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METHODOLOGICAL FOUNDATIONS OF NEW-TYPE LOGISTICS SERVICES IN THE CONDITIONS OF DIGITAL ECONOMY

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Abstract
This article covers the origin, development stages of supply chain management and its role in modern economic activity. Based on historical sources, it is emphasized that the concept of "logistics" was formed starting from the ancient Greek and Roman periods, and its initial forms were used in military and administrative activities. The presentation also highlights the importance of supply and supply chain in effectively organizing the activities of enterprises in the context of the digital economy. This serves as an important theoretical basis for developing the methodological foundations of new types of logistics services.

Keywords: Digital economy, logistics, supply chain, digital logistics, supply system, methodological foundations, artificial intelligence, digital transformation, information technology, historical evolution, competitiveness.

Introduction

In today's context of globalization and technological progress, the digital economy is fundamentally changing all facets of human activity, particularly logistics and delivery services. New digital solutions, artificial intelligence, IoT (Internet of Things), cloud technologies, and blockchain-based systems enable optimization of the logistics chain, cost reduction, and improvement of customer service quality. Within the framework of the "Digital Uzbekistan – 2030" strategic program of the President of the Republic of Uzbekistan, special attention is paid to the digitalization of all sectors of the country's economy, including the transport and logistics sector. Especially in the post-pandemic period, with the rapid development of e-commerce, the need for fast, safe, and flexible delivery systems has increased significantly. Therefore, the digital transformation of logistics services, assessing their efficiency, and managing them based on modern technologies have become urgent issues.The concept of supply has an ancient history; the word "Supply" is of Greek origin. In ancient Athens, there was a special position - "logist" or social self-government official (about 30 in the 5th century BC). Logists were appointed annually by lot; their duties included checking the reports of other officials whose terms had expired and submitting these reports to the council of honorable citizens for approval, and the council's decision was final.

Analysis of literature on the topic

The word "Logistics" exists in all major European languages, but they use it in different meanings. The term "Logistics" was used by famous scientists, philosophers, and generals in their works. The great German mathematician G.W. Leibniz (1646-1716) used this term in the meaning of "Calculation of conclusions" or mathematical logic. In the 19th century, the famous

military theorist and historian of Swiss origin, Antoine-Henri Jomini (1779-1869), used this term in his works. Starting from 1813, he worked in Russia in the staff of Alexander I, and in 1826 he received the rank of infantry general. He was a military advisor to Nicholas I and one of the founders of the military academy in St. Petersburg (1828). He was the personal teacher of Crown Prince Alexander II, and indeed the author's most important work on logistics was written for him and later translated into many languages.

Research Methodology

This research studied the development stages of logistics and supply services in the context of the digital economy, their role in modern management methods, and methodological foundations. The research was conducted based on the following methodological approaches:
Historical-analytical method – the origin of the concept of supply and logistics, their evolution from ancient societies to the modern stage of digital transformation, was analyzed based on historical sources.

Analysis and Results

This has been influenced by the latest calculation methods, the widespread use of modern computing, information technology, and the interdependent development of production infrastructure elements and intensive economic methods. At the end of the 20th century, supply became a science encompassing procurement (supply), production, sales (distribution), transport, and information supply. The mentioned areas of human activity have been sufficiently studied and described in the relevant literature.The novelty of the logistical approach lies in the integration of the mentioned and other areas of activity to achieve any result through appropriate flow management with minimal costs of time and resources. Thus, supply primarily works for consumers, striving to better satisfy their requests. In 1992, at the international symposium of the European Logistics Association in Stockholm, it was emphasized that there was still no generally accepted definition of the term logistics. Since this is a new scientific direction with clearly reflected dynamics of development, various expressions of this concept have been proposed.Therefore, let's consider some of the definitions related specifically to logistics:This is the process of planning, implementing, and controlling the technological and economically efficient operations of gathering, storing, shipping, and transmitting raw materials, semi-finished products, finished products, and relevant information from the place of production to the place of consumption for the purposes of better satisfying consumer demands. The listed operations are carried out on the input and output, internal and external flows of materials and information (this interpretation was given by the board of logistics management).
In industry, supply involves organizing the supply of production with raw materials and materials and the sale of finished products. (American Society of Production and Inventory Management Problems).
-This is the management of the movement of raw materials, materials, components, and finished products from the producer through the manufacturing firm to consumers (firm Goopere & Lybrand);

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-This is a new scientific direction, the study of planning, management, and monitoring of material and information flows in production and energy systems (Prof. A.A. Smekhov, Russia).
-This is the planning, management, and control of the material flow entering the enterprise, processed there, and leaving the enterprise, and the corresponding information flow (Prof. G. Pavellek, Germany).
-The science of planning, organizing, managing, controlling, and regulating the movement of material and information flows from the primary source to the end consumer in terms of distance and time (A.N. Rodnikov);
-This is, first of all, a defined advanced thinking, the most effective methodology in large production-economic (sectoral, regional, national economic) organizations, large-scale entrepreneurship and commercial activity (when applied to a "free" market economy) (A.T. Semenov);
-This is the science of managing flows in large systems (B.K. Plotkin);
-This is a scientific tool for the effective cooperation of society's productive forces through the system of organizing and coordinating material, commodity, and information flows (N.V. Afanaseva);
-This is a practical science, its subject consists of the methodology for coordinating the management of economic objects based on a systems economic approach. (K.V. Inyutina);
-In a broad sense, logistics is the science of managing and coordinating material flows, service flows, and the associated information and financial flows to achieve the goals set for a given micro- or macroeconomic system (V.I. Sergeev);
-The theory and practical activity of planning, organizing, functional management, and controlling the process of movement of a set of material, financial, labor, legal, and information flows in a market economy system (O.A. Novikov and S.Uvarov);
A system developed for each enterprise to appropriately accelerate the movement of material resources and goods from the purchase of raw materials and materials outside of control, through their passage through production, to the delivery of finished products to consumers, from the point of view of making a profit ("Dandas" - one of the largest German transport-use companies). Despite the noted differences, the listed concepts of logistics have a single common element - rationality and a common goal. Thus, logistics can be considered as the science of planning, controlling, and managing thetransportation, warehousing, and other material and non-material operations carried out in the process of delivering raw materials and materials to the manufacturing enterprise, processing raw materials, materials, and semi-finished products within the plant, delivering the finished product to the consumer in accordance with their interests and demands, as well as transmitting, storing, and processing relevant information (Rodnikov A.N. Terminological Dictionary. 2000).
In the period under consideration, the USA had a rapidly growing market characterized by the introduction of new production technologies (for example, in the automotive industry), a high degree of specialization, an abundance of natural resources, and less state regulation of the economy, i.e., a typical seller's market situation. Under these conditions, the main focus of management was on filling the market, i.e., searching for reserves for product production.

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During this period, conditions for the application of the logistics concept were formed. The following factors can be included:

- Increase in inventories and transport costs in product distribution systems;
- Increase in transport tariffs;
- Emergence and rapid spread of the marketing concept;
- Development of military logistics theory and practice.

During this period, a number of works on marketing were published, revealing the nature of physical distribution as a component of marketing, showing its special role in organizing sales and increasing efficiency. The emergence of the marketing concept as a result of the gradual transition of the world economy from a seller's market to a buyer's market is the main factor explaining the emergence of logistics in business. This period is characterized by the active development of military logistics, primarily in the USA.

The concept of total costs became the basis for developing the methodology of the concept of logistics decisions. At the same time, there were a number of objective economic and technological factors that also explained the rapid development of logistics during this period. The main ones include: changes in the models and relations of consumer demand (development of oligopolistic markets); pressure from the production cost factor; progress in computer technology; changes in inventory formation strategies; the influence of military experience. The main content of the concept is as follows: "Logistics activities manage all types of activities that assist in the movement and coordination of supply and demand for goods at a specified place and at a specified time." At the same time, the period under consideration did not stop trying to give a generalized definition of logistics. One of the world's most reputable logistics organizations - the National Council of Physical Distribution Management, later reorganized into the Council of Logistics Management, at that time defined logistics as follows: "Logistics is a wide range of activities related to effective movement, including the movement of final products from the end of production to the customer, and in some cases, the movement of raw materials from the source of supply to the beginning of production. This activity includes transportation of materials, warehousing, processing, protective packaging, inventory control, selection of production and warehouse locations, demand forecasting, marketing, and customer service."

Based on the above, the logistics organization proposed the following definition:"Logistics management is the art and science of, technique and technical methods involving planning, providing, and applying means of transfer to carry out planned operations to achieve set goals."The emergence and confirmation of the integral concept of logistics were significantly influenced by the possibility of controlling material flows in real-time scales and remote access modes through communication information systems (for example, via satellite telecommunication systems). Thus, along with the material revolution in information technology, the understanding of the need to manage information and financial flows was strengthened.

In 1985, the Council of Logistics Management defined logistics as follows: "Logistics is the process of planning, managing, and controlling the flow of raw materials, materials, work-in-progress inventories, finished products, services, and related information from the point of

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origin to the point of consumption (including import, export, internal, and external movement) for the purposes of fully satisfying consumer requirements."

Three aspects are important in this definition.

- First, logistics activity is of an integrated nature, extending the flow of material resources and finished products from the point of origin to the point of consumption.
- Second, the importance of managing accompanying information is emphasized.
- Third, service (non-material) flows fell into the sphere of logistics interests for the first time.

This is of fundamental importance for the development of logistics approaches in the service industry, since in recent decades only material flows have been the object of study and coordination in logistics.

The widely spread Total Quality Management (TQM) concept abroad remains one of the most important driving forces of logistics changes. It has been adopted by many of the world's leading companies. This concept made a revolution in the theory and practice of management. According to one definition, Total Quality Management is a management approach based on the participation of all members of the firm (organization) at all stages of the movement of production (services) in solving the issue of quality improvement, placed at the center of attention, allowing to achieve long-term success through satisfying the needs of consumers, and due to the mutual benefit of each member of the firm and society as a whole.

Conclusion

In conclusion, the logistics approach leads to the regulation of material flows. These flows arise in the production of certain products; in providing this production with the necessary materials, components, and raw materials; in warehousing finished products, distributing them, and delivering them to the consumer. But such regulation can only be carried out by managing the magnitude, direction, origin, completion, periodicity, consistency, and other parameters of human, energy, information, and financial resource flows. These flows are also material, although their physical nature differs from the nature of the initial materials that, as a result of economic activity, turn into a product that satisfies the defined needs of the end consumers.

Therefore, the concept of logistics can be interpreted in a broader sense as a modern methodology and technique for managing all interdependent types of flows arising in the process of economic activity as a single whole.

In general, logistics management extends to the following functional areas:

- inventories;
- movement of cargo flows;
- warehousing and warehouse processing;
- transportation of materials, raw materials, components, and finished products;
- distribution of products.

In existing practice, two types of approaches to logistics have been adopted. In one case, logistics involves developing the mechanism and structure for managing the movement of material, information, financial and other flows, i.e., it is limited to the performance of planning tasks.

In another case, logistics is not limited to planning and involves actual management actions, i.e., carries out daily operational activities for management. Logistics, whether at the stage of planning production and business activities or at the stage of implementation, influences the process of marketing research, the movement of material resources, the distribution of products among consumers, the production process itself, and administrative and management activities. On the one hand, logistics manages the main directions and practical course of marketing research. On the other hand, the nature and methods of conducting these researches determine the structure and tasks of logistics management. Regional marketing research can have a great impact on the cost indicator of economic activity. The type and volume specialization of production activity is determined by them. Marketing research determines the choice of sales volume and distribution structure. The expansion of the product range can occur through the modernization of the base model. In a number of cases, such modernization can occur only through the use of certain additional elements (accessories). In this case, the total technological cycle does not necessarily lengthen but often shortens.

Making decisions on issues of product volumes and range, methods of their storage and delivery to consumers is closely related to the conditions for obtaining financial loans, methods and terms of their repayment. The results of marketing research lead to certain conclusions and decisions in the field of management and the distribution of financial flows.

The logistics system expands and complements the organization of the entire economic activity in the direction of implementing the results of these marketing research through marketing research, and this activity is carried out through the regulation of financial flows and issuing appropriate management instructions. According to the principles of logistics, all management decisions made on the basis of marketing research on the current information about the surrounding market environment and the course of economic activity are reflected in the impact on material flows. As a result, logistics management must carry out the impact and organize the production process in such a way that it better satisfies potential consumers at lower costs and expands their range.

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