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STUDY OF FORMATION AND CONTENT OF THE TERM 'LOGISTICS ACTIVITIES': THEORETICAL ASPECTS

Introduction. A logistics activity is one of the most important components of the business enterprise operation; it includes direct logistics functions and logistics processes, as well as logistics operations.

The regulatory and legal framework lacks an appropriate definition of logistics as an activity at the national level, which leads to its improper reflection in statistical accounting forms. This does not allow assessing the efficiency of logistics operations or their impacts on the national economy. Logistics costs and their amount are not recorded in the existing forms of accounting. In the National Classification of Economic Activities DK009:2005, logistics activities are "scattered" and presented as separate functions and operations in different sections, subsections and groups of economic activities. The existing form of the Classifier does not provide entering logistics activities as an item of an account, given its intersectoral and synthetic nature [1, p.152; 13, p.290].

Analysis of recent research and publications based on the problem under consideration. Distinguishing the types and identifying the contents of various logistics activities were done by V.G. Alkema, N.V. Kovalchuk, N.Y. Konischeva, V.L. Pylyushenko, A.V. Tkachova, G.R. Rudenko, O.M. Sumets.

Thus, **object of the paper** is an investigation of the theoretical aspects of forming the term 'logistics activities' and developing its content.

Research methodology. Our research is based on a system approach using general scientific methods:

generalization, analysis and synthesis. We used abstract-logical method for making conclusions.

Problem description. A careful study of the 'logistics activities' definition was done by famous scientists V.G. Alkema and O.M. Sumets who formulated the 'business card' of logistics activities, which contains the definition, goals, objectives, direction, subjects and objects, effectiveness criteria, and types of logistics activities [1; 13].

Effective organization of logistics activities in the enterprise will facilitate its rhythmic work and optimize the business activities, providing a sustainable competitive advantage for the company; this will allow timely execution of contracts as well as prompt and flexible response to any changes in demand.

We agree with V.G. Alkema who says about the lack of a unified approach to the definition of the term "logistics activities"; this is proved by various alternative definitions, such as logistic function, company logistics, types of logistics activities, logistics process and so on. Scholars have different views on types of logistics activities; there is no common understanding of the objects of logistics or the classification of its subjects and constituents, etc [1, p.152].

Table 1 shows the most common definitions of logistics activities that occur in scientific publications and periodicals. By 'definition' we mean a form of reflection of the universe using language means for generalization of objects and phenomena in the form of simplest abstractions by which facts can be systematized and summarized [1, p.148].

Table 1

Approaches to the definition of logistics activities

Definition	Author
1	2
Activities for a systematic improvement of flow processes at the enterprise in order to reduce costs and improve customer service. The main activities in focus are supply, production, marketing, storage, transport and inventory management; the essence of logistics activities varies with the stage: either it is procurement, production, or sales	[10, p.70-72]
A separate economic activity that requires a sustainable process of logistics activity in the enterprise as a single industrial complex; this will minimize costs and losses due to an optimization of a logistics "chain" in the enterprise and reduce the impact of external risks	[6, p.122]
A direction of economic activity that involves the material flow management supported by the information, financial and service flow management through consistent and coordinated logistics operations based on the consistent, comprehensive, and integrated performance of all parts of the "supply - production - sales" logistics chain. The goal is to achieve a long-term success in business by maximizing the customer satisfaction, minimizing costs, meeting the interests of all	[15]

1	2
parties to the goods turnover under the conditions of risks, volatility and uncertainty of the external environment. Logistics operations as integrated flow control in an industrial enterprise cover all of its units and functional areas - procurement, production, marketing, sales, finance, and infrastructure. The functional areas in focus are procurement, production, sales, warehousing, transportation, inventory management. The object of the company's logistics activity is a set of material, financial, information and service flows	
The process of planning and implementation of raw material flows and stocks, work in progress, finished goods and related information flow from the place of manufacture to the place of consumption in order to meet the customer's product requirements	[16, p.29]
A business function, responsible for the coordination of physical distribution and management of materials to save costs and improve the service level	[11, p.29]
A sphere of competence that combines the company with its customers and suppliers through the inventory and information flows; to maximize the strategic advantages, all the functional units are to be integrated	[2., p.51]
Activities performed in the process of moving products from the point of manufacture to the point of consumption	[12, p.18]
A set of spheres of the organization's activity, from procurement of raw materials to delivery of finished products to consumers	[7, p.23]
A set of processes of physical movement of material values (raw materials, semi-finished and finished products) within the enterprise and between enterprises and promotion of information flows that reflect the material processes and are used to manage these processes	[8, p.18]
A type of economic activity associated with the planning, organization, management and control of material and accompanying flows in the process of moving them from the place of manufacture to the point of consumption through consistent and time- and place coordinated performance of logistics activities	[13, p.292]
A set of integrated phase and functional logistics processes and operations aimed at transforming material and related flows in order to achieve a long-term success by maximizing the customer satisfaction, minimizing costs, coordination of interests of all the parties to the goods turnover in terms of effective protection against the threats of a changing and unstable environment	[1, p.152]

Source: systematized by the author.

O.M. Sumets, exploring the definition of "logistics activities", insists on highlighting the goals, objectives, target, subjects and objects, effectiveness criteria, and types of logistics activities [13, p.290]; V.G. Alkema accomplishes the decomposition of the logistics activity elements, adding the following components of logistics activities to the above constituents of the 'business card': research methods, managerial and supply aspects and organizing principles [1, p.152].

Solving problems. The author's opinion on structural and logical analysis of the mutual subordination and interrelationship of the terms that synthesize the concept of "logistics activities" coincides with the findings by O.M. Sumets who says that the category of "activity" is the base for the development of a universal philosophical methodology [13, p.291]. Activities, when examined in a social system are differentiated by objective criteria into the following types: physical, social, and spiritual activity [3, p. 243].

Material activity implemented in the procedures of interaction between man and nature in the context of production is translated into economic activity; therefore, the category of "economic activity" is subordinate

to the category of "activity". In turn, production activity is also divided into types - production activity, marketing activity, logistics activity etc. Each of these activities is performed in the company through a specific function and each function is performed through a particular process or a set of processes. And, accordingly, each process is implemented through a set of operations [13, p.291].

Approaches to defining the logistics activities can be analyzed using the definitions shown in Table 1.

Firstly, in formulating goals we singled out several areas:

- a) reducing costs [1, p.152; 6, p.115-116; 10, p.70-72; 11, p.29; 16];
- b) improving the quality of customer service [1, p.152; 10, p.70-72; 11, p.29; 15; 16, p.29;];
- c) reducing the impact of external risks [1, p.152; 6, p.115-116; 15];
- d) strategic long-term benefits [1, p.152; 2, p.51].

Secondly, the objectives of logistics depend on the goal and the current situation (Table 2).

Table 2

Approaches to the content of logistics objectives

Description	Author
1) objectives of exogenous nature: Providing maximum adaptability of the enterprise to the changing market conditions; increasing their own market share; creating the conditions for obtaining competitive advantages and a long-term business success; 2) objectives of endogenous nature: reducing the costs of logistics activities in order to increase the profits; improving logistics management in the enterprise; creation of appropriate logistical capacity of the enterprise; forming an integrated utility of the products or logistics services for the consumers; improving the efficiency of the enterprise logistics system	[13, p.293]
1) formation of the optimal production program for the production and distribution system of the industrial enterprise, which follows the structure of consumer demand; 2) development of an algorithm of the program change with fluctuations in consumer demand in case of resource constraints; 3) optimization of inventory at each level of the logistics system of the company; 4) optimization of movement of the material and information flows of the logistics system; 5) optimization of total costs in the movement of material and information flows of the logistics system	[9, p.67]
1) long-term tasks concerning the process of storage and transportation; warehousing and transportation facilities; structure and processes of planning decisions; ensuring the production potential; support for innovative technologies; 2) medium- and short-term objectives concerning the use of transport facilities; production management; management of the material and technical resource movement; staff and technical device management; information exchange; innovation resources; 3) coordination of processes and scopes of activities (organizing): specialization of production; coordination of the production programs; determination of the logistic strategy; choice of technology; determination of the distribution of products; identifying the needs in production; specifying the machine loads; determining the volume of production; specifying the use of the process time; implementation of planned innovations. 4) control of the following: quality of the products; introduction of innovative technologies; staff efficiency; procurement; use of vehicles; inventory	[4]
organization and management of procurement; organization of warehousing and cargo management within the "storage space"; inventory management; organization and management of transport process; organization and management of the production process; organization and management of material flows distribution; organization and management of sales; organization and management of information flows ; organization and management of logistics operations	[5]

Thirdly, the objects of logistics activities are the components of logistics activities (phase, flow and functional processes and operations), which are characterized by a change in size, form of existence, location; they are the target for management functions as to ensure the desired efficiency of performance. The following objects of logistics activities are usually distinguished:

Material values (physical distribution) [2, p.29; 7, p.23; 8, p.18; 11, p.29; 12, p.18];

Flow processes [6 p.115-116; 10 p.70-72];

Material flows and accompanying information, financial and service flows [1, p.152; 8, p.18; 13 p.292; 15; 16, p.29].

Fourth, the subjects of logistics activities are physical and legal entities who are engaged in logistics activities and directly affect the objects in order to reach the goals by performing the specified tasks; they are logisticians, logistics operators, intermediaries, logistics centers, contractor companies.

Fifth, concerning the components of logistics activities, V.G. Alkema suggests distinguishing the fol-

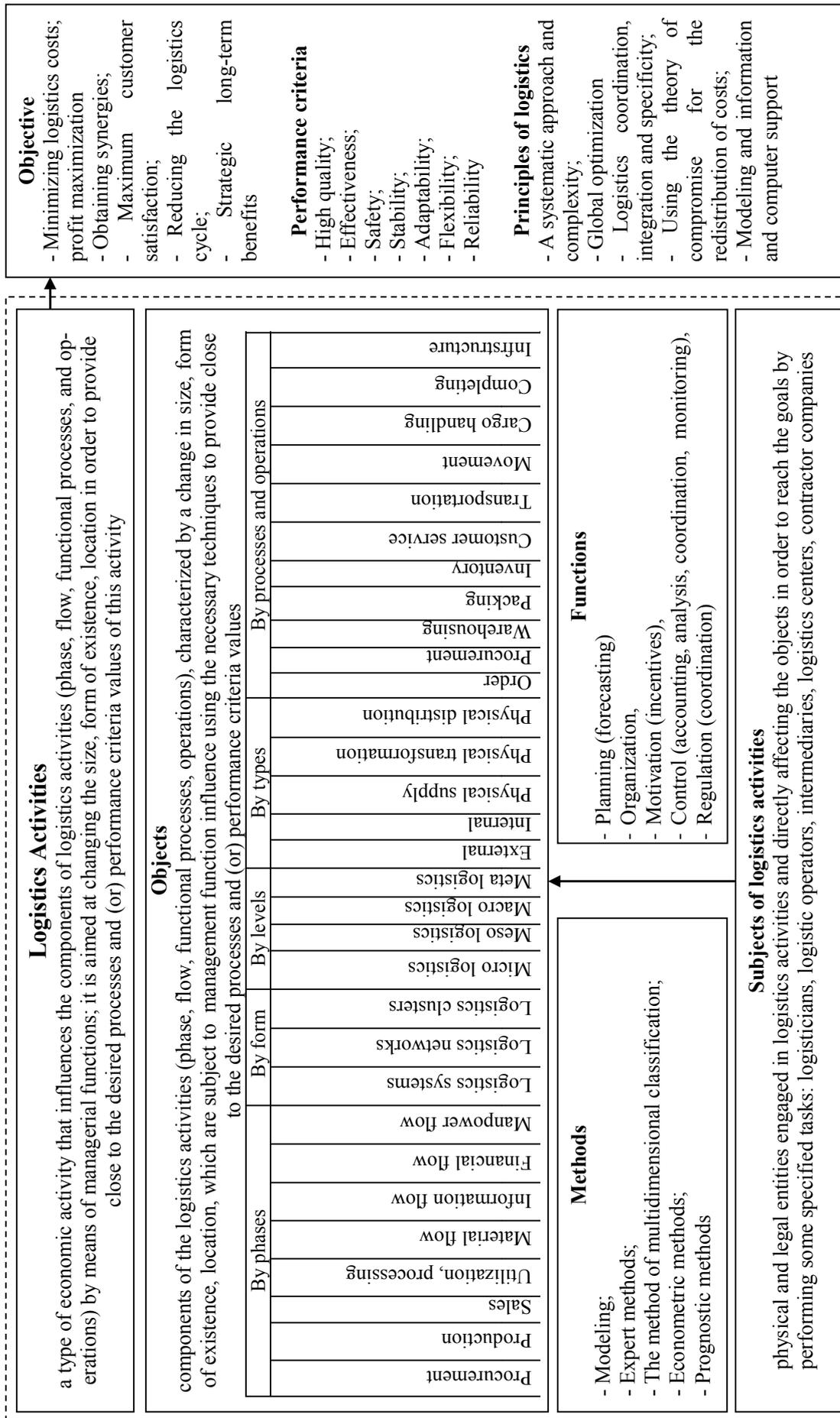


Fig. 1. System decomposition of logistics activities at the industrial enterprise

Source: developed by the author based on [1 p.153-154; 14 p.162; 15].

lowing classification groups of logistics activity components: phase scope, form of organization, levels, types, subtypes, processes, operations [1, p.154].

A careful review of the suggested approaches to the distinguishing the components of logistics activities has allowed us to identify the following groups:

1) by the phases of production and commercial cycle: procurement, production logistics activities, sales activities (distribution), processing and recycling activities [1, p.153]; management of information and financial flows [14, p.161];

2) by the form of organization: logistics systems, logistics networks, logistics clusters [15];

3) by levels: micro logistics activities, meso logistics activities, macro logistics activities [14, p.162], meta logistics activities;

4) by types: external and internal logistics activities, physical procurement, physical transformation, physical distribution [13, p.294];

5) by functions: planning (forecasting), organization, motivation (incentives), control (accounting, analysis, coordination, monitoring), regulation (coordination);

6) by processes and operations: processing and fulfilment of orders, transport activities, warehousing, packaging, stockpiling, logistics services [1, p.153]; purchasing, materials handling, monitoring the movement of products, completion [14, p.162].

Fig. 1 shows the author's vision of the system decomposition of logistics activities. This scientific method allows us to consider the system being studied (logistics activities) as a complex consisting of individual interconnected subsystems which, in turn, are divided into parts.

Based on the above study, we will consider logistics activities a type of economic activity that influences the components of logistics activities (phase, flow, functional processes, and operations) by means of managerial functions; it is aimed at changing the size, form of existence, location in order to provide close to the desired processes and (or) performance criteria values of this activity.

Conclusions. We made several conclusions based on the study:

1) First, when formulating the objective of logistics activities, the authors distinguish the following directions: cost reduction; improving the quality of customer service; reducing the impact of external risks; obtaining strategic long-term benefits. Second, the objective of logistics activities directly depends on the goal and the current situation. Third, the objects of logistics activities are the components of logistics activities (phase, flow, functional processes, and operations). Fourth, the subjects of logistics activities are physical and legal entities engaged in logistics activities and directly affecting the objects in order to reach the goals by performing some

specified tasks: logisticians, logistic operators, intermediaries, logistics centers, contractor companies. Fifth, phase spheres, forms of organization, levels, types, subtypes, processes, and operations are distinguished as the components of logistics activities.

2) logistics activities are a type of economic activity that influences the components of logistics activities (phase, flow, functional processes, operations) using management functions, aiming at changing the size, form of existence, location in order to provide close to the desired processes and (or) values of the logistics performance criteria.

References

1. **Al'kema, V.H.** (2014), "Logistics entities of the system and its decomposition", *Vcheni zapysky universytetu «KROK». Seriya : Ekonomika*, vol. 37, pp. 148-155.
2. **Baujersoks, D.** and Kloss D. (2001), *Logistika: integrirovannaja cep' postavok* [Logistics: integrated supply chain], Olimp-Biznes, Moscow, Russia.
3. **Solodovnikov, S. Ju.** (2002), *Bol'shoj jenciklopedicheskij slovar': filosofija, sociologija, religija, jezotermizm, politjekonomija* [Great Encyclopedic Dictionary: philosophy, sociology, religion, esotericism, political economy], MFCP, Minsk, Belarus.
4. **Ziajlyk, M.** and Vivchar, O. (2011), "Paradigm scientific base and logistics management", *Sotsial'no-ekonomichni problemy i derzhava*, [Online], vol. 1 (4), available at: <http://sepd.tntu.edu.ua/images/stories/pdf/2011/11zmfblm.pdf> (Accessed 16 Nov. 2015).
5. **Koval'chuk, N.V.** (2011), "Theoretical aspects of logistics activities of agricultural enterprises", *Efektivna ekonomika*, [Online], vol. 12, available at: <http://www.economy.nayka.com.ua/?op=1&z=864> (Accessed 9 Nov. 2015).
6. **Konischeva, N.J.** and Trushkina, N.V. (2005), "Managing the logistics activities of industrial enterprises", *Ekonomika promyslovosti*, vol. 1, pp. 114-123.
7. **Kristofer, M.** (2004), *Logistika i upravlenie cepochkami postavok* [Logistics Management tsepochkamy supply], Piter, Saint-Petersburg, Russia.
8. **Skovronek, Ch.** and Sariush-Vol'skij, Z. (2004), *Logistika na predpriyatii* [Logistics for the enterprise], *Finansy i statistika*, Moscow, Russia.
9. **Piljushenko, V.L.** and Borzenkov, S.V. (2002), "Need to use the models and methods of the industrial logistics coke enterprises", *Visnyk Donets'koho universytetu, Ser. Ekonomika i pravo*, vol. 1, № 2, pp. 66-71.
10. **Rudenko, H.R.** (2010), "Theoretical aspects of the definition of the nature and effectiveness of logistics engineering enterprise", *Ekonomika rozvytku*, vol. 1 (53), pp. 70-73.
11. **Vud, D.** Donal'd, F. Vordlou, D. Merfi-ml, L. and Pol', R. (2002), *Sovremennaja logistika* [Modern Logistics], Izdatel'skij dom "Vil'jams", Moscow, Russia.
12. **Stok, Dzh. R.** and Lambert, D. M. (2005), *Strategicheskoe upravlenie logistikoj* [Strategic logistics management], INFRA-M, Moscow, Russia.
13. **Sumets', O.M.** (2013), "Meaningful analysis of the definition of

“logistic activity”, *Stalyj rozvytok ekonomik*, vol. 4, pp. 290-295. 14. **Sumets', O.M.** (2014), “Systematics kinds of logistical activity agricultural enterprises”, *Ekonomichnyj forum*, vol. 2, pp. 157-163. 15. **Tkachova, A.V.** (2011), “The economic mechanism of logistic activity of metallurgical enterprises”, *Efektivna ekonomika*, [Online], vol. 5, available at: <http://www.economy.nauka.com.ua/?op=1&z=563> (Accessed 9 Nov. 2015). 16. **Uoters, D.** (2003), *Upravlenie ser'ju postavok* [Logistics Supply Chain Management], JuN-ITI-DANA, Moscow, Russia.

Иванова М. І. Дослідження особливостей формування й наповнення терміну «логістична діяльність»: теоретичний аспект

Дослідження теоретичних аспектів формування й наповнення терміну «логістична діяльність» дозволило з'ясувати мету, завдання, об'єкти, суб'єкти та складові логістичної діяльності. У статті наведена системна декомпозиція логістичної діяльності промислового підприємства та авторське визначення терміну логістична діяльність.

Ключові слова: логістична діяльність, мета логістичної діяльності, завдання логістичної діяльності, об'єкт логістичної діяльності, суб'єкт логістичної діяльності, складові логістичної діяльності.

Иванова М. И. Исследование особенностей формирования и наполнения термина «логистическая деятельность»: теоретический аспект

Исследование теоретических аспектов формирования и наполнения термина «логистическая деятельность» позволило уточнить цели, задачи, объекты, субъекты и составляющие логистической деятельности. В статье приведена системная декомпозиция логистической деятельности промышленного предприятия и авторское определение термина логистическая деятельность.

Ключевые слова: логистическая деятельность, цель логистической деятельности, задачи логистической деятельности, объект логистической деятельности, субъект логистической деятельности, составляющие логистической деятельности.

Ivanova M. I. Studies of Formation and Content of the Term ‘Logistics Activities’: Theoretical Aspects

The investigation of theoretical aspects of formation and content of the term ‘logistics activities’ allowed clarifying the goals, objectives, objects, subjects and components of logistics activities. The paper has shown a system decomposition of the logistics activities at an industrial enterprise and the author’s definition of the term ‘logistics activities’.

Keywords: logistics activities, goal of logistics activities, objectives of logistics activities, object of logistics activities, subject of logistics activities, the components of logistics activities.

Received by the editors: 04.12.2015
and final form 28.12.2015