms that concentrate infrastructure, information, and coordination functions within their boundaries begin to play a key role.

A change in the organizational logic of trading activities is accompanied by a transition to the so-called asset-light strategies. Within such models, enterprises deliberately reduce capital intensity by reducing investments in physical assets, and instead concentrate management efforts on customer

experience, working with behavioral data, and developing digital channels of interaction with consumers. The practical implementation of this logic involves the partial transfer of storage, order processing, and delivery functions to specialized partners, in particular through dropshipping models and fulfillment services [2; 3; 16]. This format increases the adaptability of trading enterprises and reduces their dependence on fluctuations in demand, but at the same time makes the quality of operational coordination and standards of service on the side of partners critical.

Organizational shifts are also manifested in the transformation of supply chains: under the influence of e-commerce, they become more dynamic and "data-driven". The use of big data analytics and digital demand forecasting systems allows for more accurate inventory planning, shortening the capital turnover cycle, and increasing the efficiency of logistics operations [9; 10]. As a result, flexible structures are formed that can quickly readjust to changing market conditions and reduce sensitivity to external shocks.

In the context of the development of e-commerce, the role of a trading enterprise is also changing. The sale of a single product is gradually supplemented (and sometimes replaced) by the provision of a comprehensive service within the framework of omnichannel interaction. In this configuration, the enterprise performs not only the function of a "point of sale" but also the role of an integrator of the digital and physical environment, ensuring the continuity of communication with the consumer throughout the entire process of decision-making and purchase. Long-term customer loyalty is formed based on personalized offers, transparency of operations and stable quality of service [1]. Therefore, organizational innovations of e-commerce at the micro level should be interpreted as the formation of adaptive management models that combine flexibility, digital integration and consumer orientation. It is such transformations that create the prerequisites for increasing the resilience of trade enterprises in the context of increased global competition and serve as a basis for applied recommendations for the organization of trade in Ukraine (see Fig. 1).

The results of the study show that in the context of full-scale military challenges, e-commerce in Ukraine has acquired a distinct stabilization value: it acts not only as a sales channel, but also as a tool for maintaining the economic viability of business, maintaining a connection with the consumer and adapting to an unstable environment [15; 20]. In the context of the destruction of physical infrastructure, logistical gaps, and spatial migration of consumers, the integration of mobile and social platforms into the logic of E-commerce 3.0 allows maintaining customer communication and operational continuity even with increased risks [15; 20]. In this context, digital sales channels perform not only a commercial, but also an adaptive function, providing a quick reconfiguration of business processes.

The introduction of asset-light approaches is of particular relevance for Ukrainian retail. Reducing dependence on large warehouse complexes, retail space and centralized infrastructure, as well as refocusing on decentralized logistics solutions (in particular, networks of pick-up points and parcel lockers), increases the flexibility of enterprises and reduces the capital intensity of operations in the face of increased logistics and security risks [10; 20]. At the same time, the implementation of global experience in the development of e-commerce in Ukrainian practice requires focusing on several strategic guidelines.

Firstly, the issue of institutional capacity and regulatory quality is being actualized, in particular in the context of adapting national rules to the requirements of the EU Digital Single Market: cross-border e-commerce, protection of digital consumers' rights, regulation of data circulation and trust in digital channels are the basic conditions for expanding the participation of enterprises in international markets [8; 22]. Secondly, logistics resilience is of primary importance, which involves the formation of flexible supply chains based on digital flow management and data analytics; the use of intelligent demand forecasting and inventory management systems reduces the risks of physical supply disruptions and reduces the vulnerability of businesses to external shocks [10; 20]. Thirdly, the digital inclusion of small and medium-sized businesses is an important direction: the use of the infrastructure of global and national marketplaces as "ready-made" sales platforms and services creates opportunities for the recovery of economic activity of enterprises that have lost part of their physical assets or access to traditional trade channels [12; 21]. In this sense, e-commerce works as a mechanism to reduce barriers to entry and stimulate entrepreneurial activity.

Thus, the organization of trade in Ukraine should be based on the principles laid down in the proposed integrated model (see Fig. 1): systematic tracking of global drivers, the use of digital

transformation tools, and the adaptation of organizational decisions to conditions of increased uncertainty. The recovery of trade activity largely depends on the depth of integration of domestic enterprises into global digital ecosystems and their ability to turn structural challenges into sources of long-term economic growth.

6. Conclusions

Within the framework of the study, a comprehensive economic analysis of global trends in e-commerce development was carried out, and the directions for transforming trade organizations in Ukraine were outlined, taking into account current macroeconomic and security factors. The results obtained allow us to draw the following conclusions.

The systematization of theoretical approaches to the analysis of e-commerce shows that today it goes beyond the "additional channel" of sales and functions as a platform ecosystem in which the rules of access to demand and the logic of competition are changing. The defining mechanism of this transformation is the proliferation of bilateral and multilateral market models: digital platforms actually act as an institutional coordinator of participants' interactions, standardize processes and influence the structure of transaction costs.

An empirical analysis of global trends in the development of e-commerce has shown an increase in ecosystem competition and a gradual transition to the logic of E-commerce 3.0, where the integration of sales, services, logistics, payments and data within platform solutions plays a key role. The constructed logical and structural scheme of the study (Fig. 1) made it possible to systematically reflect the relationship between macroeconomic drivers of digitalization, key economic indicators of e-commerce development and organizational consequences for business entities. The results obtained indicate that the integration of mobile, social and omnichannel trade is actually becoming a basic condition for maintaining the competitiveness of enterprises in the global digital environment.

The assessment of quantitative indicators confirmed the uneven spread of e-commerce between regions with a general upward dynamic: markets develop at different speeds, which affects the structure of demand, competitive models and infrastructure requirements. Comparative comparisons showed that the effectiveness of digital trading models is most closely related to the quality of logistics infrastructure, the scale of use of digital payment instruments, and the institutional capacity of the regulatory environment. At the same time, a change like barriers to entry has been recorded: technological, informational and managerial competencies are becoming increasingly important, while the "advantage of capital" through tangible assets is not decisive in itself.

At the micro level, the development of e-commerce is accompanied by processes of disintermediation and the transition of some enterprises to asset-light strategies, which changes the organizational model of trade and the distribution of functions in the value chain. The efficiency of trade activities in the digital economy is increasingly determined by the ability of the enterprise to work with data, integrate logistics solutions, ensure the quality of order fulfillment and the flexibility of supply chains – and not by the scale of the material and technical base as such.

For Ukraine, in the context of war and post-war recovery, e-commerce is one of the key factors in the adaptability and resilience of the trading system. Practice proves that domestic enterprises are able to implement hyperlocal logistics solutions, actively use social platforms and develop omnichannel formats of interaction with consumers.

At the same time, the further development of e-commerce requires overcoming institutional constraints, harmonization of the regulatory environment and deepening of Ukraine's integration into the European Union's digital single market.

The practical significance of the research results lies in the fact that the proposed integrated model of transformation of trade organization (see Fig. 1) sets clear strategic guidelines for enterprises and allows linking global trends with specific organizational decisions. The formulated conclusions can be used by Ukrainian trade enterprises in the development of adaptive development strategies, in particular, on the development of omnichannel models, investing in data analytics and the formation of sustainable logistics ecosystems. The implementation of these approaches will strengthen the competitiveness of national trade and create the basis for its sustainable development in the post-war period.

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