

UDC 658.8:004.738
DOI: 10.24025/2306-4420.78(1).2026.351397

JEL Classification Code: R41, L81
Article's History:
Received: 22.12.2025; Revised: 30.12.2025;
Published: 16.03.2026.

Olena Bilovodska*

Doctor of Economic Sciences, Professor
Taras Shevchenko National University of Kyiv
01033, 60 Volodymyrska St., Kyiv, Ukraine
<https://orcid.org/0000-0003-3707-0734>

Violetta Zhurba

Student
Taras Shevchenko National University of Kyiv
01033, 60 Volodymyrska St., Kyiv, Ukraine
<https://orcid.org/0009-0008-4576-5871>

**Prospects for e-commerce development under
the digitalization of logistics processes:
innovative technologies
and global brand business models in retail**

Abstract. The article examines the prospects for e-commerce development in the retail market under digitalisation of logistics processes by analysing innovative technologies, key implementation challenges and comparing business models of leading global retail brands. The study draws on domestic and international research in e-commerce development under digitalisation of retail logistics processes. The information base includes scientific literature, works of leading domestic and foreign scientists, methodological materials, information portals and periodicals. A combination of general scientific and specialised methods was applied. In particular, methods of analysis and generalisation were used to systematise innovative e-commerce technologies and assess their impact on retail trade. Comparative analysis examined the business models of leading e-commerce companies (Amazon and Walmart) to identify their strategic advantages and differences. Logical generalisation method was applied to determine key challenges and outline promising directions for e-commerce development under digital transformation.

The results include the systematisation of key innovative e-commerce technologies (artificial intelligence, machine learning, augmented and virtual reality, mobile and voice commerce, modern payment systems and cybersecurity technologies) that transform retail business processes. Adoption of these technologies enhances personalisation, operational efficiency and online transaction security. Major challenges, including intensified competition, rising consumer expectations regarding service and delivery, cybersecurity issues, the complexity of integrating artificial intelligence while maintaining the human factor, as well as logistical constraints, were identified. Comparative analysis revealed differences between Amazon's digitally oriented, highly automated and personalised model and Walmart's omnichannel model, which integrates online and offline sales with emphasis on logistics and physical presence.

The scientific novelty of the study lies in a comprehensive substantiation of e-commerce development prospects in the retail market through the lens of innovative technologies and challenges, considering

*Corresponding author



the impact of digitally oriented and omnichannel strategies. The practical significance is aimed at providing guidance for retail enterprises to adapt to the digital environment, implement innovative solutions and increase the implementation of digital technologies in logistics business processes

Keywords: efficiency of digital solutions, omnichannel strategy, online retailing, supply chain management, digital sales channels, logistics

Introduction

Innovative technologies have become a key catalyst for the transformation of e-commerce, significantly changing approaches to running a business, organising trade processes and consumer experience. Their implementation opens up new opportunities for personalising offers, improving supply chain management efficiency, optimising marketing communications and improving customer service quality. Modern digital solutions, such as artificial intelligence, big data, cloud services, and automation, not only accelerate operational processes but also fundamentally transform the competitive landscape, establishing new standards for market competitiveness. With the growth of online commerce technological innovations are becoming a decisive factor in the sustainable development of e-commerce companies. They enable businesses to adapt more rapidly to changing market conditions, respond promptly to shifts in consumer behaviour and preferences, and ensure effective integration of online and offline sales channels. Continuous technological progress shapes the future development of e-commerce by encouraging companies to regularly update their business models, implement innovative tools, and build long-term competitive advantages within the digital economy.

Literature review

Issues related to development, tools, market statistics, e-commerce in the context of digital transformation, marketplaces and digital platforms are actively researched by both domestic and foreign scientists. For example, they can be grouped into several key areas: the development and application of digital tools and technological innovations, the design of innovative business models and marketing strategies, the impact of digital transformation on business performance and sustainability, and international case studies and market analysis.

Issues related to digital control system tools in e-business have been examined by S. Bondarenko *et al.* (2023), who identified advantages and disadvantages of various tools and proposed strategies to optimise storage and inventory management. U. Balyk and Yu. Stevchak (2024) highlighted the role of mobile devices, artificial intelligence, data analysis, and personalization in shaping e-commerce markets, while C. Schultz (2025) discussed how emerging technologies including AI, augmented reality (AR/VR), digital assistants, and smart systems are transforming retail operations, customer experiences, and value chain sustainability.

In terms of business models and marketing strategies, L. Shostak *et al.* (2025) analysed the impact of e-commerce on business model development and integration of advanced sales technologies, including AI, big data, and automation, emphasizing global economic changes and future innovations that drive competitive advantages. X. Ma and X. Gu (2024) proposed a new marketing strategy model for e-commerce enterprises, focusing on leveraging digital technologies, data-driven tools, customer engagement, and innovative business practices to optimise online market performance. Similarly, B. Rolando and H. Mulyono (2025) explored how e-commerce marketing strategies contributed to the growth of the digital economy and supported MSME development, addressing cybersecurity, digital inequality, and strategic roles of digital capabilities.

Regarding business performance, sustainability, and digital transformation, H. Giang and L. Dung (2025) demonstrated through structural equation modelling that business model transformation, mediated by digital capabilities, significantly enhances retailers'

sustainability outcomes. N. Toni (2025) analysed the interplay between e-commerce adoption, digital banking, and digital marketing on supply chain sustainability and SMEs' financial performance, highlighting digital commerce's role in operational resilience and competitive advantage, while V. Gvozdytskyi (2023) emphasised the evolutionary nature of trade transformation in Ukraine and globally and the importance of implementing e-commerce tools at all enterprise levels.

Finally, international case studies and market analyses provide additional insights: Z. Huo (2024) examined Amazon's recommendation systems using statistical and sentiment analysis to identify key trends shaping e-commerce, A. Bagekari (2025) provided a comprehensive overview of global e-commerce growth, business models, regional segmentation, and challenges such as cybersecurity and logistics, D. Pirogov *et al.* (2025) explored forecasting and modelling techniques for e-commerce within multi-level dynamic systems, and Z. Oman and S. Begum (2025) highlighted the positive impacts of digital transformation on retail performance, consumer satisfaction, and operational efficiency.

Despite the growing body of academic literature on e-commerce development and digital technologies, existing studies remain fragmented and insufficiently integrated. Research primarily addresses individual technological solutions, separate functional areas, or general market dynamics, while the interdependence between innovative technologies, strategic business model design, and sustainable competitiveness in retail e-commerce remains underexplored. In addition, comparative empirical insights into how leading global retailers apply different technological and organisational approaches to address market challenges are still limited. This lack of a holistic perspective constrains the ability to assess the systemic impact of technological innovation on the evolution of e-commerce and its long-term implications for retail markets.

So, the purpose of the article is to generalise and substantiate the directions of e-commerce development in retail trade under digitalization of logistics processes based on innovative technological solutions and contemporary retail practices. The main objectives are: 1) to analyse modern innovative e-commerce technologies and determine their impact on the transformation of retail trade; 2) to systematise key trends in the digital development of e-commerce and outline their role in improving the efficiency of logistics business processes; 3) to identify the main challenges of implementing e-commerce into the activities of retail enterprises; 4) to conduct a comparative analysis of the business models of leading e-commerce companies (Amazon and Walmart); 5) to identify promising directions for the development of e-commerce in the retail market under the digital transformation of logistics processes.

Materials and methods

The methodological basis of the research is general scientific and special methods of cognition. In particular, methods of analysis and generalisation were used to systematise innovative e-commerce technologies and determine their impact on the development of retail trade. Comparative analysis was used to compare the business models of leading e-commerce companies (Amazon and Walmart) in order to identify their strategic advantages and differences. The method of logical generalisation was used to identify the key challenges of e-commerce implementation and to form promising directions for its development in the context of digital transformation.

Results and discussion

The e-commerce technology landscape is developing rapidly, driven by certain key trends that are shaping the industry and driving innovation. These trends reflect the changing needs and expectations of both consumers and businesses. They influence how online transactions are conducted, managed and optimised.

Modern technologies and their impact on the purchase of goods or services are presented in Table 1.

Table 1. Trends affecting e-commerce

Technology / Trend	Description and impact on e-commerce
Artificial intelligence (AI) and machine learning	<ul style="list-style-type: none"> - Use of chatbots and virtual assistants for prompt customer support. - Personalisation of customer interactions based on big data analysis. - Optimisation of supply chains and operational activities. - Dynamic pricing based on market trends and customer behaviour. - Detection and prevention of fraud through transaction data analysis.
Augmented reality (AR) and virtual reality (VR)	<ul style="list-style-type: none"> - Virtual fitting of clothing, accessories and cosmetics. - Creation of virtual showrooms for an interactive shopping experience. - Visualisation of products in a real environment to improve shopping planning.
Mobile commerce and progressive web apps (PWA)	<ul style="list-style-type: none"> - Buying and selling goods via mobile devices. - Using PWA to combine the advantages of web and mobile applications. - Offline mode and high download speed. - Accessibility via regular URLs without the need to install applications.
Voice commerce	<ul style="list-style-type: none"> - Making purchases using voice commands via virtual assistants (Alexa, Siri, Google Assistant, Cortana). - Improving the accessibility of electronic services for people with disabilities.
Payment options	<ul style="list-style-type: none"> - A variety of payment methods: credit/debit cards, bank transfers, digital wallets (Apple Pay, Google Pay, Amazon Pay), cryptocurrencies. - The popularity of 'buy now, pay later' models, particularly in Ukraine through payment be installments.
E-commerce security technology	<ul style="list-style-type: none"> - Biometric authentication for identity verification. - Use of Blockchain technology for secure and transparent transactions. - Tokenisation of confidential data to reduce the risk of theft. - Cloud security solutions: web application firewalls, DDoS attack protection, threat analysis, data encryption.
Sustainable development and green technologies	<ul style="list-style-type: none"> - Implementation of environmental practices: use of environmentally friendly materials, renewable energy sources, environmentally friendly delivery options, sustainable packaging materials. - Increasing consumer loyalty to environmentally friendly brands.

Source: summarised by the authors based on (Hanak, 2026)

Therefore, innovative technologies in e-commerce contribute to business development, increased security and convenience of purchases. They allow for improved customer interaction and optimised operational processes, making the implementation of such technologies an important step in ensuring the competitiveness of companies in the market, especially in the context of digital transformation.

An important task is to consider the challenges of implementing e-commerce. Businesses face many challenges when implement and develop e-commerce technologies. However, instead of viewing the difficulties in the e-commerce sector as obstacles, companies should view them as opportunities for growth. Undoubtedly, various departments face operational challenges, both those related to customer service and those that directly involved in marketing and other strategic functions. Managing large volumes of orders and ensuring uninterrupted payment processing are difficult tasks. It is also important to consider about digital marketing trends, which requires constant adaptation, significant funding and staff training. In addition, businesses must also align their strategies with new consumer behaviour in order to remain competitive.

Online stores have to deal with fluctuations in consumer demand, the desire for high profitability, and the development of payment technologies. It is also difficult for them to stand out in a crowded market where products have many substitutes. In addition, with the development of digital technologies, barriers to market entry have significantly decreased, so companies must constantly improve and update their products, services, and marketing strategies to remain competitive. The e-commerce sector operates in a highly competitive environment due to the proliferation of online businesses. It follows that companies must improve their propositions and use new sales methods to attract more customers.

As mentioned above, artificial intelligence and automation are trends that characterise the e-commerce market. In addition to the advantages of using these tools, there are also certain challenges. Many companies are trying to effectively implement AI-based chatbots, recommendation systems, and automated supply chains. However, ensuring the successful implementation of AI, while maintaining human contact when interacting with customers, requires considerable effort, so this remains a major challenge.

In addition, customer satisfaction is important for the success of an online company. However, researching changing consumer expectations and adjusting operations leads to significant difficulties and challenges: customers want a wide range of payment options, including fast order processing, complete transparency of order status, and flexible delivery options, which requires funding, research, and innovation. Therefore, logistics and delivery remain another challenge. High consumer expectations for speed and quality of delivery require companies to optimise their logistics processes, which means significant costs and close cooperation with partners. In addition, almost 30% of those who buy goods online return them for various reasons (10 Challenges, 2025). This adds to the previous challenges the necessity to develop a reverse logistics system.

Confidentiality is not the least important issue in customer engagement. Cybercriminals are prone to fraud and theft of users' personal data. Many people also use fake identification data and stolen credit card numbers, phone numbers, and addresses to carry out transactions. In addition, consumers expect a high level of security from online stores, so any security breaches can lead to a loss of reputation and customers. That is why it is important to pay attention to the authentication of each website user. Another important aspect is the effective and omnichannel operation of technological tools. For e-commerce to function successfully, it is necessary to ensure the stable operation of websites, mobile applications, online payment systems, and logistics services. Failures in these systems can lead to a loss of sales and customer satisfaction. The issue of legislative regulation is no less important. Countries have specific requirements for consumer protection, taxation, personal data processing, and electronic transactions, which complicates the activities of companies at the international level.

Consequently, the development of e-commerce is accompanied by numerous challenges; however, despite these challenges, it provides wide opportunities for businesses to implement a systematic approach to problem solving and investment in innovation, security, and customer service quality.

Taking into account the challenges and opportunities accompanying the development of e-commerce, it is advisable to consider specific examples of the implementation of innovative technologies and business strategies by leading market players. To this end, we will conduct a comparative analysis of the business models of Amazon and Walmart to identify their approaches to digital transformation, process automation, service personalisation, and the integration of online and offline sales channels. Amazon is one of the world's largest companies in the field of e-commerce and cloud technologies. It was founded by Jeff Bezos in 1994 in the United States. Amazon started out as an online bookstore, but over time has evolved into a global platform selling millions of products, from electronics and clothing to food and digital services.

Amazon's net income in 2022 was \$513.98 billion, Amazon's annual net income is close to \$514 billion (Buck, 2025), and in 2024 was \$637.959 billion (Amazon, 2025). However, only little more than half of Amazon's revenue actually comes from e-commerce. The company generates \$220 billion in net revenue from online store sales, as well as \$117.72 billion from services related to external sellers (a significant portion of which is commission and fulfilment fees). The rest comes from advertising, subscription services (such as Amazon Prime fees) and revenue from Amazon Web Services (AWS). Amazon's revenue by category is shown in Fig. 1.

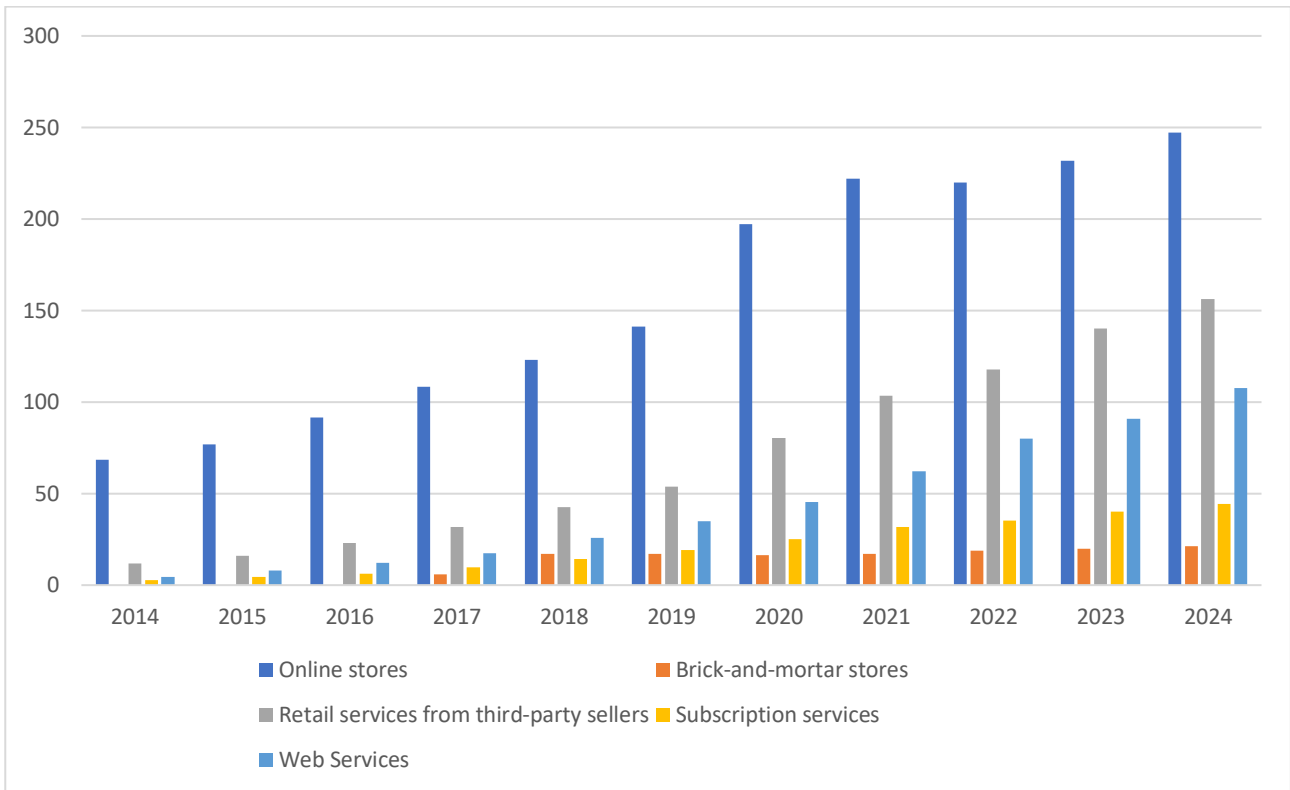


Figure 1. Amazon's global net revenue in 2014–2024 by product group, billion US dollars
Source: (Global, 2025).

Amazon's gross merchandise value (GMV) is \$692.8 billion. Overall, in 2023, Amazon's trading platforms generated a total value of about \$728.8 billion, which includes transactions across all 22 domains Amazon makes worldwide (Fig. 2).

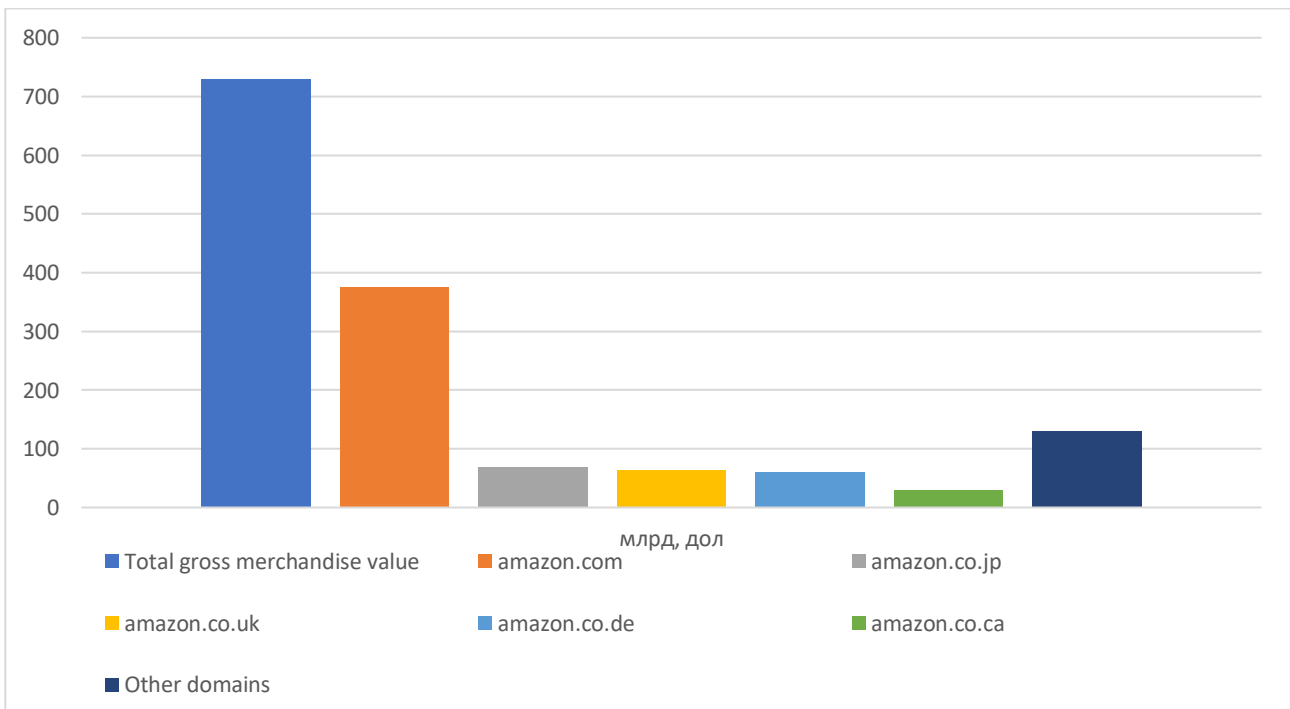


Figure 2. Amazon GMV marketplaces and share by top domains
Source: (Amazon GMV, 2024)

More than half of this volume is generated by the US market (\$362.7 billion GMV, 52.35% of total sales), with Japan in second place (\$64.9 billion GMV, 9.37% of total sales) (Fig. 3).

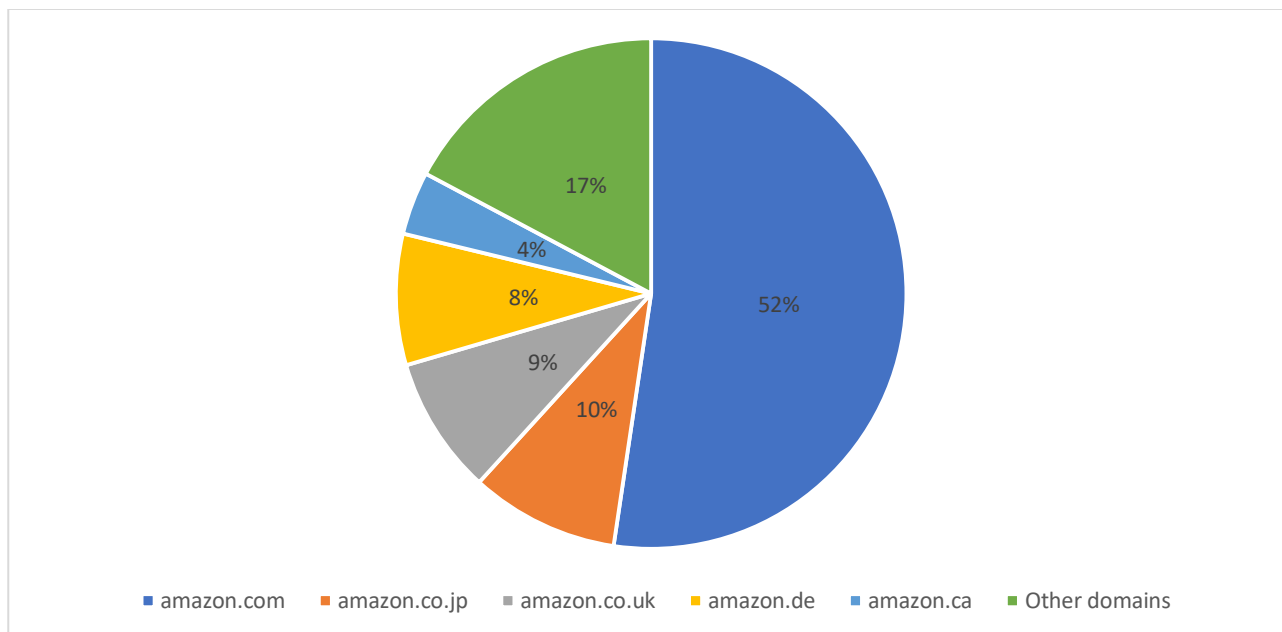


Figure 3. Amazon GMV share by domain, %

Source: (Amazon GMV, 2024)

It is worth noting that Amazon is growing by 10% annually. Among the top 15 e-commerce retail companies in the United States, Amazon ranks 4th among the fastest-growing companies. The company is expected to grow by 9.9% in 2023 and 11.7% in 2024, which would place it second among the fastest-growing companies at that time (Buck, 2025).

Amazon delivers over 1.6 million parcels every day – that's over 66,000 parcels per hour or over 1,000 per minute. Small and medium-sized American businesses sell over 4,000 items per minute through the platform, making up part of over 2 million third-party sellers on Amazon Marketplace, which offers a total of over 350 million items. In addition, Amazon itself sells over 12.2 million products through its own brands. The company has over 300 million active users in more than 100 countries and receives over 230 million unique visitors to its websites every month.

The Amazon app is ranked 3rd in the Apple App Store for the US and 4th in Google Play, and it's consistently one of the most downloaded shopping apps in the App Store, especially in the US. It should be noted that in August 2022, the app set a new record for monthly downloads in the US, with 5.5 million new downloads, more than 65% from last year.

Every year, more than 150 million people make purchases on the Amazon app, and the monthly audience of the Amazon app is 98 million active users (Buck, 2025). The most common reason why people buy products on Amazon is fast and free delivery, which is a driving factor for 79.8% of Amazon customers. 68.9% of people shop on Amazon because it offers a wide selection of products (Fig. 4).

Thus, Amazon continues to expand its capabilities, changing the global market for retail, technology and online services.

The next step will be to compare Amazon's performance with its main competitor, Walmart (Table 2).

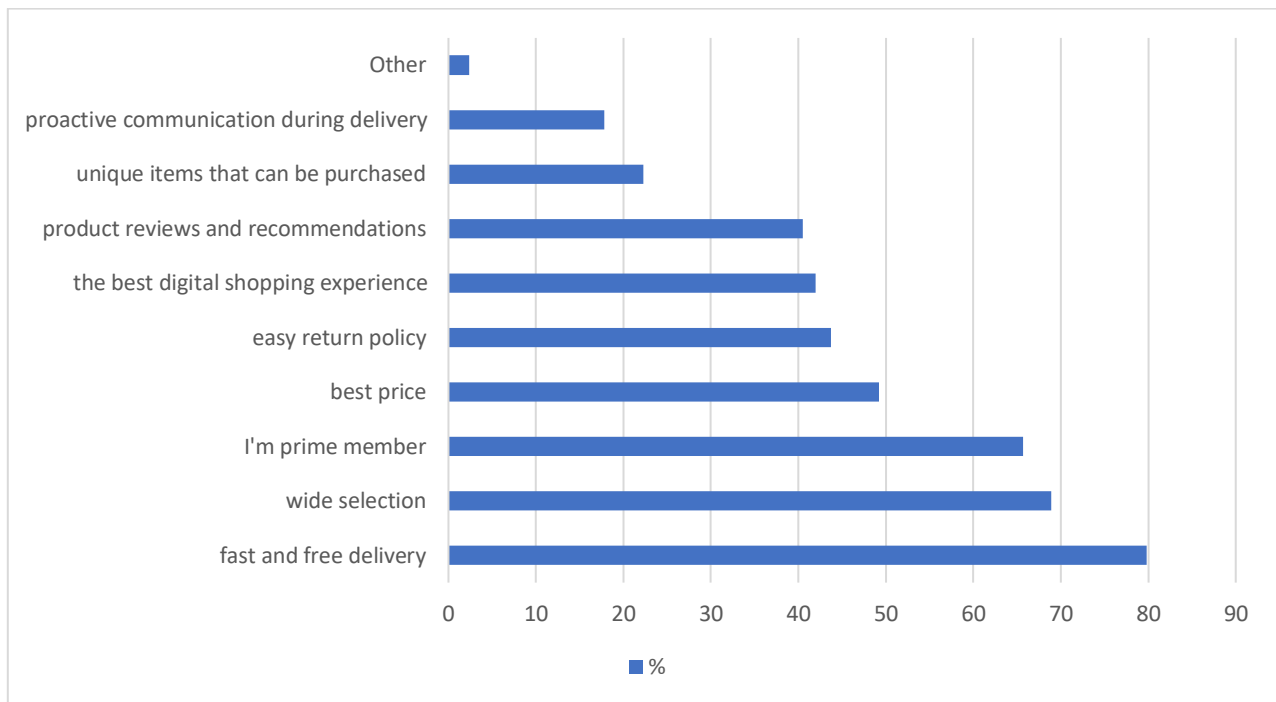


Figure 4. Reasons for buying through Amazon

Source: (Demand, 2020)

Table 2. Comparative analysis of Amazon and Walmart performance

Element of comparison	Walmart	Amazon
Year of foundation	1962	1994
Headquarters	Bentonville, Arkansas	Seattle, Washington
Number of employees	2,1 million	1,52 million
Income	665.035 billion US dollars (2024 financial year)	604.334 billion US dollars (2024 financial year)
Market share	~6.4% (US e-commerce)	~37,6% (US e-commerce)
Business model	Retail trade using brick-and-mortar stores and e-commerce	E-commerce marketplace and cloud services
Revenue streams	Sales of products, membership fees (Sems Club), financial services, advertising	Product sales, subscription services (Prime), cloud services (AWS), advertising
Customer segments	Regular consumers, families, budget-conscious shoppers, business customers	General consumers, tech-savvy shoppers, businesses, content consumers
Value proposition	Low prices, convenience, wide selection of products, community involvement	Wide selection, fast and free delivery, innovative technologies, personalised shopping experience

Source: compiled by the authors based on (Haleem, 2025)

Next, we should compare the share of e-commerce sales in the United States (Fig. 5) and e-commerce sales in the United States by year (Fig. 6). As we can see, in 2024 Amazon demonstrated extremely strong results in e-commerce: its sales amounted to approximately \$447 billion, which is almost equal to the total sales of all other categories in the TOP 2000, excluding mass retailers – \$503.8 billion. Although Amazon and Walmart together account for the largest share of the Mass Merchant category, Amazon retains its leading position, as its online sales were more than three times higher than Walmart's.

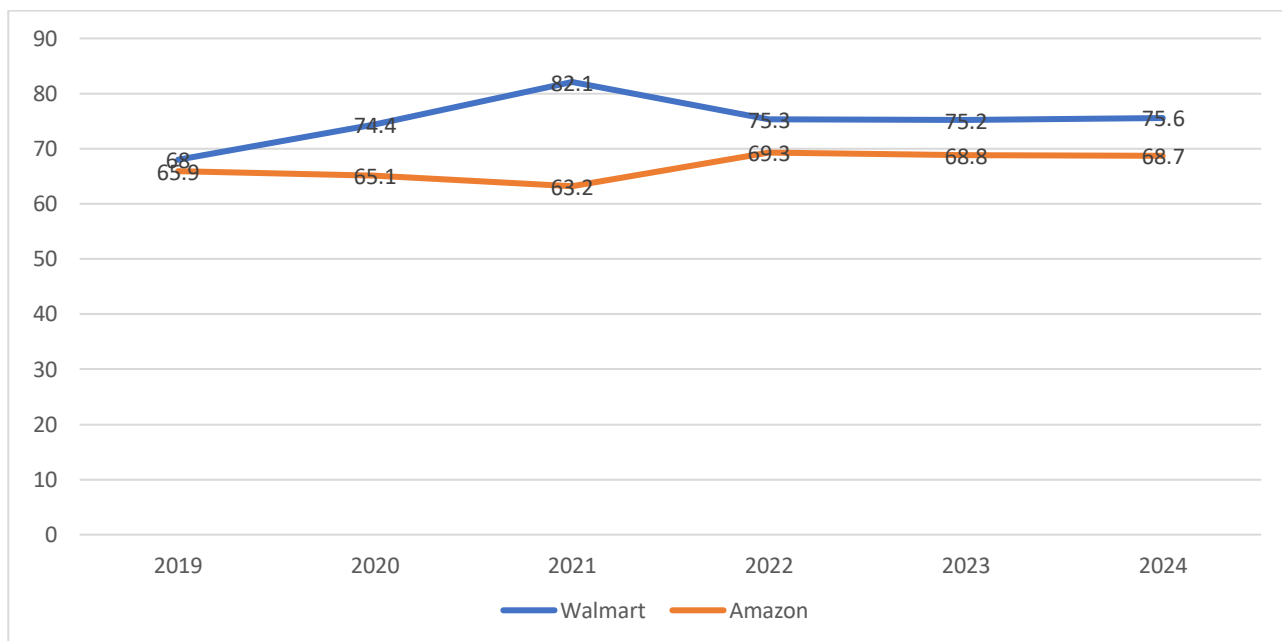


Figure 5. Share of e-commerce sales in the United States

Source: (Haleem, 2025)

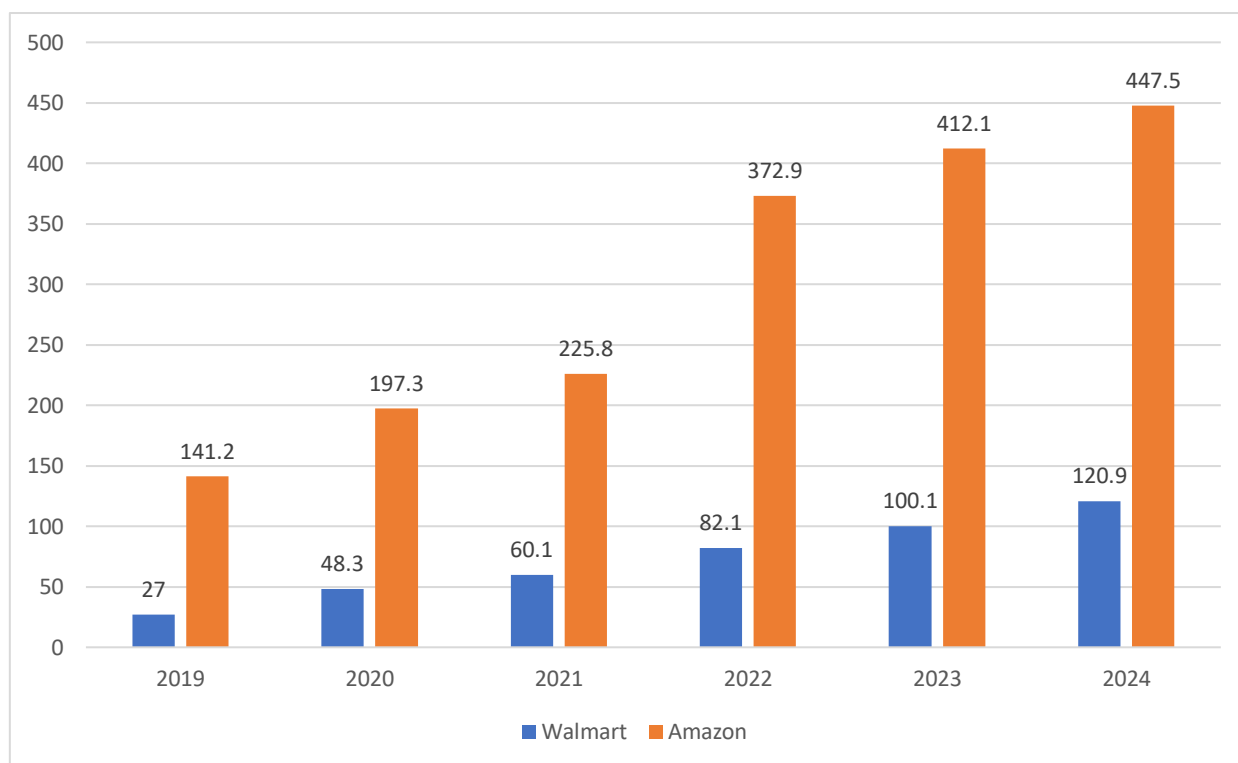


Figure 6. E-commerce sales in the United States by year, billion dollars

Source: (Haleem, 2025)

It should be noted that in 2024 and 2023, Amazon's online sales exceeded the combined sales of the next 51 retailers in the TOP 2000 ranking, while in 2022, they exceeded the combined figures of the next 42 companies. This clearly illustrates the company's dominance in the e-commerce market. For comparison, in 2024, Walmart's online sales exceeded the combined sales of the next five retailers in the same ranking. In 2023, this gap was four companies, and in 2022, it was three, indicating Walmart's consistent growth in digital commerce (Fig. 7).

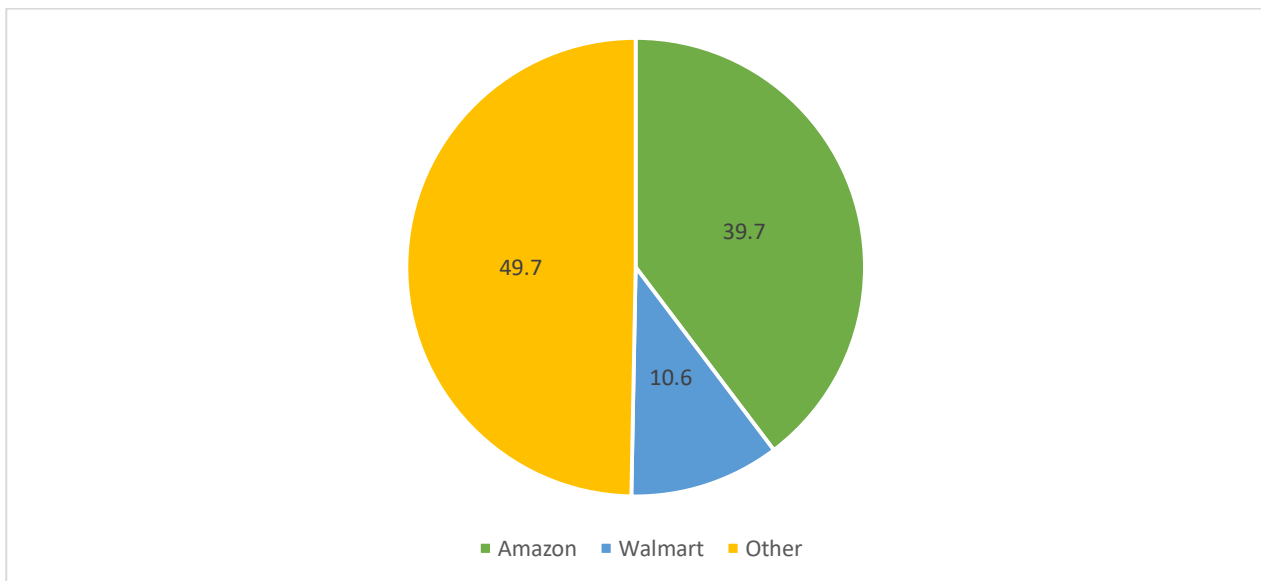


Figure 7. Market share of Amazon and Walmart, % of global e-commerce sales of the 2,000 largest North American retailers

Source: (Haleem, 2025)

The annual market share of both companies in e-commerce is presented in Table 3.

Table 3. Amazon and Walmart's share of the e-commerce market, %

Year	Amazon	Walmart	Top 2000 Share
2017	36,4	4,4	40,8
2018	37,0	5,2	42,2
2019	37,3	6,9	44,2
2020	36,9	7,9	44,8
2021	37,0	7,6	44,6
2022	36,8	8,1	44,9
2023	38,1	9,2	47,3
2024	39,7	10,6	50,3

Source: summarised by the authors based on (Haleem, 2025)

In this way, comparing Amazon and Walmart as e-commerce leaders demonstrates two different approaches to doing business in the digital age. Amazon is an example of a technology-driven company that has focused on innovation, automation, cloud services, and global expansion. Its strategy is based on scaling, personalising the user experience and creating a digital ecosystem that encompasses not only online commerce, but also logistics, IT and artificial intelligence. Walmart, on the other hand, while maintaining its position as a traditional retail giant, is successfully adapted to digital challenges by combining its physical presence with the development of online sales. The company actively invest in omnichannel retailing and expanding its own digital services, but at the same time emphasises maintaining a competitive advantage in pricing, last-mile logistics and local availability.

In general, both companies demonstrate the effectiveness of different strategic models in the field of e-commerce. Their experience proves that success in modern trade is determined not only by the volume of investment in technology, but also by the company's ability to respond to changing consumer expectations, use its own strengths and transform in time.

Hence, the conducted study of the prospects for the development of e-commerce in the conditions of digitalization demonstrates a high degree of correlation with the developments of the analysis of domestic and foreign authors.

In particular, the conclusions of S. Bondarenko *et al.* (2023) regarding the role of digital control tools in electronic business are generally confirmed by research, in particular, in terms of the feasibility of implementing innovative solutions to increase operational efficiency and optimise inventory management. At the same time, the work pays attention to a wider range of digital technologies of e-commerce, which form the competitive advantages of retail companies, in contrast to the emphasis of these authors on control systems as a separate management tool.

In addition, the provisions formulated by L. Shostak *et al.* (2025) regarding the impact of e-commerce on the transformation of business models and the integration of innovative technologies, they are confirmed in the results we have formed, especially in terms of the analysis of artificial intelligence, big data and automation of operations. At the same time, this study paid less attention to the macroeconomic aspects of global change, instead focusing on practical models of the functioning of leading e-commerce platforms.

The approaches of U. Balyk and Yu. Stevchak (2024) regarding the role of mobile technologies, artificial intelligence, and personalisation are fully confirmed by the results of the work, where these tools are identified as key drivers of e-commerce development.

Recommendations for the transformation of traditional business models through the effect of digitalization completely coincide with the results of V. Gvozdytskyi (2023), who substantiated the evolutionary nature of processes in international trade. At the same time, our statement about the growth of consumer satisfaction, loyalty and operational efficiency as a result of automation is confirmed in a thorough analysis of Z. Oman and S. Begum (2025), who proved the beneficial effect of digitalization integration on the level of customer satisfaction.

Conclusions

So, based on the analysis of innovative technologies and challenges, taking into account the peculiarities of e-commerce, the authors determined promising directions for the development of e-commerce under the digital transformation of retail logistics processes: 1) flexible personalization (the platform interface can change in real time depending on the user's actions and preferences, especially in mobile versions, where competition for attention is especially high); 2) active transformation of social networks from an advertising channel to a full-fledged point of sale – with the possibility of making a purchase directly in the feed, since according to research, we have a significant potential of social commerce; 3) digital transparency (building a system of reviews, order statuses, compensation for non-conformity of the product, its damage, which increases trust in online trade, as trust is a critical factor for Ukrainian consumers; 4) systematic analysis of user behaviour to adapt marketing messages not only to search activity, but also to the client's interests.

It is confirmed that the prospects of e-commerce are largely related to the introduction of innovative technologies, namely: artificial intelligence, augmented reality, mobile applications, voice assistants and secure payment systems. At the same time, the development of the industry is accompanied by numerous challenges: increased competition, cyber security issues, adaptation to changes in consumer behaviour, compliance with international standards for regulating digital trade, which can both hinder business development and contribute to its rapid modernization.

The importance of using e-commerce in the retail market is emphasised based on a comparative analysis of the world's largest platforms, Amazon and Walmart. Prospects for further research may be directed towards developing practical recommendations for forming an optimal structure of distribution channels in e-commerce, taking into account current challenges and market trends.

Acknowledgements

None.

Conflict of interest

None.

References

- Amazon GMV: Leading domains, highest growth & emerging markets (2024, July 23). *ECDB*. Retrieved from <https://ecdb.com/blog/amazon-com-produces-50-of-amazon-s-marketplace-gmv/3954>
- Amazon: Facts and statistics (2025). *Investing.com*. Retrieved from <https://www.investing.com/academy/statistics/amazon-facts/>
- Bagekari, A. (2025). E-commerce market analysis 2026. *Cognitive Market Research & Consulting*. Retrieved from <https://www.cognitivemarketresearch.com/e-commerce-market-report>
- Balyk, U., & Stevchak, Yu. (2024). E-commerce market: New technologies and development prospects. *Management and Entrepreneurship in Ukraine: Stages of Formation and Problems of Development*, 6(1), 83–91. doi: 10.23939/smeu2024.01.083
- Bondarenko, S., Ivanchenkova, L., Minakova, S., & Butenko, T. (2023). Digital control system tools in e-business. *Journal of Scientific Papers "Social Development and Security"*, 13(1), 207–224. doi: 10.33445/sds.2023.13.1.17
- Buck, A. (2025, December 03). 37 Amazon Statistics for 2025 (Order Volume, Market Share, Amazon Prime). *MobiLoud*. Retrieved from <https://www.mobiloud.com/blog/amazon-statistics>
- Demand for fast and innovative delivery persists amid the pandemic (2020, May 26). *EMARKETER*. Retrieved from <https://www.emarketer.com/content/demand-for-fast-and-innovative-delivery-persists-amid-the-pandemic>
- Giang, H. T. T., & Dung, L. T. (2025). Sharing economy and retailer sustainable performance: The mechanisms via business model innovation and digital capabilities. *Journal of Innovation and Entrepreneurship*, 14, Art. 27. doi: 10.1186/s13731-025-00492-x
- Global net revenue of Amazon from 2014 to 2024, by product group (2025). *Statista*. Retrieved from <https://www.statista.com/statistics/672747/amazons-consolidated-net-revenue-by-segment>
- Gvozdytskyi, V. (2023). Transforming of traditional commerce into e-commerce: Trends in the world and in Ukraine. *Development management*, 21(1), 36–45. doi: 10.57111/devt/1.2023.36
- Haleem, A. (2025, April). Amazon vs. Walmart: Who sells more online? *Digital Commerce*, 360. Retrieved from <https://www.digitalcommerce360.com/article/amazon-vs-walmart-ecommerce/>
- Hanak, A. (2026, January 06). ECommerce technology: Top 10 trends shaping 2025's retail landscape. *Digital Silk*. Retrieved from <https://www.digitalsilk.com/digital-trends/ecommerce-technology/>
- Huo, Z. (2024). Data statistical analysis on Amazon e-commerce platform for recommender system. *Applied and Computational Engineering*, 51(1), 97–103. doi: 10.54254/2755-2721/51/20241183
- Ma, X., & Gu, X. (2024). New marketing strategy model of e-commerce enterprises in the era of digital economy. *Heliyon*, 10(2), e29038. doi: 10.1016/j.heliyon.2024.e2903
- Oman, Z. U., & Begum, S. (2025). Digital transformation in retail. *Journal of Emerging Technologies and Innovative Research*, 12(3), i354–i361. doi: 10.1729/Journal.44346
- Pirogov, D., Pirogov, E., & Kushch, A. (2025). Modeling and forecasting of the development of electronic commerce in Ukraine: Modern trends and prospects. *Herald of Khmelnytskyi National University. Economic Sciences*, 5(346), 302–306. doi: 10.31891/2307-5740-2025-346-5-43
- Rolando, B., & Mulyono, H. (2025). E-commerce as a catalyst for digital economy development: A study of marketing strategies and their impact. *Journal of Distribution Science*, 23(4), 61–79. doi: 10.15722/jds.23.04.202504.61
- Schultz, C. D. (2025). Reimagining retail: Technology at the frontline, across the value chain, and toward sustainability. *Journal of Retailing and Consumer Services*, 87, 104449. doi: 10.1016/j.jretconser.2025.104449
- Shostak, L. V., Lipich, L. G., & Pavlova, S. V. (2025). The impact of e-commerce on business model innovation and new sales technologies in the market. *Kyiv Economic Scientific Journal*, 9, 302–309. doi: 10.32782/2786-765x/2025-9-40
- Slobodzianyk, R., & Chornopyska, N. (2024). E-commerce logistics: Supply chain resilience. *Management and Entrepreneurship in Ukraine: The Stages of Formation and Problems of Development*, 6(1), 145–152. doi: 10.23939/smeu2024.01.145
- Toni, N. (2025). Supply chain sustainability and financial performance: The role of e-commerce, digital banking and digital marketing of SMEs. *Economics - Innovative and Economics Research Journal*, 13(1), 487–507. doi: 10.2478/eoik-2025-0027
- Tully, P. (2025, February 06). 10 Challenges for ecommerce in 2025. *Pimberly*. Retrieved from <https://pimberly.com/blog/10-challenges-for-ecommerce-in-2025>

Олена Біловодська

Доктор економічних наук, професор
Київський національний університет імені Тараса Шевченка
01033, вул. Володимирська, 60, м. Київ, Україна
<https://orcid.org/0000-0003-3707-0734>

Віолетта Журба

Студентка бакалаврату
Київський національний університет імені Тараса Шевченка
01033, вул. Володимирська, 60, м. Київ, Україна
<https://orcid.org/0009-0008-4576-5871>

Перспективи розвитку електронної комерції в умовах цифровізації логістичних процесів: інноваційні технології та бізнес-моделі світових брендів-ритейлерів

Анотація. Стаття присвячена обґрунтуванню перспектив розвитку електронної комерції на ринку роздрібною торгівлі в умовах цифровізації логістичних процесів шляхом аналізу інноваційних технологій, ключових викликів їх впровадження та порівняльної оцінки сучасних бізнес-моделей провідних світових брендів-ритейлерів. Теоретичну та методологічну основу дослідження становлять роботи вітчизняних і зарубіжних учених у сфері розвитку електронної комерції в умовах диджиталізації логістичних процесів роздрібною торгівлі. Інформаційну базу становлять наукова, економічна та довідкова література, роботи провідних вітчизняних та зарубіжних вчених, методичні матеріали, інформаційні портали, періодичні видання. Використано сукупність методів і підходів: загальнонаукові та спеціальні методи пізнання. Зокрема, методи аналізу та узагальнення використано для систематизації інноваційних технологій електронної комерції та визначення їх впливу на розвиток роздрібною торгівлі. Порівняльний аналіз застосовано для зіставлення бізнес-моделей провідних компаній електронної комерції (Amazon та Walmart) з метою виявлення їх стратегічних переваг і відмінностей. Метод логічного узагальнення використано для ідентифікації ключових викликів впровадження електронної комерції та формування перспективних напрямів її розвитку в умовах цифрової трансформації. Основні результати дослідження полягають у систематизації ключових інноваційних технологій в електронній комерції (штучний інтелект, машинне навчання, доповнена та віртуальна реальність, мобільна і голосова комерція, сучасні платіжні системи та технології кібербезпеки), що визначають трансформацію бізнес-процесів у роздрібній торгівлі. Виявлено, що впровадження зазначених технологій сприяє підвищенню рівня персоналізації, операційної ефективності та безпеки онлайн-транзакцій. Досліджено основні виклики розвитку електронної комерції, серед яких посилення конкуренції, зростання очікувань споживачів щодо сервісу та доставки, проблеми кібербезпеки, складність інтеграції штучного інтелекту зі збереженням людського фактора, а також логістичні обмеження. Проведено порівняльний аналіз бізнес-моделей світових брендів електронної комерції Amazon і Walmart, що виявив відмінності у підходах до розвитку електронної комерції, зокрема орієнтацію Amazon на цифрово-орієнтовану модель із високим рівнем автоматизації та персоналізації, тоді як Walmart реалізує омніканальну модель, інтегруючи онлайн- та офлайн-канали збуту з акцентом на логістичну інфраструктуру та фізичну присутність у регіонах. Наукова новизна полягає в комплексному обґрунтуванні перспектив розвитку електронної комерції на ринку роздрібною торгівлі через призму інноваційних технологій та викликів їх застосування з урахуванням впливу цифрово-орієнтованої та омніканальної стратегій розвитку в умовах диджиталізації. Практична значимість дослідження спрямована на формування орієнтирів підприємствам роздрібного бізнесу для адаптації до цифрового середовища, застосування інноваційних рішень та зростання рівня впровадження цифрових технологій у логістичні бізнес-процеси

Ключові слова: ефективність цифрових рішень, омніканальна стратегія, онлайн-торгівля, управління ланцюгами постачання, цифрові канали збуту, логістика