The Role of Digitalization in the Strategic Development of Marketing and Logistics Activities of Enterprises

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Abstract

In the article, strategic priorities of development of marketing and logistics activities, which are extremely important by determining new approaches for successful functioning of enterprises in modern competitive environment, adapting to digital challenges and effectively responding to changing market needs, are examined. It is proven that in today's conditions, digitalization is a key factor of changes that radically transform business models and processes at all stages of marketing and logistics. Innovative technologies provide for new opportunities for businesses to optimize operations, improve customer experience and reduce costs. It has been argued that big data, artificial intelligence, machine learning, the Internet of Things, cloud technologies, blockchain, augmented reality and virtual reality, drones and autonomous vehicles are the main digital innovations affecting marketing and logistics. The role of innovative technologies in transformation of marketing and logistics is analyzed. The main problems in marketing and logistics management are summarized, the key factors generating these problems are highlighted, and ways to solve them are proposed.Based on identified problems and offered ways to solve them, main strategic priorities for enterprises striving to achieve success in the conditions of global competition and active digitalization are formulated. The impact of the main indicators of the marketing and logistics system on the volume of products sold by the enterprise was modeled. Strategic priorities are outlined, compliance to which will contribute to increasing enterprises' competitiveness, effective marketing and logistics activities, and adaptation to new challenges of the digital economy.

Keywords: Marketing, Logistics, Global Competition, Digitalization, Business Processes, Marketing Strategies, Strategic Priorities, Strategy.

Introduction

Formation of modern business environment takes place being influenced by intensive globalization, which constantly change rules of the game on the market and force enterprises to constantly adapt their strategies to changing conditions of the external and internal environment to ensure competitiveness. Achieving sustainable competitive advantages requires enterprises to find innovative approaches to manage marketing and logistics. In particular, enterprises should focus on improved management of supply chains, increased efficiency and quality of interaction with customers, as well as on introducing modern methods of data analysis to make more informed managerial decisions.

Management of marketing and logistics activities in the conditions of growing economic instability, war and related trade complications and other global challenges becomes an objective of particular urgency. It is worth noting that today's conditions new business models should be created based on synergy of marketing and logistics. Enterprises that effectively use new technologies and integrate them into their own marketing and logistics strategies can quickly adapt to changes and minimize risks, and gain significant competitive advantages.

Moreover, synchronized marketing and logistics is of strategic importance for enterprises that are eager to reduce costs and increase effectiveness of activities, which serve as indicators of profit and profitability. Development of integrated strategies will provide for optimizing processes and improving resource management, which is a critical success factor in the conditions of digitization and global competition.

Therefore, studying strategic priorities of development of marketing and logistics is relevant to determine new approaches to help enterprises to function successfully in modern competitive environment, adapt to digital challenges and effectively respond to changing needs of the market.

Literature review

In modern scientific research and publications devoted to this scientific topic, complex impact of digital technologies and globalization on marketing and logistics is emphasized. The latest studies confirm integration of marketing and logistics as an important factor to increase efficiency of enterprises and their adaptation to changing market conditions. Thus, scientific works of M. Christopher (2016) and D. Ferney and L. Sparks (2018)point to globalization as one of the main factors increasing pressure on enterprises. Globalization leads to increased competition, which forces companies to review their business models and improve marketing and logistics strategies to ensure competitiveness. Global supply chains are becoming more complex, so companies must optimize logistics flows, and ensure speed, transparency and flexibility to respond market changes.

In the work of J. S. Sray and H. Lorenz (2019), the way digital tools can contribute to the logistics transformation are analyzed, in particular by increasing transparency and speed in managing supply chains. The authors prove that ability of enterprises to respond to rapid changes in demand is an important competitive advantage in the conditions of global competition, and using the Internet of Things technology and big data allows enterprises forecasting demand, managing inventories and reducing costs.

The work by Eqbal Khan (2020), which examines modern principles of the supply chain management, as well as the issue of integrating marketing and logistics strategies to achieve competitive advantages, is interesting from scientific point of view.

According to research of P. Kotler and others (2009; 2016), integration of marketing and logistics is becoming more and more important for enterprises, as it allows reducing operating costs and improving customer service. Coordination between marketing and logistics is a critical factor in achieving balance between demand and supply, which is urgent to provide competitiveness.

Scientists (Spivakovskyy S. etal., 2023; Arefiev S. etal., 2023) analyze digitalization of marketing and logistics of production and trade enterprises, study marketing and logistics in adaptive management of enterprises within digitalization.

Articles (Dimitrakieva S. etal., 2023; Lagodiienko V. etal., 2023; Velychko O. etal., 2019; Nikiforov P. et al., 2022; Zhavoronok A. et al., 2022: Viknianska A. et al., 2021)analyzefeatures of marketing and logistics in management of small and medium-sized enterprises, investigate the role of digital technologies in optimizing

marketing and logistics systems of the enterprise, and introduce strategic managerial decisions in the marketing and logistic systems of the enterprise and public-private patnership.

Scientific papers (Thiele, Laura Sophie etal., 2023; Yu Feifei etal., 2023) reveal the study of digitization processes and inter-organizational strategies if information exchange of German companies, analyze impact of digitization on enterprise, formation of relevant business strategies and distribution of subsidies.

The authors (Ivanova N. etal., 2022; Fiona Febzi etal., 2024; Hokmabadi Hamed etal., 2024) analyze the marketing strategy of small business adaptation to modern challenges, investigate the role of digital marketing in increasing efficiency of enterprises, prove urgency of startups and innovative marketing solutions in ensuring business sustainability.

Theses (Ma Xiuli etal., 2024; Khan Shad Ahmad etal., 2024) prove expediency of a new model of marketing strategy of e-commerce enterprises in the conditions of rapid development of digitalization, substantiate positive impact of the mentioned aspects on the development of small and medium-sized businesses.

Articles (Enshassi Mohammed etal., 2024; Wu Chih-Wen etal., 2024) reveal potential of artificial intelligence in digital marketing and financial technologies for small and medium-sized enterprises, and also conduct empirical study of the strategy and effectiveness of digital marketing in small and medium-sized enterprises.

Work of scientists in the research proves relevance of the article and justifies expediency of conducting this study.Investigating scientific works devoted to the outlined topic gave grounds to highlight several aspects that remain insufficiently researched. In particular, many scholars consider marketing and logistics separately, but the issue of their integration through digital platforms to create the single value chain has not yet received sufficient attention. For example, harmonization of digital technologies (artificial intelligence, big data, Internet of Things, etc.) and their impact on the enterprises' competitiveness has not been sufficiently studied. In addition, scientists have insufficiently substantiated approaches to determine strategic priorities for development of marketing and logistics of enterprises in the conditions of global competition and digitalization, which will contribute to increasing their competitiveness and adaptability to modern market challenges. These unexplored aspects open perspectives for further scientific research and allow formulating the objective of this scientific article.

The purpose of the article is the analysis of modern trends in global competition and digitalization, identification of key problems and challenges faced by enterprises in management of marketing and logistics, as well as determination of strategic priorities for development of marketing and logistics of enterprises in the conditions of global competition and digitalization.

Methodology

To understand the role of the marketing and logistics system, it is proposed to conduct econometric modeling between the main indicators that reflect current trends in the functioning of such system system.

This modeling can be carried out using correlationregression analysis. The mathematical expression will be as follows:

$$y = a_0 + a_1 x^3 + a_2 x^2 + a_3 x + \varepsilon,$$
 (1)

where y - endogenous variable;

x-exogenous variable.

 A_0, a_1, a_2, a_3 – model parameters;

 ϵ – error.

However, it should be noted that calculating the error is difficult, therefore, when modeling, it is customary to determine, first of all, calculation models of the dependence between economic indicators:

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\hat{y} = \hat{a}_0 + \hat{a}_1 * x^3 + \hat{a}_2 * x^2 + \hat{a}_3 * x, \qquad (2)
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where y – calculated value of an internal variable;

x- actual values of the external variable.

 a_0, a_1, a_2, a_3 – calculated model parameters.

Therefore, taking into account formulas (1) and (2), we can write

$\varepsilon = y - y$,	(3)
$\varepsilon \rightarrow \min$,	(4)

Taking into account formulas (1-4), the formula will look like:

Taking into account formulas (1-4), the formula will look like:

$$\sum_{i=1}^{n} \varepsilon = \sum_{i=1}^{n} (y_i - a_0 + a_1 * x^3 + a_2 * x^2 + a_3 * x),$$
(5)

where $\sum_{i=1}^{n} e_{-i}$ sum of deviations of values in the calculated model

from parameters in the real model.

In accordance $\sum_{i=1}^{n} e$ can take both positive and negative values. Therefore, $\sum_{i=1}^{n} (y - \hat{a}_0 + \hat{a}_1^* x^3 + \hat{a}_2^* x^2 + \hat{a}_3^* x)^2 \rightarrow \min, \qquad (6)$

Therefore, for a cubic univariate model, the system of equations will have the form:

$$\begin{cases} a_{3} \sum x_{i}^{3} + a_{2} \sum x_{i}^{2} + a_{1} \sum x_{i} + na_{0} = \sum y_{i}; \\ a_{3} \sum x_{i}^{4} + a_{2} \sum x_{i}^{3} + a_{1} \sum x_{i}^{2} + a_{0} \sum x_{i} = \sum x_{i}y_{i}; \\ a_{3} \sum x_{i}^{5} + a_{2} \sum x_{i}^{4} + a_{1} \sum x_{i}^{3} + a_{0} \sum x_{i}^{2} = \sum x_{i}^{2}y_{i}; \\ a_{3} \sum x_{i}^{4} + a_{2} \sum x_{i}^{5} + a_{1} \sum x_{i}^{34} + a_{0} \sum x_{i}^{2} = \sum x_{i}^{3}y_{i}; \end{cases}$$

Next, the correlation coefficient is calculated using the formula:

$$R = \sqrt{1 - \frac{\sum (y_i - \hat{y}_i)^2}{\sum (y_i - \overline{y}_i)^2}},$$
 (7)

wheren-number of observations in the sample;

 \mathcal{Y}_{t} – actual values of the dependent variable;

y_i - estimated values f the independent variable;

 $\overline{y_i}$ – average of the estimated values of the dependent variable. The calculation model for the linear relationship between x and y is defined by the formula:

 $y = \hat{a}_0 + \hat{a}_1 \cdot x, \tag{8}$

where \hat{y} – estimated values of the dependent variable;

x – the initial data of the independent variable that are known; \hat{a}_0, \hat{a} – estimation of unknown parameters a_0, a_1 .

Results

Globalization has both led to expansion of markets and to increased competition between enterprises, at the national and international levels. In these conditions, analysis of modern trends in global competition becomes important, especially in the context of influence of the chosen and justified development strategy by the enterprise and required introduced innovations. Enterprises of various organizational and legal forms and types of activity to ensure competitive advantages need to adapt their marketing and logistics strategies to changing conditions of the external micro-, meso- and macro environment; that, in turn, requires both a detailed analysis of competitive conditions, and analysis and assessment of strong and weak competitor parties, especially those that previously focused their activities on national or regional markets, and now seek to expand their activities through international markets.

Ensuring global competitive advantages is significantly determined by innovative solutions that can be introduced by enterprises. At the same time, enterprises need not only to evaluate their own probable advantages from introduced innovations, but also to monitor innovative technologies implemented by competitors and to investigate which of them best affect marketing and logistics in the context of adapting the experience of competitors to their needs.

Digitalization is a key factor of change that radically transforms business models and processes at all stages of marketing and logistics (from data collection and analysis of market trends to supply chain management and customer service provision). Within digital transformation, enterprises are forced to look for new ways to increase efficiency of their operations and optimize supply chains, as well as improve customer service. Innovative technologies open up new opportunities for businesses to optimize operations, improve customer experience and reduce costs. Main trends of digitalization of marketing and logistics of EU enterprises, namely their use of software for managing resources, relationships with clients, as well as creating their own websites (Fig. 1).

Figure. 1. Main trends of digitalization of marketing and logistics of EU enterprises



Enterprise using Enterprise Resource Planning (ERP) software, 2023



Conducted studies allow asserting that the main digital innovations affecting marketing and logistics today are big data (Big Data), artificial intelligence (AI) and machine learning (ML), Internet of Things (IoT), cloud technology, blockchain, augmented reality (AR) and virtual reality (VR), drones and autonomous vehicles.

Big data allows companies collecting, storing, and analyzing vast amounts of information related to both customers and logistics operations. This innovative technology opens up new opportunities for accurate forecasting of demand, optimized inventory management, analysis of consumer behavior and improvement of marketing campaign.

Artificial intelligence and machine learning technologies can be used in forecasting, planning and optimization of both marketing and logistics. They allow automating decision-making processes, which increases their efficiency and reduces the number and scale of errors that can be made by people involved in all types of business.

The Internet of Things involves connection of enterprises to the Internet for real-time data exchange, which significantly improves the control and management of logistics, and also ensures a more transparent and efficient performance of marketing tasks. Cloud technologies allow enterprises to effectively manage marketing and logistics from anywhere in the world, providing both continuous data exchange, and access to necessary information in real time.

Blockchain provides transparency, security and control over all transactions in supply chains. Using the blockchain technology allows automating accounting and tracking the movement of goods in real time, and reducing the risks of fraud, which positively affects the results of the company's business.

Technologies of augmented and virtual reality open up new opportunities for marketing and logistics for enterprises by creating new formats of interaction with customers, which increases the efficiency of business processes.

Innovations in transportation technology, including drones and autonomous vehicles, are changing approaches to delivering goods and providing new opportunities for logistics.

Thus, introduction of innovative technologies by enterprises radically changes marketing and logistics, contributing to their automation, speed and accuracy of operations, as well as personalization and increased efficiency. Integration of technologies such as Big Data, AI, IoT, cloud computing and blockchain, allows enterprises to manage their resources more efficiently, provide competitive advantages and meet growing demands of consumers (Fig. 2).

At the same time, it is worth considering that digitalization significantly changes the behavior of consumers who expect fast delivery of goods, transparent logistics, personalized products and services, etc., which stimulates enterprises adapting marketing and logistics strategies to new service standards.

Modern consumers prefer making purchases online, receive real-time information about delivery status, and have flexible options for receiving goods, such as fast delivery or possible self-pickup or forwarding goods to other destination addresses. Businesses must respond in time to changes in consumers' behavior, which, in our opinion, is possible due to active implementation of omnichannel strategies providing combined physical and digital sales channels, setting up continuous interaction between the customer and the brand and improving customer service [9]. This, in turn, affects logistics carried out by enterprises, which must provide for flexible supply chains to meet demand through various channels.





Figure 2. Role of innovative technologies in transformation of marketing and logistics (continued)



Source: systematized by the authors

One of key trends in modern marketing is personalization of offers for existing and potential customers. Due to possible collecting and analyzing large volumes of consumer data, businesses can create targeted and relevant offers for each customer, which increases the level of consumer engagement and helps increasing sales, and therefore the income level. As for logistics, personalization is associated with possible customization of deliveries to specific requirements of customers who expect flexible delivery options from enterprises (choice of time, place or method of receiving goods).

It is also worth considering that in modern conditions urgency of environmental responsibility and sustainability of enterprises is increasing, which should be considered as environmental and social factors in their marketing and logistics, which is connected with the fact that consumers and regulatory authorities are increasingly paying attention to sustainable supply chains and environmental friendliness of products. By adapting to these requirements, companies must integrate sustainable development strategies, in particular, optimize their supply chains to reduce CO_2 emissions, minimize waste and implement environmentally friendly packaging materials.

In the conditions of digitalization and global competition, integration of marketing and logistics becomes a necessary condition for achieving efficiency and gaining competitive advantages. Synergy of marketing and logistics allows you creating complex strategies to ensure a quick response of enterprises to changes in the market situation, implementing better coordination of operations and increasing consumer satisfaction.Cartographic analysis shows e-sales trends by size class of enterprises in EU countries (Fig. 3).Businesspersons claim that success in esales largely depends on the effective marketing and logistics system.



Figure3.E- sales by size classof enterprises, 2023, EU countries

Table 1 presents the indicator share of the number of enterprises use of ERP software of the total number of enterprises of the relevant type of economic activity. In 2024, the highest indicators were characteristic of enterprises: electricity, gas, steam and air-conditioning supply (26.1%), retail trade (19.6%) and wholesale trade (16.6%).

Source: Eurostat (2024).

Table 1. Share of the number of enterprises use of ERP software of the total number of
enterprises of the relevant type of economic activity, %, 2022-2024

Indicator		2024
Total	5,9	15,2
Manufacturing		16,2
Manufacture of food products, beverages and tobacco products; textile production, production of clothing, leather, leather products and other materials; manufacture of wood, paper and printing		15,1
Manufacture of coke and refined petroleum products; manufacture of chemicals and chemical products; manufacture of basic pharmaceutical products and pharmaceuticals preparations; manufacture of rubber and plastic products; manufacture of other non-metallic mineral products		15,7
Manufacture of basic metals; manufacture of fabricated metal products, except machinery and equipment		11,9
Machine-building; manufacture of furniture, other products, repair and installation of machinery and equipment	6,8	19,9
Electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities		18,8
Electricity, gas, steam and air-conditioning supply		26,1
Water supply; sewerage, waste management and remediation activities		13,5
Construction	4,3	10,3
Wholesale and retail trade; repair of motor vehicles and motorcycles		17,0
Wholesale and retail trade and repair of motor vehicles and motorcycles		14,3
Wholesale trade, except of motor vehicles and motorcycles		16,6
Retail trade, except of motor vehicles and motorcycles		19,6
Transportation and storage		14,6
Accommodation and food service activities		9,3
Accommodation	6,8	11,4
Information and communication		22,8
Publishing activities, motion picture, video and television programme production, sound recording and music publishing activities, programming and broadcasting activities		16,9
Telecommunications		18,4
Computer programming, consultancy and related activities; information service activities		27,4

Indicator	2022	2024
Real estate activities		12,7
Professional, scientific and technical activities		13,9
Legal and accounting activities, main departments activities (head offices); management consulting; architectural and engineering activities; technical testing and analysis		14,6
Scientific research and development	7,7	12,8
Advertising and market research; other professional, scientific and technical activities		11,3
Administrative and support service activities		11,6
Rental and leasing activities; employment activities; security and investigation activities; services to buildings and landscape activities; office administrative, office support and other business support		
activities	4,4	11,5
Travel agency, tour operator and other reservation service and related activities		12,8
Repair of computers and communication equipment		2,9
Information and communication technologies		26,5

Enterprises operating in the marketing and logistics sphere face a number of problems and challenges that can negatively affect their efficiency and competitiveness. In our opinion, the main range of problems and challenges for these enterprises is related to growing global competition, high consumer expectations, complicated management of supply chain, outdated technologies, changes in legislation and regulation, needs to manage large volumes of data, cyber security, high logistics costs, environmental requirements, lack of qualified personnel. Solving the problems faced by enterprises by managing marketing and logistics requires the use of the strategic approach and implementation of innovative technologies.

Problem 1. Growing global competition. Businesses are forced to compete both with local competitors, and international companies that may have better resources, technology or lower production costs.

Ways to solve the problem:

- entering new markets or creating niche offers that will help reducing dependence on specific markets or territories;

- constant improvement of products, as well as optimization of business processes, which will increase efficiency and reduce costs;

- using modern analytical tools for in-depth analysis of competitive environment to better understand market trends and competitors' strategies.

Problem 2. High consumer expectations. Consumers expect fast delivery, high quality goods and services, personalized solutions and a high level of service.

Ways to solve the problem:

- using Big Data and artificial intelligence to analyze consumer behavior and create personalized marketing campaigns;

- implementation of digital platforms for interaction with consumers, including mobile applications, chatbots, real-time support systems;

- ensuring seamless interaction through various channels such as online, mobile platforms, etc., to improve customer satisfaction.

Problem 3. Complicated management of supply chain. Supply chains are complicated by globalization, increase in the number of suppliers, supplies from different countries and impact of force majeure situations (pandemics, natural disasters, wars).

Ways to solve the problem:

- implementation of the blockchain technology, which will ensure transparency at every stage of the supply chain and data protection from unauthorized intervention;

- real-time tracking of goods using sensors and smart devices, which allows timely response to any disruptions in the supply chain (Internet of Things);

- implementation of innovative solutions for inventory

management, monitoring and planning of supply chains.

Problem 4. Outdated technologies. Using outdated logistics or marketing management systems leads to inefficiency, waste of time and resources.

Ways to solve the problem:

- updating outdated systems to modern platforms, which will allow automating processes and increasing their efficiency;

- transition to cloud platforms for data storage and processing, which reduces IT infrastructure costs and increases flexibility;

- introduction of artificial intelligence and machine learning to automate routine operations, demand forecasting, etc.

Problem 5. Cyber security. Growing digitalization generates risk of cyber-attacks, resulting in the leakage of confidential information and loss of trust.

Ways to solve the problem:

- using encryption, multi-factor authentication and advanced access control systems to critical data;

- conducting regular trainings for employees on cyber security and countering phishing attacks;

- using tools to monitor systems in real time and detect anomalies or threats, allowing timely response to potential attacks.

Problem 6. Changes in legislation and regulation. Regulatory changes can create difficulties for businesses, especially in international trade, where rules can vary from country to country.

Ways to solve the problem:

- creation of internal or external legal teams engaged in monitoring changes in legislation and rapid adaptation to them;

- introduction of automatic control systems over the fulfillment of regulatory requirements;

- interaction with government bodies to obtain consultations or clarifications regarding new rules and requirements.

Problem 7. High logistics costs. Logistics costs can make

up a significant portion of a company's operating costs, especially by rising prices for energy, fuel, and transportation.

Ways to solve the problem:

- using artificial intelligence to optimize transport routes, which will reduce fuel costs and delivery time;

- using automated systems to manage warehouse stocks and reduce warehouse maintenance costs;

- transferring part of logistics to third-party companies to reduce costs and increase efficiency.

Problem 8. Management of large data volumes. Modern enterprises collect a large amount of data, but effective use of this mass of data remains a challenge.

Ways to solve the problem:

- investing in big data analysis systems to obtain more detailed information about customers, operations and markets;

- transition to cloud solutions for data storage and analysis to ensure their security and availability;

- using artificial intelligence for analysis and forecasting based on large data sets, which will help making informed decisions.

Problem 9. Environmental requirements. Public pressure on companies to reduce their environmental impact.

Ways to solve the problem:

- introduction of environmentally friendly technologies, such as renewable energy sources, electric transport, etc.;

- optimized delivery routes and reduced CO2 emissions;

- adapted business processes to international environmental standards.

Problem 10. Lack of qualified personnel. Introduction of new technologies requires qualified specialists.

Ways to solve the problem:

- investments in training employees in new skills and technologies;

- cooperation with educational institutions;

- using work automation.

Therefore, it is advisable to model the impact of marketing

and logistics system indicators on the volume of products sold by an enterprise, namely: a model of the impact of wireless telecommunications activities on the volume of products (goods. services) produced by enterprises; a model of the impact of social networks of enterprises on the volume of products (goods. services) produced by enterprises; a model of the impact of blogs or microblogs of enterprises on the volume of products (goods. services) produced by enterprises; a model of the impact of websites or applications (web applications) for exchanging multimedia content on the volume of products (goods. services) produced by enterprises.

Figure4.Modeling the impact of key indicators of the marketing and logistics system on the volume of products sold by the enterprise





VPP = -0,12*VPPt³+19,65* *VPPt²-958,6*VPPt+19997,85

VPP – Volume of products (goods. services) produced by enterprises VPPt– Volume of products produced in the field of wireless telecommunications

Model of the influence of social networks of enterprises on the volume of products (goods, services) produced by enterprises



VPP-3858,15*SN+8798,9

VPP – Volume of products (goods. services) produced by enterprises SN – social networks

Model of the influence of blogs or microblogs of enterprises on the volume of products (goods, services) produced by enterprises



VPP=23211,9*Ebm+10350.56

VPP – Volume of products (goods. services) produced by enterprises Ebm – enterprise blogs or microblogs

Model of the impact of websites or applications (web applications) for sharing multimedia content on the volume of products (goods, services) produced by enterprises



VPP = 3085,44*WA+6520,3

VPP – Volume of products (goods. services) produced by enterprisesWA - websites or applications (web apps) for sharing multimedia content

According to the results of the calculated impact models, we can state that there are sufficiently close relationships between the parameters.

The range of outlined problems and our proposed ways of

solving them made it possible identifying and generalizing main strategic priorities for enterprises that strive to achieve success in the conditions of global competition and active digitalization (Table 2).

Strategic priority	Description	Expected results
1. Business digitalization	Implementation of digital technologies in marketing and logistics, including automation, Big Data, AI, IoT and cloud platforms	Increasing efficiency, reducing costs, better analytics and data management, improving operational flexibility
2. Personalized marketing strategies	Using tools to better understand customer needs and create personalized offers and communications	Increasing the level of customer satisfaction and loyalty, increasing sales and market share
3. Transparency and security of supply chains	Using blockchain to ensure transparency and security at all stages of the supply chain, as well as reduce risks of tampering and fraud	Increasing trust of consumers and partners, reducing operational risks
4. Optimized logistics	Using AI, Big Data and automation for optimiz ed delivery routes, inventory management and demand forecasting	Reduced logistics costs, delivery time, improved reliability of supply
5. Strategic data management	Implementation of systems for analysis of large volumes of data (Big Data) of market trends, consumer behavior and efficiency of business processes	Justified managerial decisions, improved planning and forecasting
6. Improved qualifications and training of personnel	Investments in training employees in the latest technologies and management methods, so that they can work effectively in the conditions of digitalization	Increasing staff productivity, adapting to changes in the external and internal environment, reducing the need to hire additional specialists
7. Development of the omnichannel strategy	Integration of all channels of interaction with consumers (online, mobile platforms, physical stores) to create a unified customer experience	Seamless customer experience, increased loyalty, increased sales through various channels
8. Resistance to market changes and innovation	Constant work on innovations in products and businesses for quick adaptation to new conditions and changes in the market	Increased competitiveness, quick adaptation to changes in the external environment
9. Implementation of environmentally friendly technologies	Using sustainable solutions in production and logistics (e.g. electric transport, renewable energy sources)	Reduced environmental impact, compliance with international environmental standards, improvement of the company's reputation
10. Cooperation with partners for outsourcing of logistics	outsourcing part of logistics	Reduced costs, improving quality of services, focusing on main activity of the enterprise

Table 2. Main strategic priorities of enterprises in marketing and logistics and the expected results of their implementation

Source: systematized by the authors

The specified strategic priorities, subject to their observance, will contribute to increasing competitiveness of enterprises, effective marketing and logistics, and adaptation to new challenges of the digital economy.

Conclusions

Within the conducted research, it was established that growth of global competition and digitalization forces enterprises to actively review and adapt their marketing and logistics strategies to changing market conditions; achieving competitive advantages in modern market is significantly determined both by effective solutions, and by implementing innovative technologies; digitalization marketing and logistics becomes a key factor to increase operational efficiency, reduce costs and improve customer experience, and using technologies such as Big Data, artificial intelligence and machine learning, the Internet of Things, blockchain and others allow enterprises ensuring transparency, accuracy and speed of business processes; challenges in the marketing and logistics management require integrated latest technologies, which will improve internal efficiency and also increases customer satisfaction and flexibility in managing market changes. In addition, it has been proven that main problems of enterprises in marketing and logistics, such as high competition, complexity of supply chain management, outdated technologies, cyber security and lack of qualified personnel, and others, create significant challenges. Overcoming these challenges requires investment in innovation and personnel, which can be the subject of further research.

References:

Arefiev, S., Lagodiienko, V., Tkachev, V., Stavroiani, S., Shevchenko, O. (2023). Marketing and logistics in the adaptive management of enterprises in the conditions of digitalization. *Journal of Theoretical and Applied Information Technology*, *101*(8), 3121-3132.

Carvalho, J. L. G., & Campomar, M. C. (2014). Multichannel at retail and omni-channel: Challenges for Marketing and Logistics. *Business and Management Review*, 4(3), 103-113.https://citeseerx.ist.psu.edu/ document?repid=rep1&type=pdf&doi=5b1d0ee9a60b eafbcc4957df056a0a281cf9ca9b

Christopher, M. (2016). Logistics and Supply Chain Management: Logistics & Supply Chain Management. Pearson UK.https://books.google.com.ua/ books?hl=uk&lr=&id=IRXQEAAAQBAJ&oi=fnd&p g=PP1&dq=Christopher,+M.+(2016).+Logistics+%26 +Supply+Chain+Management&ots=V26vzcvVLX&si g=bnt7cyMmcfRmmi9zCaD1oJ7c6SU&redir_esc=y# v=onepage&q=Christopher%2C%20M.%20(2016).% 20Logistics%20%26%20Supply%20Chain%20Manag ement&f=false.

Dimitrakieva, S., Demirova, S., Mehmedov, M. (2023). Characteristics and peculiarities of marketing and logistics in the management of small and medium-sized enterprises. *E3S Web of Conferences*, 05018.

Enshassi, Mohammed, Nathan, Robert Jeyakumar, Soekmawati, Al-Mulali, Usamac. (2024). Potentials of artificial intelligence in digital marketing and financial technology for small and medium enterprises. *IAES International Journal of Artificial Intelligence, 13*(1), 639-647. Eurostat. (2024). https://ec.europa.eu/eurostat.

Fernie, J., & Sparks, L. (Eds.). (2018). Logistics and retail management: emerging issues and new challenges in the retail supply chain. Kogan page publishers.http://dspace.vnbrims.org:13000/xmlui/bits tream/handle/123456789/4194/Logistics%20and%20 Retail%20Management%20Emerging%20Issues%20a nd%20New%20Challenges%20in%20the%20Retail% 20Supply%20Chain,%203rd%20Edition.pdf?sequenc e=2.

Fiona, Febzi, Salim, Muhartini, Hadi, Effed Darta, Hayu, Rina Suthia. (2024). The role of entrepreneurship orientation in the effect of digital marketing through social media on the performance of micro, small and medium enterprises (MSMEs) in Indonesia. Journal of Sustainability Science and Management, 19(7), 70-94.

Hokmabadi, Hamed, Seyed M. H. S. Rezvani, and Celso Augusto de Matos. (2024). Business Resilience for Small and Medium Enterprises and Startups by Digital Transformation and the Role of Marketing Capabilities — A Systematic Review. *Systems*, 12(6), 220. https://doi.org/10.3390/systems12060220.

Ivanova, N., Popelo, O., Avhustyn, R., Rusak, O., Proshchalykina, A. (2022). Marketing Strategy of the Small Business Adaptation to Quarantine Limitations in the Sphere of Trade Entrepreneurship. *IJCSNS International Journal of Computer Science and Network Security*, 22(1), 149-160. https://doi.org/10.22937/IJCSNS.2022.22.1.21.

Khan, E.A. (2020). Logistics & Supply Chain Management. College of Management and Economics Studies, UPES, Dehradun.https://dr.ddn.upes. ac.in/handle/123456789/3838.

Khan, Shad Ahmad, Magd, Hesham, Bhuyan, Ujjal, Jonathan, Henry, Naim,Arshi. (2024). Digital Marketing (DM): How are small business enterprises (SBEs) of Bhutan and Sikkim (India) Responding to It? *Digital Influence on Consumer Habits: Marketing Challenges and Opportunities*, 135-145. https://doi.org/10.1108/978-1-80455-342-820241008.

Kotler, P., Keller, K. L., Brady, M., Goodman, M., & Hansen, T. (2016).*Marketing Management 3rd edn PDF eBook*. Pearson Higher Ed.

Kottler, P., & Keller, KL (2009). Marketing management. *Jakarta: Erlangga*.https://www. uoguelph.ca/mcs/sites/uoguelph.ca.mcs/files/public/A dvanced%20Marketing%20MCS%203000%20Course %20Outline%20-%20Fall%202010.pdf.

Lagodiienko, V., Perevozova, I., Bakhchivanzhi, L., Ozarko, K., Milcheva, V., Orlova, O. (2023). The Role of Digital Technologies in Optimizing the Functioning of the Marketing and Logistics System of the Enterprise. *Review of Economics and Finance, 21*, 2019-2026.

Ma,Xiuli, Gu, Xue. (2024). New marketing strategy model of E-commerce enterprises in the era of digital economy. *Hellyon*, 10(8), e29038. https://doi.org/10.1016/j.heliyon.2024.e29038.

Nikiforov P., Zhavoronok A., Marych M., Bak N., Marusiak N. State policy regulation conceptual principles of public-private partnership development. *Cuestiones Politicas*. 2022. Vol. 40(73). P. 417-434. https://doi.org/10.46398/cuestpol.4073.22

Spivakovskyy, S., Jarvis, M., Boiko, O., Robul,Yu., Liulchak, Z., Salo, Ya. (2023). Digitalization of marketing and logistics activities of manufacturing and trading enterprises. *Journal of Law and Sustainable Development*, *11*(4), 0945.

Srai, J. S., & Lorentz, H. (2019). Developing design principles for the digitalization of purchasing and supply management. *Journal of Purchasing and Supply Management*, 25(1), 78-98. https://www.sciencedirect. com/science/article/abs/pii/S1478409218302000.

Thiele, Laura Sophie, Peters, Diana. (2023). Digitalisation and inter-organisational information exchange strategies of German companies-A survey with focus on small and medium sized enterprises. *IET Collaborative Intelligent Manufacturing*, 5(4), el2082.

Velychko, O., Velychko, L., Butko, M., Khalatur, S. (2019). Modelling of strategic managerial decisions in the system of marketing logistics of enterprise. *Innovative Marketing - Open Access*, *15*(2), 58-70. http://dx.doi.org/10.21511/im.15(2).2019.05.

ViknianskaA., Kharynovych-YavorskaD., SahaidakM., ZhavoronokA., FilippovV.Methodological approach to economic analysis and control of enterprises under conditions of economic systems transformation. *NaukovyiVisnykNatsionalnohoHirnychohoUniversytet u*. 2021. Vol. 4.P. 150-157. https://doi.org/10.33271/ nvngu/2021-4/150

Wu, Chih-Wen, Botella-Carrubi, Dolores, Blanco-González-Tejero, Cristina. (2024). The empirical study of digital marketing strategy and performance in small and medium-sized enterprises (SMEs). *Technological Forecasting and Social Change, 200,* 123142. DOI: 10.1016/j.techfore.2023.123142.

Yu, Feifei, Du, Hongyan, Li, Xiaotong, Cao, Jiayu. (2023). Enterprise digitalization, business strategy and subsidy allocation: Evidence of the signaling effect. *Technological Forecasting and Social Change, Elsevier, 190*, 122472. DOI: 10.1016/j.techfore. 2023.122472.

ZhavoronokA., ChubA., YakushkoI., KotelevetsD., LozychenkoO., Kupchyshyna O. RegulatoryPolicy: BibliometricAnalysisUsingtheVOSviewerProgram. *International Journal of Computer Science and Network Security.* 2022. Vol. 22(1). P. 39-48. https://doi.org/10.22937/IJCSNS.2022.22.1.7