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## TRANSPORT LOGISTICS AS A TOOL FOR INCREASING THE EFFICIENCY OF THE ORGANIZATION

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## ТРАНСПОРТНА ЛОГІСТИКА ЯК ІНСТРУМЕНТ ПІДВИЩЕННЯ ЕФЕКТИВНОСТІ ОРГАНІЗАЦІЇ

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*The presented work describes the logistics activity of the enterprise (organization) from the point of view of the use of transport logistics. The essence of transport logistics, as a scientific and practical tool for the joint management of many economically independent market structures, which allows to achieve a rational organization of flow processes that occur in a space-time sequence, with the aim of identifying and implementing potential management reserves and obtaining additional income and profit by these structures, mainly at the expense of socially useful, mainly industrial, factors and sources.*

*Logistics activities at the enterprise are carried out with the help of the development of a logistics plan, on the basis of which a logistics strategy is formed. In the process of developing a logistics plan and strategy, the purpose and tasks of logistics activity, as well as its direction, are the defining components. Regarding the interpretation of the specified characteristic elements of logistics activity by scientists, there is no single point of view here either. It should be noted that the existing differences in views are characteristic of the stage of formation and development of logistics activity as a type of economic activity.*

*The logistics activity of the enterprise should ensure the optimization of sales activities and the acceleration of its management processes. The development of transport logistics in particular ensures the optimization of distribution and promotion channels, which in turn becomes one of the competitive advantages of an organization or enterprise.*

*When writing the work, the method of analysis was used to determine the essence of the concept of transport logistics, the methods of induction and deduction to form an idea about the logistics activity of the organization (enterprise).*

*The main result of the presented work is the confirmation of the thesis that the interests of consumers require from the manufacturing companies not only the adaptation of the product to the needs of a specific buyer, but also the support of constant feedback with him and the adaptation of the entire chain to such needs. The result of the implementation of these conditions is an increase in the quality of service and, above all, a reduction in the time of order fulfillment and compliance with the agreed delivery schedule.*

**Keywords:** logistics tools, logistics, transport networks, logistics system, logistics activity

**Introduction.** The harsh conditions of the competitive environment in the conditions of the post-industrial economy require the use of new approaches to planning and managing the movement of goods flows from the manufacturer of finished products to the consumer, based on the principles of transport logistics, and the growth of its role in ensuring the efficiency of economic activity necessitated a review of the definition of this term.

First, transport logistics is part of the general theory of management, but it is distinguished from it by its specificity, which consists in the management of various flow processes that have a spatio-temporal sequence. From which follows the conclusion that the object of its use can be any activity where a set of processes or events has an alternative sequence in space and time and considers many options for its organization and management according to certain criteria.

Secondly, the peculiarity of transport logistics is its ability not only to manage flow processes, but also to ensure the organization of their rational management in order to identify hidden management reserves, mainly in the form of additional income and profit. Thirdly, a feature of transport logistics is its purpose for reorganizing the forms and methods of managing flow processes in order to identify and use additional reserves at the expense of productive factors and sources. This is most characteristic of the evolutionarily adjusted market economy of developed countries.

Logistics is considered as a field of scientific activity, which is aimed at creating a system of industrial and commercial relations at the micro, meso, and macro levels based on the principles of integration and optimization of material (material resources, semi-finished products, finished products), information (paper or electronic documentation), financial (financial resources), service (services of transport

companies, forwarding companies, wholesale and retail intermediaries, etc.), innovative (scientific ideas, developments), personnel and investment flows in the short- and long-term with the aim of ensuring profit maximization, increasing market share and achieving long-term competitive advantages [1,2, 3, 5].

#### **Analysis of basic research and publications.**

Logistics activity and its elements are reflected in the works of many domestic and foreign researchers. So, for example, Stock J.R. [9] points out that logistics activity is aimed at "moving and storing materials as they move along the chain." Ye/. Krykavskiy [4] presents logistics activity as a toolkit in solving logistics tasks. From the above, it can be concluded that the direction vector of logistics activity is material flows, which must be planned, organized, moved and stored, managed and coordinated.

According to L. Yu. Mykhalchuk [5], the efficiency of logistics activities is an indicator (or a system of indicators) that characterizes the level of quality of the enterprise's functioning at a certain level of total logistics costs. From the point of view of the consumer, who is the final link of the logistics chain, the efficiency of logistics activity is determined by the level of service quality of his order. Efficiency also means the degree of completeness and quality of solving the task set before the enterprise, its fulfillment of its purpose. The efficiency of logistics activity is the ratio between the specified (target) indicator of the result of the enterprise's functioning and the actual one. Also, the efficiency of logistics activity is the degree of actual achievement of the result.

Thus, there are many interpretations of the concept of logistics, logistics activity and its components. At the same time, every year the issue of improving logistics activities and its tools becomes more important and relevant. That is why further consideration of transport logistics is relevant and timely.

**Aim** The purpose of this study is to investigate the components of transport logistics to improve the efficiency of the organization.

**Research materials and results.** Logistic activity at the enterprise is aimed at rational organization, support of rhythmic work and optimization of the economic activity of the enterprise as a whole, providing it with the following competitive advantages: leadership in minimum costs; timely fulfillment of all orders and timely delivery of finished products are guaranteed; at the request of customers, products can be unique; depending on the conditions of supply and demand, flexible regulation of the production volume is possible; expansion of service services; increasing the competitiveness of manufactured products, etc. Logistics activity is directed not only to the optimal organization of internal flows, but also to the external environment in order to reduce costs in supply, production and sales chains. This requires a complex logistics analysis, which is carried out in order to develop measures to reduce logistics costs and better meet consumer requirements. An important link of

logistics activity at the enterprise is the sphere of sales. Its place is determined by connections with the spheres of supply, production and customer service. In the field of sales, logistics is aimed at effective organization of the structure of sales channels, sales centers; efficient organization of transportation of finished products, containers, and waste; rational organization and use of warehouses, warehouses, terminals; risk insurance. Between producers and consumers there is always a certain number of intermediaries, cooperation with which must be optimized.

So let's consider the use of transport logistics on the example of ensuring the rear supply of the National Guard of Ukraine.

According to the conditions of the post-industrial economy, the central link of the rear support of the military units of the National Guard of Ukraine should be the system of transport logistics, which ensures efficient and prompt satisfaction of the army's needs in the necessary supplies.

An important condition for the provision of resources for the units of the National Guard of Ukraine is the search for reserves to reduce the costs of procurement, storage, unloading, loading and shipping of products. Reducing the costs of transport and storage operations increases the economic efficiency of the material and rear support of the troops. The choice of the optimal cost option for logistics operations plays a significant role. The effectiveness of the rear and material support of military units is directly related to the effectiveness of the operational cost control system. The tendency to increase costs leads to the need to analyze logistics activities in order to identify sources of possible savings. The need to reduce logistics costs is due to the increase in product prices, on the one hand, and the limitation of the size of sales markets, which does not allow increasing the volume of production, on the other.

At the same time, it does not always make sense to set oneself the task of reducing logistics costs, associating increased profitability with changes in tariffs, taxes, and prices for raw materials. The simple path of reduction, which in practice converges on most cost minimization programs, can lead to a weakening of the effectiveness of the system of rear and material support of military units. Logistics costs should be 5-35% of the total volume of purchases. Logistics costs, as a rule, make up one of the largest parts of the costs associated with the rear and material support of military units.

The analysis of logistics cost structures shows that the largest share of them is occupied by inventory management costs (20-40%), transport costs (15-35%) and administrative costs (9-14%) [2].

In general, the main concept describing the effectiveness of logistics costs is the concept of total costs or total cost, which was introduced by L. Howard, D. Culliton and D. Steele. They showed how the approach from the position of total costs justifies the high costs of logistics operations [11]. The essence of

this concept is that, if the costs for high-quality and timely service to consumers (in our case - military units of the National Guard of Ukraine) allow to reduce or completely eliminate other costs (in particular, for warehousing and storage of stocks), then in parallel there is a reduction in total costs financial support. The main advantages of logistics cost management as a means of increasing the efficiency of the rear support of the military units of the National Guard of Ukraine are the purchase and use of competitive products at the expense of lower costs and, accordingly, a reduction in the price of a product unit; the availability of high-quality and real information about the logistics costs of certain types of products; providing objective data for making reasonable and effective management decisions regarding the rear support of the army.

Thus, it is becoming more and more obvious that competitive advantage comes from the ability to combine a network of related organizations, which in our time has been called a "logistics supply chain." Moreover, in today's economic environment, markets are becoming more volatile and, therefore, less predictable. Thus, the need for an adaptive response is increasing.

Meeting the needs of the military units of the National Guard of Ukraine and market knowledge are crucial elements for consideration when the command tries to develop a new logistics strategy [1]. Only with a complete understanding of the needs and limitations of the market, the command of military units can make an attempt to develop a strategy that will satisfy both the participants of the logistics chain and the end consumers (ie, soldiers and officers of the National Guard of Ukraine). Initiatives to improve logistics chain performance are aimed at balancing supply and demand by reducing costs while more fully meeting the requirements of military units. This determines the reduction of uncertainty in the logistics chain as much as possible, ensuring the predictability of demand for the previous sections of the logistics chain. However, sometimes uncertainty in the supply chain is difficult to avoid due to the nature of the product. For example, if the demand for a product is subject to changes in fashion and is less dependent on the intrinsic utility of the product, then it is less predictable.

Therefore, the command of the military units of the National Guard of Ukraine has to come to terms with uncertainty, but it is necessary to develop a strategy that will still allow balancing supply and demand.

Considerable interest has recently been shown in the concept of "clean production" and the broader concept of "clean enterprise" [3, 6-8, 11]. In the context of our scientific work, we will explain that the concept of "clarity" is quite effectively applied in conditions of relative stability, predictability of demand and low uncertainty. On the contrary, in conditions where the demand and needs of military units vary greatly, there is a need for a high level of adaptability of the logistics chain. Within the scope of the study of possible options

for the application of concepts, it is necessary, in our opinion, to show different conditions under which these concepts can be combined, ensuring high competitiveness of the chain, capable of winning in a changing and competitive environment. To begin, we will point out important differences in the two concepts, as well as how one of them can benefit from the implementation of the other. Both adaptability and clarity make demands for high product quality.

They also require minimizing the total lead time, which is defined as the time from the submission of a request by the command of military units to the delivery of the goods to military warehouses. Total lead time must be minimized to ensure adaptability, as demand is highly variable and difficult to predict. If the chain has long delivery periods, the supplier cannot respond quickly enough to the needs of the military units of the National Guard of Ukraine. In addition, effective restructuring to reduce operating cycles always leads to reduced production costs and increased productivity. Delivery times must be reduced in clean production relative to excess delivery time as unnecessary costs, and cleanness implies the elimination of all unnecessary (redundant) costs. The difference between clarity and adaptability in terms of providing added value to the customer is that service level (availability) is a critical metric for adaptability, while cost and low selling price are closely related to clarity. However, where the concept of reducing total cycle time with effective implementation is a sufficient condition for achieving lean manufacturing, it is only one condition for achieving adaptive supply.

Thus, the use of transport logistics in the system of rear and material support of the military units of the National Guard of Ukraine in the conditions of reforming the economy of Ukraine cannot be limited only to the rationalization of logistics management systems, but must be accompanied by their parallel transformation into systems. As a result, the effect of its use will far exceed the additional benefit of business entities from the rational (optimal) management organization of their flow processes. Consideration of the potential of logistics and its components is due to the need to develop a mechanism for assessing the possibility of applying modern economic approaches for the rear support of the army. An assessment of its potential will make it possible to reveal the hidden reserves of the rear support system, and therefore to increase the return from a more reasonable use of modern economic tools, increase the efficiency of logistics processes, and obtain such an economic effect as reducing costs and time in the areas of rear support of military units and the circulation of goods.

#### **Conclusions from this study and prospects for further research in this direction.**

From this, we can conclude that transport logistics is a scientific and practical tool for the joint management of many economically independent market structures, which allows achieving a rational organization of flow processes that occur in a space-

time sequence, with the aim of identifying and realizing potential management reserves and obtaining additional income and profit by these structures mainly at the expense of socially beneficial, mainly industrial, factors and sources. The very concept of logistics contains significant reserves of time savings and cost optimization for logistics operations. The experience of leading foreign countries proves the high efficiency of logistics in obtaining sustainable competitive advantages. Thanks to it, enterprises provide the necessary level of service to the end consumer, while providing him with certain additional benefits (values). These additional values can relate to the elasticity of deliveries in relation to the size of the lot, and elasticity in relation to the terms of payment, and elasticity in relation to the terms and place of order fulfillment.

Analyzing primary and secondary value-added activities helps identify where in the supply chain the greatest value growth occurs and where there are potential opportunities to increase value by relocating activities and improving their integration. At the same time, individual logistics actions do not add value, but only increase costs. Therefore, one of the most important tasks of logistics management is the elimination of the time of operations that do not add to the value of the product, thus achieving a reduction of the logistics cycle. Today's accepted logistics ideology "customer focused manufacturing" (production oriented to the buyer) puts forward the requirements of production flexibility and the use of feedback between the stages of goods movement in the first place.

According to these requirements, adaptation to the interests of consumers requires from the manufacturing enterprises not only the adaptation of the product to the needs of a specific buyer, but also the support of constant feedback with him and the adaptation of the entire chain to such needs. The result of the implementation of these conditions is an increase in the quality of service and, above all, a reduction in the time of order fulfillment and compliance with the agreed delivery schedule.

Thus, the time factor, along with the price and quality of products, determines the success of the operation of the enterprise in the modern market, and the indicator of the duration of the logistics cycle as a separate case of it, together with indicators of logistics costs, the level of maintenance, reliability of supplies, is used as a criterion for evaluating the effectiveness of the logistics management.

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**Птащенко О.В., Сохацька О.М. Транспортна логістика як інструмент підвищення ефективності організації**

*В представленій роботі охарактеризовано логістичну діяльність підприємства (організації) з точки зору використання саме транспортної логістики. Визначено сутність транспортної логістики, як науково-практичного інструменту спільного господарювання багатьох економічно самостійних ринкових структур, що дозволяє досягти раціональної організації потокових процесів, які відбуваються в просторово-часовій послідовності, з метою виявлення та реалізації*

*потенційних резервів управління й одержання додаткових доходів і прибутку цими структурами переважно за рахунок суспільно-корисних, головним чином – виробничих, факторів і джерел.*

*Логістична діяльність на підприємстві здійснюється за допомогою розробки логістичного плану, на основі якого формується логістична стратегія. В процесі розробки логістичного плану і стратегії визначальними складовими є мета і завдання логістичної діяльності, а також її спрямованість. Щодо трактування вказаних характерних елементів логістичної діяльності науковцями, то і тут єдиної точки зору немає. Необхідно зазначити, що наявні відмінності у поглядах є характерними для етапу становлення і розвитку логістичної діяльності як виду господарської діяльності.*

*Логістична діяльність підприємства повинна забезпечувати оптимізацію збутової діяльності та прискорення процесів її управління. Розвиток саме транспортної логістики забезпечують оптимізацію каналів розподілу та просування, що в свою чергу стає однією з конкурентних переваг організації чи підприємства.*

*При написанні роботи було використано метод аналізу для визначення сутності поняття транспортної логістики, методи індукції та дедукції для формування представлення про логістичну діяльність організації (підприємства).*

*Основним результатом представленої роботи є підтвердження тези, що інтереси споживачів потребують від підприємств-виробників не просто адаптації товару до потреб конкретного покупця, а й підтримки постійного зворотного зв'язку з ним і адаптації всього ланцюга до таких потреб. Результатом реалізації цих умов є підвищення якості обслуговування і, перш за все, скорочення часу виконання замовлень та дотримання узгодженого графіка постачань.*

**Ключові слова:** логістичний інструментарій, логістика, транспортні мережі, логістична система, логістична діяльність

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