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## **MECHANIZM OF ORGANIZATION OF LOGISTICS ENTERPRISES ACTIVITY**

**Dmytro Bugayko, Volodymyr Reznik, Svitlana Smerichevska.** «*Mechanizm of organization of logistics enterprises activity*». Globalization of the market and conditions for the development of information technologies create a promising situation. Opportunities for the development of logistics in the business sector. It is important to support logistics companies. The general well-being and stability of the economy for various reasons. First, a logistics company. Ensuring efficient transportation and distribution of goods important for the functioning of the industry in various branches of industry. Second, logistics companies create jobs and contribute. Economic growth due to product distribution, inventory management, warehouse management, operation and other logistics services. In addition, efficient operation of logistics. Companies contribute to foreign economic relations in the context of international services and globalization. There is support for trade and export, cross-border cooperation and expansion of the activities of Ukrainian companies.

**Keywords:** logistics, transportation, multimodal transportation, supply chain, WMS, freight-forwarding, means of transport

**Дмитро Бугайко, Володимир Резнік, Світлана Смерічевська «Механізм організації діяльності логістичних підприємств».** Глобалізація ринку та умови для розвитку інформаційних технологій створюють перспективну ситуацію. Можливості розвитку логістики в бізнес-секторі. Важливо підтримувати логістичні компанії. Загальне благополуччя і стабільність економіки з різних причин. По-перше, логістична компанія. Забезпечення ефективного транспортування та розподілу важливих для функціонування промисловості вантажів у різних галузях промисловості. По-друге, логістичні компанії створюють робочі місця та роблять внесок. Економічне зростання завдяки розподілу продукції, управлінню запасами, управлінню складом, експлуатації та іншим логістичним послугам. Крім того, ефективна робота логістики. Компанії сприяють зовнішньоекономічним відносинам у контексті міжнародних послуг та глобалізації. Існує підтримка торгівлі та експорту, транскордонного співробітництва та розширення діяльності українських компаній

**Ключові слова:** логістика, транспортування, мультимодальні перевезення, ланцюг поставок, WMS, експедирування, транспортні засоби.

**Introduction.** The modern globalized economy requires new conditions for the adaptation of intermodal transport. The role of intermodal transportation is becoming increasingly important. This is because this type of transportation allows production processes in different geographical locations to continue without interruption. When considering intermodal transportation, it is first necessary to consider the nature of this concept. Intermodal transport is the transportation of goods by two or more means of transport organized by a single logistics company. Moreover, the main transport company has the possibility to contract with subcontractors who provide other means of transport, but the main transport company is responsible for delivery. The different types of transport include rail, sea, car and air.

**The purpose of the article.** The main aim of the article is to provide the research of the main challenges and problems of activity of Logistics enterprise (in our case freight forwarding in case of "Freight Transport Partner Company". This article will explain not only why it is so important to pay attention on risks and challenges develop and to develop the plan how to avoid them or to reduce up to the minimum values the conducted research, a conclusion will be formulated.

**Presentation of the main results.** Logistics companies are responsible for the

delivery of goods from point A to point B within a given time frame. They manage all processes related to the movement, storage and transportation of goods, ensuring reliable delivery and reducing the risk of loss or damage to goods. [1].

A number of Ukrainian researchers such as Kharazishvili Y. [2, 4], Bugayko D. [2 - 10], Savchenko L., Smerichevska S. [9], Hryhorak., Ovdienko O., Marchuk V. [3] are devoted to the study of the problems of further development of logistics and multimodal transportation. The company's goal is to optimize the schedule of product delivery to this sector. During the work, work tasks are divided into individual problems that are systematically solved. For Ukraine, this problem is extraordinary relevant questions related to the study of strategies for the development of transport enterprises engaged in Ivashkevich V.S., Evdokimov A.V., Ustenko M.O., Konishcheva N.Y., Trushkina N.V. [11], Oklander M. A [12]., Reznik N., Rudenko S., Pylypchuk K. [13], Skrynkovskyy R.M. [14], Khvyshchun N.V. [15] and others.

Among foreign scientists, it is appropriate to single out Ya. Witkovsky, J. Koil, H.K. Paul, J. Waters, M. Cheshelski, and others.

During transportation, logistician calculations are taken into account, ensuring economic expediency and profitability. The main principles are to fully meet deadlines and avoid delays and haste. The methods



used ensure orderly and uninterrupted execution of the work. Otherwise delays and warehouse overflows may occur. The following principles ensure efficient use of resources and vehicles: minimizing downtime and loading/unloading times. Traffic flow must be continuous and movement with empty bodies or idling must be avoided. This principle is applied through the delivery of raw materials to the plant and the removal of finished products in the opposite direction. Supporting circularity ensures continuity in the execution of the business plan. Traffic is profit. Mechanization is a group of elements that is a win-win for all sides. If returns are made on empty vehicle bodies, this can lead to increased delivery costs [6].

Traffic conflicts and optimal route strategy selection.

All important factors are considered before a scheduled flight. The main concerns are given to the main tasks and features. The basis is the minimization of the following factors:

- Distance travelled;
- Time required;
- Consumption of resources;
- Risks.

Routes are planned taking these factors into account. However, real conditions often do not allow all points to be taken into account and fully implemented. Therefore, the main focus is on the main tasks.

Partial fulfilment of these can also be useful. Final decisions are made wherever possible. The aim of logistics is to unify delivery phases into a single payment mechanism, reduce costs and ensure domestic delivery. By managing the flow of goods, transportation can be optimized and efficiency increased. As each flight is unique and has its own characteristics, it can be tracked individually, resulting in further security improvements and cargo savings.

There are many logistics strategies in business but only some of them are basic. It is mostly used to create logistics system. For business D. Waters gives the following interpretation of his logistics strategy,

including the entire long-term one. Decisions in conjunction with logistics activities make all strategic decisions and the Chain Management Plan " creates a link between strategies and is more abstract. High-level strategies and detailed problem-solving operations in the supply chain

*Successful logistics missions* require the assessment of cargo characteristics such as dimensions, value, composition, consistency and weight. The distance and availability of connected delivery routes are also taken into account. It is necessary to note the importance of a systematic approach to the development of logistics strategies, which must be connected with other strategies, and cover all areas of the company's activity to optimally implement a competitive strategy. For the successful implementation of logistics strategies the following conditions must be observed: have a corporate strategy and a support strategy; the possibility of designing the dimensions and structure of production in accordance with the requirements of logistics; the presence of vertical integration of the logistics areas of the company; resource-oriented supply, production and sales structure; compliance of management and information systems; take appropriate measures to improve efficiency; comply with the degree of automation of the movement of goods and information. The main goal of the logistics strategy is to build an organization that can work successfully, cope with unforeseen circumstances, competition and internal problems, and to win new positions in the market. The logistics strategy of the company consists of the following stages: analysis of logistics systems of the enterprise; development of a logistics strategy model's acceptable for the company; strategy implementation control.

*When planning logistics strategies*, the following factors must be taken into account external and internal:

- Existence of a competitive environment;
- Development of international cooperation;



- Development of modern information technologies;
- Development of transport and warehouse infrastructure;
- Environmental standards;
- Close cooperation with partners;
- Use of modern information technologies;
- Delivery of own transport and warehouse infrastructure;
- Effective inventory management;
- Expansion of the logistics network;
- Improving the quality of logistics services;
- Application of modern management concepts;
- Focus on achieving the company's strategic goals;
- Participation of management in the modelling of logistics strategies;
- Assessment of development opportunities.

*Improved simulation model of the typical function Transport company "FTP", which offers a wide range of products, transport and logistics services, i.e.:*

- Organization of cargo transportation;
- Freight transportation; -
- The work of a shipping agent;
- -process of bulk at the warehouses and sea harbors
- Sea container transportation;
- Delivery and customs clearance of cargo (including vehicles);
- Cargo insurance (with the assistance of partnership insurance company "Ingo" LLC..

Before March 2022 such partnership sea ports were engaged in maritime company's operations. Each group has an integrated supply chain. Acceptance of orders, reception of goods, delivery on the territory of Ukraine

(depending on the selected mode of transport) to the harbor warehouse and sea transportation to the destination point. The company's jurisdiction ceases from the moment of delivery of the cargo. Goal. The shipping company is hired by the company. After the completion of the sea transportation, it will issue an invoice for the payment of the service. In turn, the Transport Company will pay for the road or rail service. The final indicators will be created: Number of completed orders, revenue and profit. In addition to the real number of the formation of the main financial indicators the number of completed orders and the saved cost of order fulfilment, for some lawsuits that were affected by the possibility of imposing a fine on the company. More likely types of fines are severe punishment and arrest. In general, with a fine's on exceeds the penalty for using container equipment. The terms agreed in advance with the Maritime Carrier. Demolishing additional fees for exceeding the free time spent by the container in the port of unloading. Fee for storing the container outside the terminal for longer than the set time for returning the container to the line. The difference between calculations and reimbursement is only in the amount and the amount of fees from the free period. Each marine line has its own size and amount of bet. The fine is reproduced in the model as an effect random variables according to the law of probability distribution are determined based on the available statistical observations of the function of real system.

The most-common used ferries of the transport company (Example of Freight Transport Partner LLC).

The table formulated by the author is represented bellow.

Table 1.1. The main ports used by logistic company's and their characteristics

No	Port name	Port location
1	2	3
1	Belgorod - Dniester seaport	The port is located on the shores of the Dniester estuary northwest of the Dniester-Constantinople estuary (southern bucket of the Dniester estuary)

End of table 1.1

1	2	3
2	Berdyansk seaport*	Sea of Azov, Berdyansk Bay, Tonka Strait
3	Izmail seaport	Port in the Odessa region, located at the mouth of the Kili River Danube.
4	Chernomorsk seaport	Black Sea
5	Mariupol seaport *	North-western part of the Taganrog Bay of the Sea of Azov
6	Mykolaiv seaport	The Mykolaiv seaport is located in the city of Mykolaiv near the left bank of a bend of the river the Southern Bug for 19 miles to the north from its mouth. The port also includes the port of Ochakiv and a raid near the city of Ochakiv near the banks of Trutayev
7	Odessa seaport	Black Sea, Odessa Bay
8	Specialized seaport Olbia	The left bank of the Bug-Dnieper estuary
9	Reni seaport	Coastline on the left bank of the Danube
10	Skadovsk seaport*	Black Sea. Dzharilgatskaya Bay
11	Ust-Dunaisk seaport	Odessa region, Kiliya district, Vilkove city
12	Kherson seaport*	right and left banks of the Dnieper River in the city of Kherson
13	Southern seaport	Black sea, Adzhalik estuary

*Developed by: Volodymyr Reznik, Bugayko Dmytro*

Also railway operations were commonly used. The railway map is also represented bellow.



Figure 1.1 – Railway road map of Ukraine [6]

Source: <http://www.gps-info.com.ua/31924>

As to the railway transportation, for accurate understanding the dynamics, the Table is provided bellow.

Table 1.2 - Freight shipped, by rail of general use, million tons (% of total volume) (it is dedicated to all the transportation in Ukraine)

№	Freight type	Years					
		2016	2017	2018	2019	2020	2021
1	Total freight	343	339	322	313	306	314
2	oil and oil products	15 (4)	14 (4)	12 (4)	12 (4)	11 (4)	12 (4)
3	coal	73 (21)	67 (20)	65 (20)	59 (19)	49 (16)	50 (16)
4	coke	8 (3)	6 (2)	6 (2)	5 (1)	5 (2)	5 (2)
5	ore	77 (23)	70 (21)	71 (22)	75 (24)	80 (26)	78 (25)
6	cement	6 (2)	6 (2)	6 (2)	6 (2)	6 (2)	6 (2)
7	chemical and mineral fertilizers	11 (3)	12 (4)	9 (3)	9 (3)	9 (3)	11 (4)
8	timber	4 (1)	4 (1)	3 (1)	1 (0)	1 (0)	1 (0)
9	ferrous metals (including scrap)	29 (8)	26 (7)	25 (8)	24 (8)	22 (7)	24 (8)
10	grains, cereals and flour	32 (9)	37 (11)	34 (10)	40 (13)	35 (11)	34 (11)
11	other freight	88 (26)	97 (28)	91 (28)	82 (26)	88 (29)	93 (30)

*Developed by: Volodymyr Reznik, Bugayko Dmytro, Svitlana Smerichevska*

The main principles of Freight-Forwarding company's operation's strategy. Especially during the complex period's at the market of Logistics service provider's. There are such principle's, that are observed bellow:

1. Optimization of the supply chain, including research and improvement for each stage of the logistics chain from the supplier to the final consumer; realization Automation technology will reduce and increase the cost of inventory tracking and management systems Increase efficiency and improve service.

2. The use of information technologies, especially the implementation of such modern IT solutions Logistics management system (WMS), electronic document management system, online Tracking facilitates and ensures the automation and optimization of the logistics process Quick exchange of information, reduction of errors and improvement of cooperation with partners.

3. Development of infrastructure, including attracting additional investments for its development of transport infrastructure, primarily ports, railways and highways. This helps to reduce the time and costs of transporting goods, modernization of

the distribution center and communications. Attract global and new investors.

4. Continuous improvement and training, including the implementation of a continuous system. Training and professional development of personnel to promote the improvement of knowledge and skills of industry workers. Logistics, especially in the direction of understanding new trends, technologies and methods.

5. The development of logistics and strategic partnership consists in cooperation and partnership organization, suppliers, carriers and other market participants and it may be applied forms of joint planning, coordination and sharing of resources will be expanded to reduce costs and to increase delivery speed and customer service.

The article is a logical continuation of a number of publications by the authors devoted to the development of mechanism of logistics enterprises activity organization [2-10].

**Conclusions.** Logistics companies are the main participants in the global supply chain. It ensures efficient transportation of goods, optimizes routes, manages stocks, ensures customs clearance and implements innovations. Through their activities, logistics companies contribute to increasing the

competitiveness of business and the stability of the world economy. The role of logistics companies is becoming increasingly important in a world where speed and efficiency are key success factors. At the role that logistics companies play in the global supply chain and why logistics companies are necessary.

1. Ensuring uninterrupted flow of goods. Logistics companies are responsible for organizing and coordinating the transportation of goods around the world. It ensures a smooth flow of goods, minimizes delays and prevents supply disruptions. This is especially important for industries that depend on on-time delivery, such as manufacturing and retail.

2. Optimization of transport routes. One of the main functions of logistics companies is the optimization of transport routes. Using the latest technologies and analytical tools, they develop the most efficient routes for transporting goods, reduce fuel consumption and shorten delivery times. This helps to increase the competitiveness of companies and reduce the impact on the environment.

3. Inventory and warehouse management. The logistics company is also engaged in inventory and warehouse management. They ensure that products are stored in optimal conditions and help

maintain quality and safety. In addition, logistics companies help customers optimize inventory levels, preventing excessive storage costs.

4. Provision of customs clearance. International transportation is usually associated with the need for customs clearance. The logistics company has experience in this field and ensures timely and accurate processing of customs documents. This will help avoid delays at the border and minimize the risks associated with violating customs rules.

5. Innovations and technologies. Modern logistics companies are actively innovating and using advanced technologies to improve their services. From automation to using big data for demand forecasting, logistics companies are constantly improving their operations for greater efficiency and accuracy. Logistics strategy plays an important role in achieving the company's strategic goals. They are related to other functions: supply, production, etc. It covers all areas of strategy and activity, including: the implementation of logistics strategies leads to a decrease and an increase in total costs, increasing the efficiency of customer service activities and achieving business goals, ensuring business development and growth prospects.

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