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LOGISTICS MANAGEMENT AS A TOOL FOR IMPROVING BUSINESS ECONOMIC EFFICIENCY IN THE MODERN ENVIRONMENT

ЛОГІСТИЧНИЙ МЕНЕДЖМЕНТ ЯК ІНСТРУМЕНТ ПІДВИЩЕННЯ ЕКОНОМІЧНОЇ ЕФЕКТИВНОСТІ БІЗНЕСУ В СУЧАСНИХ УМОВАХ

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Левкіна Р.В., Котко Я.М., Кулініч О.А. Логістичний менеджмент як інструмент підвищення економічної ефективності бізнесу в сучасних умовах. Науково-методична стаття.

У статті досліджено теоретичні та практичні аспекти логістичного менеджменту як стратегічного інструменту підвищення ефективності підприємств в умовах динамічного та нестабільного ринкового середовища. Обґрунтовано, що логістика трансформується з допоміжної операційної функції у комплексний управлінський механізм, який забезпечує інтеграцію матеріальних, інформаційних та фінансових потоків. Визначено основні тенденції розвитку галузі та бар'єри у впровадженні сучасних логістичних підходів. Зроблено висновок, що ефективний логістичний менеджмент і цифрові інструменти (ERP, WMS, та TMS- системи, технології Big Data, IoT та ін.) дозволяють мінімізувати вплив людського фактора, забезпечити сталий розвиток підприємств в умовах глобалізації та цифровізації.

Ключові слова: логістичний менеджмент, економічна ефективність, логістичні процеси; ланцюги постачання, цифрові технології, управління запасами, конкурентоспроможність, зелена логістика, підприємництво

Levkina R.V., Kotko Ya.M., Kulinich O.A. Logistics Management as a Tool for Improving Business Economic Efficiency in the Modern Environment. Scientific and methodical article.

The article explores the theoretical and practical aspects of logistics management as a strategic tool for enhancing the efficiency of enterprises in a dynamic and unstable market environment. It is substantiated that logistics is transforming from an auxiliary operational function into a comprehensive management mechanism that ensures the integration of material, information, and financial flows. The main trends in industry development and the barriers to implementing modern logistics approaches are identified. It is concluded that effective logistics management and digital tools (ERP, WMS, and TMS systems, Big Data technologies, IoT, etc.) allow for minimizing the impact of the human factor and ensuring the sustainable development of enterprises in the context of globalization and digitalization.

Keywords: logistics management, economic efficiency, logistics processes, supply chains, digital technologies, inventory management, competitiveness, green logistics, entrepreneurship

In today's economic environment, logistics management is becoming one of the key factors in ensuring the effective operation of enterprises, enhancing their competitiveness, and improving their adaptability to dynamic changes in the external environment. However, despite the growing role of logistics in the business management system, a significant portion of domestic enterprises still faces a number of problems related to the insufficient integration of logistics processes into the overall management system, the fragmentation of management decisions, and the lack of a comprehensive approach to coordinating material, information, and financial flows.

This issue becomes particularly relevant in the context of market instability, rising logistics costs, supply chain disruptions, shifting consumer priorities, the digital transformation of business processes, and intensifying competition. Under such circumstances, enterprises need not only to respond promptly to external challenges but also to establish an effective logistics system capable of minimizing costs, reducing order fulfillment times, optimizing inventory, and improving service levels. At the same time, in practice, there is a contradiction between the objective need to use modern logistics approaches and the insufficient level of their implementation in the operations of business entities.

Another significant problem is the lack of recognition of logistics management as a strategic tool for economic efficiency, rather than merely a support function related to transportation or warehousing. This narrow approach limits companies' ability to

comprehensively optimize business processes, reduce unproductive costs, and build sustainable competitive advantages. Furthermore, there is a need to adapt modern logistics concepts to the realities of business operations amid economic instability, infrastructure constraints, and high levels of uncertainty. Thus, the research problem lies in the need for a theoretical justification and practical understanding of the role of logistics management as an effective tool for improving business economic efficiency, as well as in identifying the main directions for improving a company's logistics processes under current economic conditions. This is precisely what necessitates an in-depth analysis of the essence, functions, tools, and mechanisms of logistics management in the context of ensuring the effectiveness and sustainable development of enterprises.

Analysis of recent publications on the problem

The issue of logistics management as a key tool for improving business efficiency is the subject of research by both foreign and domestic scholars. The theoretical and methodological foundations of logistics, supply chain management, material flow optimization, and the improvement of business process efficiency are discussed in the works of scholars, in particular [1-3]. In their studies, logistics management is viewed as an integrated system for managing flow processes that ensures cost reduction, improved service levels, the development of competitive advantages, and the creation of added value for the consumer. Among domestic scholars, significant contributions to the development of the theory and practice of logistics management have been made by O.I. Karitseva, M.O. Kharchenko, Yu.O. Mazin [4], A.S. Mokhnenko, O.B. Naumov [5], M. Zhelikhovska [6], I. Kyryliuk, A. Sokur [7] and others. Their scientific works explore issues related to the organization of enterprise logistics systems, inventory management, transport logistics, warehousing, logistics services, the integration of logistics into the strategic management system, as well as the evaluation of the effectiveness of logistics processes in the context of ensuring the economic performance of business entities. Recent scientific studies [8-10] have focused on the digital transformation of logistics management, the automation of logistics operations, and the application of management information systems, analytical platforms, artificial intelligence, Big Data technologies, and the Internet of things in logistics processes. In this context, logistics management is increasingly viewed not merely as an operational function, but as a strategic tool for ensuring business adaptability, supply chain resilience, and improving the effectiveness of management decisions [10].

Identification of previously unresolved parts of the general problem

At the same time, despite a significant body of scholarly work, the issue of using logistics management as a tool for improving business economic efficiency in today's environment remains under-researched. This is due to the dynamic nature of the external environment, changes in logistics risks,

market instability, disruptions in supply chains, rising transportation and storage costs, as well as the need to adapt classical logistics approaches to the new conditions of digitalization and crisis-driven transformations [11]. This is precisely why further scientific analysis is needed regarding the improvement of logistics management mechanisms, the determination of its impact on a company's economic performance, and the development of practical recommendations for enhancing the efficiency of logistics processes in the modern business environment. We have conducted research on business process management based on innovative activities involving the formation and satisfaction of demand for organic vegetable products, as well as strategic management of production activities in the agri-food sector of the economy [12-14]. The most closely related topic of our research is [15]. This publication is devoted to the results of a study on the innovative potential of an enterprise in the context of volatility and uncertainty in external and internal environmental factors. It is concluded that the level of innovative potential is influenced by the ability to mobilize all possible enterprise resources for development, including the ability to adapt its logistics system to changing conditions, as well as the formation of working capital reserves to temporarily maintain market positions and ensure optimal goods flows. Therefore, research in the field of logistics management must now be coordinated in a fundamentally new direction to ensure a high level of management effectiveness for business entities.

Formulation of research objectives (task setting)

The aim of the article is to define the essence, role, and functional significance of logistics management within the enterprise management system, as well as to substantiate its impact on improving business economic efficiency in the current economic environment by optimizing logistics processes, reducing costs, improving service quality, and ensuring the enterprise's competitiveness.

Materials and methods

The research is based on methods of a theoretical, analytical, and applied nature. The authors applied a systems approach to studying logistics management as a strategic tool. Thus, the method of systems analysis was used to investigate logistics management as an integrated system for managing flow processes, including material, information, and financial flows. The method of systematization and classification was employed to structure theoretical information and to distinguish the avenues of logistics' impact, the types of digital tools, and the primary development trends in the industry. The method of analysis and synthesis was utilized to integrate the research findings of domestic and foreign scholars, along with the authors' own results, into a unified concept of logistics transformation from an auxiliary operational function into a comprehensive management mechanism. The monographic method was applied for the comprehensive study and evaluation of existing scientific views on logistics management issues to identify the topic's relevance, formulate unresolved problems, and

determine prospects for further research. The method of logical modeling was used to establish cause-and-effect relationships between the implementation of specific digital tools (ERP, WMS, IoT) and the improvement of an enterprise's economic efficiency. The presented complex of methods allowed the authors to substantiate the paradigm shift in logistics management under digitalization and to formulate practical conclusions regarding the sustainable development of enterprises in the context of globalization and environmental uncertainty.

Presentation of main results and their justification

In today's business environment, logistics management has emerged as one of the key tools for ensuring business stability, competitiveness, and economic efficiency. Increased global competition, market instability, rising energy prices, supply chain disruptions, the digitalization of business processes, and growing consumer demands for speed and quality of service necessitate a shift by enterprises toward more flexible, integrated, and rational models for managing material, information, and financial flows, as well as to alternative strategies for managing production processes [11, 12].

Thus, logistics management ceases to be merely a support function related to the transportation or storage of products. It transforms into a strategic direction of enterprise management that ensures the coordination of all stages of resource movement – from the procurement of raw materials to the delivery of the finished product to the end consumer. It is precisely

through the effective organization of logistics processes that an enterprise gains the ability to minimize costs, reduce operation times, mitigate risks, and increase profitability. Thus, logistics management is a system of managerial decisions, methods, and tools aimed at planning, organizing, coordinating, controlling, and optimizing logistics processes within an enterprise [1]. Its primary objective is to ensure the efficient flow of physical, informational, financial, and service resources at minimal cost while maximizing customer satisfaction.

The essence of logistics management lies in the fact that it integrates various functional areas of a company's operations, including: supply; procurement; inventory management; warehousing; transportation; distribution; order processing; information support; and customer service. Thus, logistics management serves not merely as a mechanism for optimizing individual operations, but as a comprehensive system for managing flow processes that directly influences the financial and economic results of the enterprise's activities [3].

The economic efficiency of a business is characterized by the ratio between the results obtained and the costs required to achieve them. In this context, logistics management is an important tool, since logistics costs account for a significant share of total operating expenses in many companies. Rational logistics management allows for a significant reduction in costs without compromising the quality of products or services (Table 1).

Table 1. Key areas of influence of logistics management on the economic efficiency of business entities

Areas of focus	Characteristics of economic efficiency
Cost optimization	Effective logistics management helps reduce: transportation costs; storage costs; costs associated with building and maintaining inventory; costs related to downtime, excess inventory, or product shortages; and costs associated with order processing and internal transfers. As a result, a company can increase the profitability of its operations and establish a more competitive pricing policy.
Accelerating asset turnover	Efficient logistics allows for the reduction of the product supply, production, and sales cycle. This ensures: faster working capital turnover; reduced need for additional financial resources; increased corporate liquidity; and enhanced financial stability.
Improving customer service	Modern business operates within a customer-centric model. Logistics management ensures: timely order fulfillment; delivery accuracy; product range stability; shorter delivery times; and flexibility in responding to consumer needs. This helps increase customer loyalty, maintain market positions, and boost the company's revenue.
Reducing risks and enhancing adaptability	In today's environment, logistics chains are often affected by external shocks: geopolitical risks, inflation, fluctuations in demand, supply disruptions, and changes in transportation infrastructure. Modern analysts emphasize that companies are increasingly shifting from simple «resilience» to models of constant flexibility, transparency, and continuous monitoring of supply chains. Effective logistics management enables companies to: diversify their suppliers; establish alternative routes; build safety stock; utilize demand forecasting; and quickly restructure supply chains.

Source: elaborated by the authors based on [16]

Thus, the identified key areas through which logistics management influences business economic efficiency clearly demonstrate that its significance extends far beyond the purely operational management of material flows. In today's environment, logistics management serves as a comprehensive management mechanism that ensures the alignment of internal and external business processes, helps reduce costs, accelerates resource turnover, and improves the quality of customer service. That is why, for a deeper

understanding of its role in shaping a company's economic performance, it is advisable to examine the main functions of logistics management through which its practical impact on business efficiency is realized.

To understand the role of logistics management, it is advisable to identify its key functions, specifically:

1. Planning of logistics processes. This involves determining resource requirements, procurement volumes, delivery schedules, optimal routes, inventory levels, and warehouse operating modes.

2. Organization of the logistics system. This encompasses the formation of the structure of logistics departments, the allocation of responsibilities, the selection of suppliers, carriers, and warehouses, as well as the establishment of cooperation among participants in the logistics chain.

3. Coordination of flows. Aimed at coordinating the movement of material, information, and financial flows between various company departments and external partners.

4. Control and monitoring. This involves tracking the execution of logistics operations, evaluating costs, and analyzing delivery times, service levels, and resource utilization.

5. Optimization and improvement. This involves identifying bottlenecks, eliminating unnecessary costs, modernizing processes, implementing innovations, and increasing the overall productivity of the logistics system.

Thus, the implementation of the core functions of logistics management ensures systematic control over an enterprise's operational processes, creating the conditions for improving the efficiency of its business activities. At the same time, in today's environment of

rapid development in information technology, digital business transformation, and increasingly complex logistics chains, traditional approaches to performing logistics functions require significant improvement. This is precisely why the consideration of logistics management in the context of digitalization is becoming particularly relevant, as it opens up new opportunities for process automation, improved accuracy of management decisions, real-time monitoring, and optimization of logistics operations. In the current context of digital business transformation, logistics management is increasingly based on the use of specialized information systems, analytical platforms, and intelligent technologies that enable the automation, coordination, and optimization of logistics processes. The use of digital tools allows enterprises not only to improve the efficiency of management decisions but also to create more flexible, transparent, and cost-effective logistics systems. The use of these digital tools in logistics management systems offers businesses significant opportunities to improve the efficiency of logistics process management and enhance their financial performance (Table 2).

Table 2. Key digital tools in modern logistics management

Digital tools	Characteristics
1	2
ERP systems for integrated enterprise resource management	ERP systems are comprehensive software solutions that provide integrated management of a company's key resources, including procurement, production, inventory, finance, human resources, and sales. In the field of logistics management, ERP systems play a crucial role in coordinating material, information, and financial flows, as they enable the synchronization of logistics operations with other business processes within the enterprise. Their use helps improve the accuracy of resource planning, reduce excess inventory levels, cut operating costs, and provide a unified information space for management decision-making.
WMS systems for warehouse management	WMS systems are designed to automate and optimize warehouse processes, including receiving, put away, storage, picking, movement, and shipping of goods. They allow for more efficient use of warehouse space, reduce errors in goods handling, speed up order fulfillment, and improve control over inventory levels. In the context of logistics management, WMS systems ensure accurate inventory tracking, transparency of warehouse operations, and increased productivity of warehouse staff, which directly contributes to lower logistics costs.
TMS systems for transportation management	TMS systems are digital tools for managing transportation operations, covering route planning, shipment tracking, carrier coordination, delivery tracking, and transportation cost analysis. Using TMS solutions allows you to optimize delivery routes, minimize fuel costs, reduce transit times, increase vehicle load factors, and ensure real-time monitoring of logistics operations. In today's environment, such systems are a vital tool for enhancing the flexibility and reliability of transportation logistics.
CRM and OMS solutions for order and service coordination	CRM systems and OMS solutions ensure effective order coordination, customer communication, and service management. In logistics management, these tools help improve the quality of customer service, ensure accurate order processing, monitor delivery timelines, and facilitate synchronization between sales, warehousing, and delivery departments. Their use allows companies to respond more quickly to customer needs, reduce the number of order errors, and increase customer satisfaction.
Big Data and Business Intelligence for analytics	Big Data technologies and Business Intelligence (BI) systems are used to collect, process, analyze, and visualize large volumes of data generated during logistics operations. They enable the analysis of demand, seasonal fluctuations, consumer behavior, route efficiency, inventory dynamics, supplier performance, and other parameters critical for making informed management decisions. In logistics management, these tools help improve forecasting accuracy, identify bottlenecks in the logistics chain, and develop strategically sound decisions for optimizing business processes.
Artificial Intelligence (AI) for demand forecasting and route optimization	Artificial intelligence technologies are increasingly being used in logistics management to automate analytical and forecasting functions. AI solutions enable demand forecasting based on historical data, market trends, and consumer behavior patterns, which contributes to more efficient inventory management and reduces the risk of shortages or surpluses. In addition, artificial intelligence is used to build optimal delivery routes, taking into account traffic, weather conditions, geographical constraints, and transportation costs, which reduces expenses and improves the efficiency of transport logistics.

Continuation of Table 2

1	2
IoT (Internet of things) for real-time cargo tracking	The Internet of Things (IoT) in logistics consists of a system of connected sensors, GPS trackers, smart devices, and other technical tools that enable continuous real-time monitoring of the location, condition, and transport conditions of cargo. The use of IoT technologies makes it possible to monitor temperature, humidity, vibration levels, delivery times, route deviations, and other critical parameters. This is particularly relevant for the transportation of sensitive or perishable goods. As a result, transportation safety is enhanced, the risk of loss is reduced, and a higher level of transparency in logistics operations is ensured.
RFID and Barcoding for Warehouse Automation	RFID technology and barcode systems are essential tools for automating the identification, tracking, and movement of inventory in logistics processes. Their use allows for the rapid identification of goods, reduces cargo handling time, minimizes errors from manual data entry, ensures accurate inventory tracking, and speeds up inventory counts. Within modern logistics management, these technologies help improve the accuracy of warehouse operations, optimize intra-warehouse movements, and reduce inventory holding costs.
Blockchain for Increased Supply Chain Transparency	Blockchain technology in logistics management is used to create secure, transparent, and immutable digital records of all stages of goods movement within the supply chain. It allows for the recording of data on product origin, transportation conditions, changes in ownership, document flow, and the fulfillment of contractual obligations. This increases trust among participants in the logistics chain, reduces the risk of fraud, minimizes information discrepancies, and simplifies the auditing of logistics operations. In today's environment, blockchain is becoming a promising tool for ensuring the transparency, security, and traceability of shipments.

Source: elaborated by the authors based on [8, 17]

First and foremost, the use of digital solutions improves the accuracy of management decisions, as executives gain access to up-to-date, structured, and analytically processed information regarding the movement of goods, inventory levels, transportation costs, order fulfillment, and the state of the logistics infrastructure. This enables more informed decision-making at both the operational and strategic levels. Another key advantage is the reduction of human error. The automation of routine operations, digital accounting, electronic document management, automated reporting, and the use of data processing algorithms minimize the likelihood of errors associated with manual data entry, subjective assessments, or delayed responses. This is particularly important for companies with a high volume of logistics operations, where even minor errors can lead to significant financial losses.

Another equally important outcome is the acceleration of data processing and the improvement of logistics process efficiency. Thanks to digital platforms, information regarding orders, deliveries, the movement of goods, and changes in inventory is updated in real time, enabling a rapid response to deviations, the avoidance of delays, and the maintenance of uninterrupted logistics operations. This helps reduce order fulfillment times, minimize downtime, and improve the overall efficiency of business processes. Additionally, the digitalization of logistics management ensures greater transparency in logistics processes. Integrated information systems allow for tracking all stages of the movement of goods and resources, monitoring the execution of logistics operations, analyzing deviations, and promptly identifying problem areas. Process transparency helps strengthen internal controls, improve coordination between departments, and build trust among supply chain participants. In summary, it should be noted that the use of digital tools in logistics management enables companies to respond promptly to market changes, and adapt their logistics processes to fluctuations in demand, changes in transportation infrastructure,

consumer behavior, and external risks. As a result, the digitalization of logistics not only improves operational efficiency but also creates the strategic conditions for strengthening competitiveness, financial stability, and long-term business development in today's environment. Thus, the use of key digital tools in the logistics management system significantly expands a company's capabilities regarding the automation of logistics processes, improving the accuracy of management decisions, ensuring operational transparency, and responding promptly to changes in the external environment. At the same time, the digitalization of logistics processes is only one component of the overall transformation of the flow management system.

This is precisely why it is advisable to shift toward a broader consideration of the benefits of implementing logistics management as a whole, since its effective application not only ensures technological improvement of logistics operations but also creates comprehensive economic, organizational, and strategic advantages for modern business (Table 3). Thus, an analysis of the advantages and challenges of implementing logistics management demonstrates its significant importance for improving business efficiency, while also revealing a number of constraints that hinder the full realization of its potential in the practical operations of enterprises. On the one hand, effective logistics management ensures cost optimization, increased productivity of business processes, improved service quality, and strengthened competitive positions. On the other hand, the instability of the external environment, digital challenges, infrastructure constraints, resource shortages, and rising logistics risks require the continuous improvement of logistics approaches and management tools. In today's environment, logistics management is undergoing a period of active transformation driven by the impact of digitalization, market globalization, increasing external instability, changing consumer behavior, rising demands for speed and service quality, and intensifying competition.

Table 3. The problems and benefits of implementing logistics management

Problems/barriers	Advantages
<ul style="list-style-type: none"> – insufficient digitization of business processes; – lack of a unified logistics strategy; – poor quality of information support; – staff resistance to organizational changes; – shortage of qualified specialists; – limited financial resources for modernization; – instability of the external environment; – dependence on individual suppliers or transport routes. 	<ul style="list-style-type: none"> – reduction in overall operating costs; – shorter order lead times; – increased inventory turnover; – reduced levels of illiquid or excess inventory; – improved delivery accuracy; – increased customer satisfaction; – strengthened competitive position; – increased business flexibility; – improved financial results..
<p>That is why logistics management should be viewed not as a one-time event, but as a continuous process of management improvement.</p>	

Source: elaborated by the authors based on [18]

Traditional approaches to managing logistics processes are gradually being supplemented by new management concepts, technological solutions, and strategic guidelines aimed at ensuring business flexibility, resilience, adaptability, and economic performance. For this reason, current trends in the

development of logistics management should be viewed as a reflection of fundamental changes in enterprise management systems, which create new opportunities for optimizing logistics processes and strengthening the competitive advantages of business entities (Table 4).

Table 4. Trends and characteristics of logistics management

Trends	Characteristics
1	2
Integrating logistics into strategic business management	One of the leading trends in contemporary development is the shift from viewing logistics as a purely operational function to understanding it as a strategic element of business management. In today's environment, logistics management is increasingly integrated into the overall corporate management system, as profitability, responsiveness to market changes, customer service levels, and overall business competitiveness depend on the efficiency of logistics processes. This approach involves incorporating logistics solutions into strategic planning, budgeting, investment policy, and risk management. As a result, logistics transforms from a cost center into a source of value creation and a key factor in shaping a company's economic performance.
Digitalization and automation of logistics processes	A key trend is the active adoption of digital technologies in corporate logistics operations. Digitalization encompasses the use of ERP, WMS, and TMS systems, as well as CRM and OMS solutions, Big Data technologies, artificial intelligence, the Internet of Things, RFID, blockchain, and other innovative tools. The automation of logistics processes allows for improved accounting accuracy, reduced operation times, fewer errors, faster data processing, and real-time monitoring of logistics flows. This trend is one of the most significant, as digital transformation creates the foundation for building more flexible, transparent, and manageable logistics systems.
Strengthening the role of data analytics and forecasting	Modern logistics management increasingly relies on analytical tools that enable the processing of large volumes of data and the formulation of informed management decisions. The use of data analytics in logistics makes it possible to forecast demand, identify seasonal fluctuations, analyze consumer behavior, evaluate supplier performance, model transportation routes, and monitor inventory dynamics. Predictive analytics is of particular importance, as it allows companies not only to respond to existing changes but also to identify potential risks and opportunities in advance. This helps increase the adaptability of the logistics system and reduce costs associated with uncertainty.
Building flexible and adaptive supply chains	One of the key current trends is the reorientation of companies toward building flexible, resilient, and adaptive supply chains. Conditions of instability, geopolitical risks, changes in transportation infrastructure, inflationary pressure, fluctuations in demand, and increasing market unpredictability necessitate a move away from overly rigid logistics models. Modern companies are increasingly turning to supplier diversification, alternative supply channels, backup routes, safety stock, and scenario planning. This approach helps minimize the risk of supply disruptions, maintain business continuity, and ensure the resilience of the logistics system during crises.
Development of customer-focused service	Changes in consumer behavior and the rapid growth of e-commerce are driving the adoption of new logistics models, under which companies provide integrated customer service across various sales and delivery channels. This necessitates the synchronization of offline and online channels, flexible inventory management, rapid order fulfillment, organization of «last-mile» delivery, returns, and personalized service. In modern logistics management, the role of not only the efficiency of internal processes but also the ability to ensure a high level of customer experience is growing. This is precisely why customer-centricity is becoming a key criterion for evaluating the effectiveness of logistics solutions.

Continuation of Table 4

1	2
Promotion of the concept of «green» logistics and sustainable development	A significant trend is the growing emphasis on the environmental aspect of logistics management. Modern companies are increasingly adopting the principles of sustainable development, which involves reducing the negative impact of logistics operations on the environment. This is reflected in the adoption of energy-efficient transportation, route optimization to reduce emissions, the use of eco-friendly packaging, waste reduction, the development of reverse logistics, and increased resource efficiency in warehousing and transportation operations. Today, «green» logistics is viewed not only as an ethical or environmental requirement, but also as a factor in reducing costs, improving a company's reputation, and increasing its investment attractiveness.
The development of partnership integration in supply chains	Modern logistics management is characterized by increased cooperation among all participants in the supply chain: suppliers, manufacturers, distributors, logistics operators, retailers, and end consumers. The efficiency of logistics processes increasingly depends on the level of information exchange, decision coordination, joint planning, and transparent communication among partners. Companies are shifting from isolated management of individual logistics operations to a model of integrated supply chain management, where the coordination of all participants' actions ensures cost reduction, increased supply reliability, and improved overall efficiency of the logistics system.
Enhancing the role of risk management in logistics	In today's environment, logistics management is closely linked to risk management. Disruptions to transport routes, delivery delays, changes in customs regulations, currency fluctuations, resource shortages, infrastructure constraints, and force majeure events require companies to implement early risk detection and warning systems. Therefore, a current trend is the integration of risk management into logistics planning, which involves assessing the vulnerability of supply chains, developing contingency plans, diversifying contractors, and utilizing digital monitoring systems. This approach helps increase the reliability of logistics operations and reduce potential economic losses.
The intellectualization of logistics management	The current stage of development in logistics management is characterized by a shift from the automation of individual operations to the intellectualization of logistics process management. This implies a growing role for self-learning algorithms, decision support systems, digital twins, predictive analytics, adaptive planning, and intelligent flow management. The intellectualization of logistics allows companies not only to improve operational efficiency but also to create fundamentally new management models focused on proactive response, risk minimization, and continuous improvement of logistics processes.

Source: elaborated by the authors based on [2, 3, 10, 17]

Thus, current trends in the development of logistics management reflect its gradual transformation from a functional and operational element of a company's activities into a strategically important management system focused on ensuring economic efficiency, sustainability, flexibility, and business competitiveness.

Digitalization, automation, the integration of logistics into strategic management, the development of analytics, customer-centricity, environmental sustainability, and the strengthening of risk management are shaping a new paradigm of logistics management, within which its effective implementation becomes a prerequisite for the stable operation and long-term development of an enterprise in today's business environment.

Conclusions and prospects for further research

The study found that, in today's environment, logistics management is evolving from a support function to a strategic management tool that ensures the comprehensive coordination of material, information, and financial flows. The essence of this process lies in the integration of various functional areas – from procurement and inventory management to warehousing and customer service – into a single system aimed at creating added value and ensuring the stable operation of the enterprise. Economic efficiency through logistics tools is achieved not only by directly

optimizing transportation and storage costs, but also by accelerating resource turnover, increasing liquidity, and establishing a flexible pricing policy. Digital transformation, encompassing the implementation of ERP, WMS, IoT, and artificial intelligence technologies, is becoming a key factor in minimizing the human factor's influence, improving the accuracy of management decisions, and ensuring real-time supply chain transparency. The use of Big Data analytics and Business Intelligence allows companies not only to track current metrics but also to perform predictive analytics, which significantly reduces risks associated with market uncertainty.

The current paradigm for the industry's development involves a shift from the concept of static stability to models of continuous adaptability, in which supplier diversification, the use of alternative routes, and the integration of risk management into daily planning play a key role. In addition to purely technological aspects, the importance of «green» logistics and customer-oriented service is growing, becoming key factors in strengthening the reputation and investment attractiveness of businesses. Thus, effective logistics management today is not merely a cost-saving mechanism but a fundamental foundation for ensuring a company's long-term competitiveness and sustainable development in the context of global digitalization and a changing external environment.

Abstract

This article examines the theoretical and applied foundations of logistics management as a strategic tool for enhancing the economic efficiency of an enterprise in a dynamic and unstable market environment. It is substantiated that, in contemporary conditions, logistics is transforming from an auxiliary operational function, focused on transportation or storage, into a comprehensive management mechanism that ensures the integration of material, information, and financial flows. The authors define the essence of logistics management as a system of managerial decisions aimed at planning, coordinating, and optimizing logistics processes to achieve maximum consumer satisfaction at minimal cost.

The study analyzes the primary avenues through which logistics impacts the financial and economic performance of enterprises, particularly through cost optimization (transportation, warehousing, inventory holding), acceleration of working capital turnover, risk mitigation, and the implementation of a client-oriented service model. Special attention is paid to the digital transformation of logistics management. The role of key digital tools – such as ERP, WMS, and TMS-systems – is characterized. It is demonstrated that their application allows for the automation of routine operations, the minimization of the human factor, increased accuracy of managerial decisions, and the assurance of supply chain transparency in real time.

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