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PRINCIPLES AND METHODS OF COMMERCIAL LOGISTICS

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In this article the author considered and analyzed the principles of logistics and commercial mediation, resulting in the identified principles of commercial logistics. By analogy, the methods of logistics have been studied, analyzed and projected onto a commercial logistics.

In a previous study we have shown the author's definition of commercial logistics as logistics section, that organizes effective management of commodity and related financial, information and service flows in the area of commercial mediation in the process of promoting products and services from the production sphere to the consumption sphere [1, p. 135]. But the study of only the economic essence of the term cannot give a complete idea of how it works. So, for the full understanding of commercial logistics functioning in commercial enterprises, it is necessary to study the principles and methods it is based on.

In the study of economic literature it was revealed that nobody highlights the principles of commercial logistics, as such, but they are associated with the principles of logistics and commercial mediation. So, we give below the principles of logistics in general and commercial mediation and define the principles of commercial logistics.

The main principles of commercial mediation are [2]:

- close relations of commerce with the principles of marketing;
- the ability to foresee commercial risks;
- flexibility of commerce that is focused on the accounting of the ever-changing market demands;
- the selection of priorities;
- drive for final results - profit;
- responsibility for the implementation of adopted obligations under the commercial transactions;
- the display of personal initiative.

The logistics principles include [3]:

1. The principle of rationality. A characteristic feature of the development of the logistics enterprise system is the choice of the most appropriate option of logistics system. Managerial decisions that are the best (optimal) in the range of indicators for given conditions are chosen. The challenge is not to find better solution that exists, but to find the best solution of all possible solutions. From the point of view of rationality you can evaluate not only the level of the quality of decisions that you make (the optimal solution of the problem, the optimal plan, optimal control), but also the state of the logistics system and its behavior (the optimal trajectory, the optimal resource allocation, optimal functioning of the storage system).

Universal principle of optimization: the decision is always taken in such a way that rational achievement of the goals of the enterprise logistics system is carried out due to the selected ratio of costs and achieved results.

2. The principle of integrity. The larger is the enterprise logistics system and the larger is the difference in size between the part and the whole, the greater is the probability that the properties of the whole may be very different from the properties of the parts. Mismatching of local optima purposes of individual parts to the global optimum purpose logistics system of the enterprise is possible. Any logistics system must be considered at first at the macro level, i.e. in the interaction with the environment, and then at the micro level.

Sum of the optimal decisions made by employees of individual structural functional departments of the enterprise, does not guarantee the optimization of enterprise logistics system as a whole. In such a way the integrity is the character of logistics system to perform a given target function realized only by the system as a whole and not its individual elements.

3. The principle of systemacity. The principle assumes approach to the logistics system as an object represented by a set of interconnected private elements (functions), the implementation of which achieves the desired effect in the required time, for the necessary human, financial and material costs, with minimal damage to the environment. The principle of systemacity assumes research of logistic object on the one hand, as a whole, and on the other hand, as part of a larger system, in which the object is analyzed in certain respects with the other systems. In such a way the principle of systemacity covers all sides of the object and the object in space and time.

4. The principle of hierarchy. Hierarchy is a method of subordination of dependent elements according to the hierarchy stairs and the transition from the lowest level to the highest level. Hierarchy is the type of structural relations in complex multilevel logistics systems characterized by ordering and organization of interactions between different vertical levels. Hierarchical relations take place in many logistics systems, which are characterized by both structural and functional differentiation, i.e. the ability to implement a certain range of logistics functions. And at higher levels the functions of integration and coordination are exercised.

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Hierarchical structure of logistics systems caused by the fact, that the management of them is related with using and processing of large amounts of data. At the lower levels it is used more detailed and specific information, covering only some aspects of the functioning of logistics system. The higher levels serve generalized information that characterizes the operating conditions of the whole logistics system; at these levels decisions are made on the logistics system as a whole. The hierarchical structure of logistics systems is not absolutely rigid. It is connected to a hierarchy which is combined with more or less autonomy of lower levels with respect to the overlying layers. In the management of logistics systems inherent to every level possibilities of self-organization are used.

5. The principle of integration. Integration means the union in the whole of any parts or properties. The principle of integration aims to study the integrative properties and laws in logistics systems. Integrative properties are manifested as a result of combining elements to a whole, combining the functions in time and space. Logistics system as an orderly set of elements with definite connections has special system properties, that are not natural to the individual elements and allows you to get a synergistic effect.

The synergistic connection is the connection which upon joint actions of independent elements of the logistics system provides a common effect exceeding the sum of the effects of these elements, acting independently i.e. the increasing connection of the elements of the system.

Synergy:

- the effect of mutual reinforcement of relations of a system with the other at the level of material flow;
- the joint (corporate) effect of the interaction of elements in the system.

Synergistic effect is the effect of the combined actions. For example, rotor-conveyor lines combine the functions of transportation and handling.

6. The principle of formalization. Formalization assumes reception of quantity and quality characteristics of functioning of the logistics system.

After studying the principles of commercial mediation and logistics, it was found that these principles are similar, namely:

- a) the principle of rationality = the principle of the selection of priorities;
- b) the principle of integrity = the principle of flexibility of commerce that is focused on the accounting of the ever-changing market demands + the principle of achieving the main objective of commercial organization (profit maximization);
- c) the principle of integration at the commercial mediation implies a close connection of the activity with marketing, forecasting commercial risks, etc. (Table 1).

Based on the foregoing 4 principles of commercial logistics should be identified:

- 1) the principle of rationality;
- 2) the principle of integrity;
- 3) the principle of integration and systematicity to achieve the synergetic effect;
- 4) the principle of expression of personal initiative. This principle is reflected in the fact that the commercial logistics is a commercial intermediary activity, which is such an activity that requires a manifestation of personal initiative of all participants of the trade organization in order to maximize profit.

Table 1 – Principles of logistics and commercial mediation related to commercial logistics

Principles of logistics	Principles of commercial mediation	Principles of commercial logistics
the principle of rationality;	the principle of the selection of priorities;	the principle of rationality (or of the selection of priorities) helps commercial enterprise to choose the most profitable supplier in terms of cost, distance and reliability;
the principle of integrity;	the principle of flexibility of commerce that is focused on the accounting of the ever-changing market demands;	the principle of integrity helps the commercial enterprise to organize its logistics system in such a way that regardless the changes in demand for the product to receive the maximum possible profit due to unity (integrity);
	the principle of achieving the main objective of commercial organization (profit maximization);	
the principle of integration;	the principle of close relations of commerce with the principles of marketing;	the principle of integration is reflected in the connection of the commercial activities of the commercial enterprise with marketing, forecasting and so on.
	the principle of the forecasting commercial risks;	

Source: own study based on the study of economic literature.

Having defined the principles of functioning of commercial logistics, we'll consider the methods by which this section of logistics operates.

During the research it was found that due to the fact that commercial logistics is a new separate area of logistics, it is difficult to identify not only its principles but also the methods. Therefore we will conduct the analysis of the methods of logistics in general and then project them on commercial logistics.

Methods of logistics are the ways of influence on the managed object for the purpose of effective and efficient logistic solutions at the enterprise [4]. The main methods of logistics are given in the table 2.

Table 2 – Methods of logistics and their essence

Methods	The essence of the method
the method of system analysis;	relies on general theory of systems in accordance with which any supply chain with moving along it perforating flows is a sophisticated economic system;
the cybernetic method;	based on the information approach to the investigation of the processes of the management of logistics operations;
the methods of economical and mathematical modeling;	widely applied in distribution logistics in cause to the complexity of the implementation of sales activity and the need to logical modeling. By the way, ABC- and XYZ-analysis are widely used in distribution logistics;
the method of operations research;	applied at allocation of limited resources of the organization in order to optimize the amount of inventories at the complex network planning of logistics systems for the optimization of delivery schemes of products etc. For example, the use of the method of operations research in production logistics allows to distribute the field of operations between the individual pieces of equipment, production units or strategic business-units in such a way that the overall total profit was maximal;
the method of forecasting;	is one of the key methods of logistics and allows to forecast tendencies of development the various systems in dynamics, relying on evidence-based approaches to decision-making.

Source: own study based on the study of economic literature.

Based on the methods of logistics listed above, we can project the following methods onto the commercial logistics:

- 1) the method of system analysis;
- 2) the methods of economical and mathematical modeling;
- 3) the method of forecasting;
- 4) the method of operations research.

The essence of the method of system analysis in commercial logistics lies in the fact that the field of commercial mediation implies a management of the system directed on processing, transfer, storage and sale of goods and services. Such a system requires a systematic approach to identify all possible risks and losses as well as gains.

The methods of economic and mathematical modeling are also projected on commercial logistics because commercial enterprise needs to know how much profit any type of product can bring and so on.

Without the method of forecasting the existence of trade organizations is useless since the trade organization is directed on reception the maximum possible profit from implementation of its activities. Without forecasting, the firm is unable to foresee the possible increasing or, conversely, decreasing of profit for the next or current period.

The essence of the method of operations research in commercial logistics is that in the trade organization all conducted operations should be clearly divided and regulated to minimize time costs, and it is very important in today's economy.

Having determined the principles and methods of commercial logistics, we can say that commercial logistics, just like any other sphere of logistics, is based on the theory of logistics as a field of science. However, due to its focus on the optimization of commercial activity the theory of commercial mediation should also be considered and it was done in this paper.

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**THE THEORETICAL MODEL OF REGIONAL COOPERATION
BETWEEN LITHUANIA AND BELARUS**

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The article discusses the theoretical issues of possible economic cooperation of Lithuanian border regions and Belarus, belonging to different economic associations of the EU and the Eurasian Union (EAU). Each economic system and proven ways of managing it has its advantages and features, which can provide a synergistic effect in improving the welfare of neighboring regions, to increase their relative share of the national budget, while maintaining "ceteris paribus" on many other parameters.

Lithuania and Belarus are two states, which have been close geographically for centuries. By the will of God in different periods of time and in different political configurations, the two territories that merge into one state, then again divided into two, came at the present time of spring 2015 to the following parameters:

A) geographically – the countries share a common border at 677 km, that makes about 39% of all Lithuanian border and about 23% of all Belarusian border, the Belarusian area is larger than that of Lithuania about 3,2 times, population approximately by 3,5 times. Border regions of Lithuania with Belarus are its nine eastern regions of Zarasai, Ignalina, Švenčionys, Vilnius, Šalčininkai, Varėna, Druskininkai and Lazdijai. Totally they make up 18.6% (12,132 square kilometers) of the territory of Lithuania, and by number of population 8,7 % of the total population of Lithuania or 255,1 thousand people at the beginning of 2014 (Lithuanian Department of Statistics, 2014);

B) politically - relate to the EU and the Eurasian Union;

C) economically - to countries with a market and partly controlled economy.

Optimization issues of regional cross-border cooperation at the junction of different economic unions and comparative evolution of the Baltic States welfare in the EU

We know that the greatest breakthroughs occur in interdisciplinary sciences or at their junction from the natural and social sciences. Thus, Lithuania and Belarus have a unique opportunity to test in practice the synthesis of state regulation and the free market to achieve breakthrough solutions and patterns of interaction in regional cooperation to improve competitiveness, employment rate and welfare of the population.

Each party can use positive sides – Belarusian – first of all an administrative resource through lending, in energy resources and enterprise creation focused at sales markets in the Eurasian Union – Lithuanian regional administrative power in the establishment of city core enterprises, aiming at markets sales within the country and the EU. In fact, the model of creating joint ventures is offered. This model has state-private capital for the purpose of diversifying markets by obtaining customs preferences and ensuring the increased employment of the population of border regions as well as reducing its migration and emigration. Regional and central Lithuanian authorities will have to challenge themselves and answer a simple question – what is better – or by use of the target program of regional cooperation with Belarus to create in the foreseeable future – for 5–10 years “n” number of jobs or to spend and continue to receive from the central authorities transfers for payment of social and other types of benefits to residents.

Why do these questions appear? Tables given below show that as separately taken regions on border with Belarus lag behind the average Lithuanian indicators. Cumulative figures of all the Baltic countries are close to those of our selected countries only on percentage. This gap is only increased during the 8-year period, except for the index GNI per capita PPP with the Benelux countries, Sweden and Finland.