

## ESSENCE AND ORIGINS OF ENTERPRISE LOGISTICS AND ITS MANIFESTATIONS IN MODERN ECONOMICS

**Анотація.** У статті систематизовано основні відмінності у підходах до визначення сутності поняття «бізнес-логістика». Наведено авторське тлумачення підприємницької логістики через раціоналістичний і забезпечувальний характер її сучасного прояву.

**Ключові слова:** підприємницька логістика, сутність, відмінності, прояви, визначення.

**Summary.** In the article basic differences in approaches to defining the term «business logistics» have been systematized. Author's definition of enterprise logistics through rationalistic and providing character of its modern manifestation have been provided.

**Key words:** enterprise logistics, essence, differences, manifestations, definitions.

**Statement of the problem.** Despite a relatively short period of logistics development as a science in the sphere of economics, a logistical concept of management over economical processes under conditions of a constant increase on competitiveness in entrepreneurial environment became an important object of attention in all successful organizations. Meanwhile information in logistics is constantly renewed and changed and area of implementation and practical use gradually widens.

A logistical science in a commercial field is based on certain works carried out in military and mathematical spheres as wells as achievements of such relevant business disciplines as management of supplies, imitating modeling, study of operations and so on. Nowadays entrepreneurial logistics forms its own subjects and objects of study which remain insufficiently studied and discussed.

Therefore additional study and systematization of a theoretical base of logistics in a business fieldy remains a very actual problem until day.

**Analysis of recent studies and publications.** ProFOUND study of separate principles of general logistics theory are revealed in publications of B. A. Anikin, D. Bade, A. M. Gadzhinskuy, J. S. Johnson, J. Esindger, A. G. Kalchenko, Y. V. Krykavskuy, M. K. Cooper, J La-Lond, R. R. Larina, M. A. Okhlander, Y. V. Ponomaryova, V. I. SergeyeV, V. V. Smyrychenskuy, V. M. Stahanov, J. Stock, K. M. Tankov, O. M. Trudida, A. Harrison, R. B. Handfield, J. Hackett, N. I. Chuhray and other.

However the absence of univocacy concerning use of terms as well as in approaches to defining essence, manifestations of logistics and its connection with other sciences creates conditions for further development of discussions and profound studies of this problem in logistical theory.

**The purpose of the publication.** The main purpose of the research is to define basic differences in defining the term «entrepreneurial logistics» and its place in the system of sciences and objects of research as well as to determine its essence considering basic manifestations of contemporary logistics in economics.

**Presentation of main material research.** In ancient Greece term «logistics» meant the art of thinking (considering, action reasonability, usage of calculations). From ancient Greeks term «logistics» came to ancient Roman people, but they defined it differently — «activity of providing food and shelter to military forces» [1, 2].

Further grounding of this term took place almost in a parallel way, and at certain stages of a historical development it integrated.

Verhogladova N. I. and Ivanytskuy T. Y. carried out evolutionary generalization of the term «logistics» in military and mathematical spheres (table 1 and 2).

Theory and practice of logistics in a great extent derives from military art. Founders of the military logistics were A. Gomini (1779–1869), A. T. Mahan (1840–1914), J. Torp (1875–1936), G. Eccles (1898–1986) and others.

One of Ukrainian researchers of contemporary military logistics is R. I. Sapiga who claims that its first task is formation of a logistics system in Defense Department in which during the peace time stocks of weapons and military technique are kept and increased and potential is kept which is necessary for current provision and service of troops. During a crisis or war this system enables superiors to: organize logistical provision of troops in the process of mobilization and achieving the highest stage of military preparedness, constant logistical provision of the military as well as support of other forces in the defined sphere (for example coalitional) [4].

Mathematical apparatus as well as the military science is also quite often connected with the term «logistics».

According to C. Fizonya contemporary logistics (civil and military) integrates all processes and logistical approaches into one connected logistical system, which increases effectiveness of management with significant support of methods and techniques of contemporary informatics [5].

O. M. Trudid and K. M. Tankov are confident that there is a certain sense in statements of researchers who consider logistics the appropriate development of logic as a science about features and methods of thin-

Table 1

**Definition of the term «logistics» in the military sphere**

Year	Source	Definition
1854	Military Encyclopedic Lexicon	Art of managing location of forces both distant and close to the enemy, organization of its home front provision
1890–1907	Brokquaz F., Hefron I. Encyclopedic Dictionary	Art of managing location of forces and organization of its home front provision
1910	Chudynov A. Dictionary of foreign words which became a part of the Russian language	A part of tactics of troops moving
1963	Muller V. English-Russian Dictionary	Technique of staff service, calculations of home fronts, technique of transportation and supply
1971	Ganshyna K. French-Russian Dictionary	Material-technical provision of work and supply for the home front
1990	Webster's Desk Dictionary	Military science connected with provision, support and movement of materials and people
1991	The Encyclopedia Americana. International Edition	Management of relocation and material technical provision of military forces
1995	Muller V. English-Russian Dictionary	Head front and provision, material-technical provision, work of head front

Source: [3].

Table 2

**Definition of the term «logistics» in the mathematical sphere**

Year	Source	Definition
1865	Michelson A. Definition of 25,000 foreign words	Calculation. The same as algebra
1950–1965	Dictionary of Contemporary Russian Literature Language	Mathematical logic
1954	Dictionary of Foreign Words	Symbolical logic, new type of formalistic logic
1983	Philosophical Encyclopedic Dictionary	Summation of calculating (arithmetic) and measuring (geometric) algorithms different from those which develop during contextual thinking of «theoretical mathematics»
1998	Krusyn L. Explanatory Dictionary of Foreign Words	One of philosophical directions of mathematics which grounds the possibility of combining all mathematics to mathematical logic
2006	Komlev M. Dictionary of Foreign Words	Mathematical logic
2007	Big Dictionary of Foreign Words	Branch of mathematics which deals with grounding logic using mathematical methods and ability of its implementation in construction, informatics and so on
2009	New Dictionary of Foreign Words	Mathematical logic; one of philosophical branches of mathematics which is connected with works of Russell and his school; main concept of logistics implies the ability to transform all mathematics into mathematical logic

Source: [3].

king as well as optimization of approaches to building formalized systems [2].

Usage of separate provisions of military logistics in economical sphere was firstly offered after World War Two by an American scientist O. Morgenstern. In fact since then logistic has started to develop as well as in most «entrepreneurial» and «economical» publications.

At separate stages of historical development the following types of entrepreneurial logistics were actual: general (1<sup>st</sup> stage), distributing (2<sup>nd</sup> stage), provisional and producing (3<sup>rd</sup> stage), transporting and informational (4<sup>th</sup> stage), electronic (5<sup>th</sup> and other stages) and so on. Meanwhile most of the mentioned stages are characterized by periodical development of business logistic in countries with developed market economy.

At the same time Russian economist V. Purlik states that in the USSR with the help of logistical approach (not focusing on the term «logistics» itself) optimization tasks of planning and management were solved mainly at macro level — creation of intra-field commercial connections, formation using regional

and field principles of storing enterprises, assortment division of production load and so on [6].

Ukrainian scientist O. B. Pugachenko estimating realization of integrated functions of logistics through a certain system of forms and methods of practical activity also reasonably claims that some of them were known in the Soviet Union but then they were called «planned economy» and planning and organization of material-technical supply [7].

Most scientists believe that main potential of contemporary entrepreneurial logistics is in realization of managing material flows. However in domestic and international economical literature one can find wider definitions of the term «logistics» in which object of management (study) goes beyond material flow.

The difference in defining essence of «entrepreneurial logistics» as a scientific discipline is mainly formed by its place in the system of scientific disciplines and the object of study (Fig. 1).

Obviously those scientists who consider entrepreneurial logistics as a field in the sphere of economics are

Main differences		Place in the system of sciences	
		Field in economics	Component of management (marketing)
Object of study	Flow	Definition of logistics	Definition of logistics
	Provisional processes (infrastructure)	Definition of logistics	Definition of logistics

Fig. 1. Matrix of main differences towards approaches of defining essence of «entrepreneurial logistic». Source: author's development

closer to the truth as well as those scientists who consider the object of its research serving (provisional) processes and infrastructure connected with them (Tables 3 and 4).

Meanwhile the main purpose of widening the sphere of logistics application beyond the management of material and other flows for example in entrepreneurial field is that economical logistics nowadays simultaneously develops in two directions: rationalistic and provisional.

Meanwhile in certain cases their approaches or manifestations are used or integrated correspondingly.

Rationalistic logistics is logistics which studies models and methods of formalization and rationalization of separate economical phenomena with the purpose of optimal building flow processes and systems.

Table 3

**Main differences in defining term «entrepreneurial logistics» by its place in the system of sciences**

Field of Economics [Source]	Management (marketing) component [Source]
Science and field of economics; material-technical provision, transport service, product flow, storage, service of delivery and so on [8]	Integral instrument of management which leads to achieving strategic, tactic or operational purposes of organizing business and movement of effective in the view of decreasing general expenditures and satisfying needs of consumers to the quality of goods and services of managing material and (or) service flows as well as concomitant flows of information and financial measures [9]
Direction in the sphere of economics within it the problem developing and application of complex management system over material and informational flows on the production line, transportation rationing to complete and well-timed meeting the demand is provided [10]	Scientific-practical discipline, component of marketing, optimization of systemic management over the process of moving and storing goods based on the usage of mathematical-economical modeling, computerization and improving transportation-storing infrastructure [11]
Scientific discipline which defines appropriateness in forming and functioning of economical flows and commercial practice which is connected with optimization and rationalization of economical flows [12]	Art and management science, technique and technical activities which imply planning, provision and usage of moving measures for realization of planned operations with the purpose of achieving the set goals [1]
Art and science of providing production and rationing materials and products in the necessary place and necessary amounts [13]	Way of organizing activity of enterprises which allows managers to unite forces of separate units which produce goods and services with the purpose of optimizing their material and labor resources, which are used by a company for realization of its economical purposes [14]
Theory and practice of optimizing reasonably grouping self-adding production, transportation, commercial types of activity and its relations with environment based on certain aim-set, correctly grounded systematic integration and complex adaptation in time and space of its internal and external flow processes...» [15]	Science of organization of joint activity of managers of different branches of an enterprise, groups of enterprises with the purpose of effective production promotion by chain «purchasing raw materials — distribution» as well as aim-set human transporting flows based on integration and coordination of operations, procedures and functions which are carried out within a certain process with the purpose of minimization of general expenditures of resources [16]

Source: [generalized by the author based on 1, 8–16].

Rationalistic logistics is oriented on the support of decisions in the system of management. It is a certain development of logistics as a science about features and methods of thinking and a part of military logistics (rational organization of moving and supply of troops).

Providing logistics is logistics which studies processes of supply for business and different logistical formations which are connected with them. That is to say that providing logistics is connected with formation and functioning of logistical objects, organizations, canals, chains, networks and logistical operations (processes) which create necessary conditions for carrying out main type of business activity. It is a certain development of a part of the military logistics (home front provision).

One of the bright examples of integrated application of rationalistic and providing logistics is a logistical mix.

To some extent rationalistic and providing character of logistics is referred in many meanings of this word. For example logistics is a field of science (theory and practice) about management of chains of supply in processes of creation, transportation and use of the material potential and rendering services, and it deals with the study and interpretation of any phenomena, developing of methods and instruments which support optimization of supply chains as well as principles of their rational practical application [22].

We believe that rationalistic and providing essence of entrepreneurial logistics is best defined in the definition which is provided in «Standards of logistics

Main differences in defining term «entrepreneurial logistics» by objects of study

Flow [Source]	Provisional processes (infrastructure) [Source]
The process of management is sufficient and effective (regarding spending of time and duration) flow of stocks of raw materials, materials, incomplete production, finished goods, services, finances and information from the place of origination of this flow to the place of its consumption with the purpose of complete satisfaction of consumers [17]	Science of planning, control and management of transportation, storing and other material and non-material operations, which are carried out in the process of moving raw materials and materials to a manufacturing enterprise, intra-plant processing of raw materials, materials and semi-finished goods, distributing finished goods to a customer based on interests and requirements of the latter as well as handing out, storing and processing of corresponding information [18]
Theory of planning, management and control over processes of material, labor, energetic and informational flows using elements of cybernetics [11]	Science of rational organization of production and distribution which in complex studies supply and sales of production means [19]
Science of planning, management and control over the movement of material and informational flows in any systems [20]	Science of the process of physical production rationing in space and time [10]
Science of management of material flows from original source to end user with minimal expenditures connected with promotion of goods and relative flow of information [19]	Branch of economics which subject is organization of a rational process of promotion of goods and services from manufacturers to consumers, functioning of sphere in production, goods, services, management over stocks of goods, creation of infrastructure for movement of goods [21]
Theory and practice of managing materials and connected informational flows [10]	Science of interconnection and interaction of provision with sales and transportation [10]

Source: [generalized by the author based on 10, 11, 17–20].

and management of supply chains» provided by the European Logistical Association.

In this case logistics is defined as planning, use and control over flow and placement of people and (or) goods as well as providing actions which are connected with such a flow and positioning within the economical system created for achieving specific purposes [23].

In this definition the object of study is not limited by only material flows for not only flow is described but also placement of people and (or) goods is mentioned. The function of planning describes rationalistic type and providing actions — providing nature of such a phenomenon as logistics.

At the same time in business such a definition requires partial clarification. It is the author's opinion that logistics is the field of knowledge in economics which studies processes of planning, performing, and control over the movement and placement of people and (or) goods based on rationalistic and effective principles as well as providing action which are connected with such a flow inside and outside the economical system.

**Conclusions.** Thus main difference in grounding essence of entrepreneurial logistics are based on different approaches to positioning this field of science in the system of other sciences and identification of its objects of study.

In most publications business logistics is defines as either a field of economics or as a component of management or marketing. The main object of study (management) in entrepreneurial logistics is mainly defined as a material flow but many scientists also define serving (providing) processes and infrastructure connected with them.

Business logistics is not a component of management (marketing) but it is a special approach to management

or its object (unlike logistical management or marketing). Likewise contemporary objects of study in logistics go beyond material and other flows. The main reason of the latter is that entrepreneurial logistics at the same time develops in two directions: rationalization and provision.

Rationalistic and providing logistics can be found in the basis of classification of entrepreneurial logistics as its two main manifestations and correspondingly form its two main types. It is essential to focus further deep research on these two types.

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