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## **STRUCTURAL DETERMINANTS OF CONFLICTS WITHIN THE LOGISTICS SYSTEM OF AN ENTERPRISE**

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agnieszka.pieczonka@pk.edu.pl**Keywords:** organizational conflicts, logistics system of an enterprise, structural determinants of conflicts**Abstract:** Among the various determinants of conflicts arising during the organization and operation of logistics system of an enterprise, the most important are those that have their origin in the organizational structure of the enterprise. The aim of this article is to systematize and characterize such determinants. The first part of the article is devoted to the interpretation of both the logistics system of an enterprise and conflicts that occur within this system. Then the general typology of structural determinants of organizational conflicts is presented. The main part of the article characterizes these determinants in relation to the logistics system of an enterprise.

### **1 Introduction - the idea of logistics system of an enterprise**

In its most general sense, the logistics system of an enterprise is a deliberately organized and integrated (cohesive) system consisting of several main subsystems such as supply, production and distribution (including storage), as well as markets for the supply, disposal and return of goods, waste and recyclable materials, the outlet market for potential customers, transport and forwarding processes, and possibly also the processes of procurement, sales, financing, etc., including relationships that occur between these elements and their properties, controlling the flow of goods, accompanied by the flow of funds and information. The above interpretation reflects the systemic approach of the logistics of an enterprise in response to changes in the conditions of market operation popularized, among others, in [2], [3], [7] and [8]. From the point of view of efficient management of activities in the logistics system, attention should be paid not only to its components but also to the objectives of its operation, output results (delivered goods - products and services, warranty and post-warranty service) and processes carried out within the system, enabling processing of the system supply factors into the delivered products [7].

Precisely defining the concept of enterprise logistics system based on a comparative analysis of the literature of the subject including, among others, [1], [2], [8] and [10], three main subsystems can be distinguished in this system, i.e. supply logistics, production logistics, distribution logistics, and additionally logistics of returns, waste and recyclable materials.

In a broader sense, given the resources used in the logistics system, its components can also include human

resources (number and structure of employees, their qualifications), computer software used, storage and transshipment facilities, their mobile equipment (means of transport and equipment for loading and unloading) and stationary equipment (warehouses, reloading facilities, factories, shops), connections between shipping and receiving points enabling the flow of material streams, road infrastructure, supplier and customer cooperation environment, and financial resources [7].

Depending on the nature of the company's activity (production, trade, service, etc.), some differences may occur in the configuration of the individual components of the logistics system. Between these elements there are specific functional relations and technical dependencies that guarantee the smooth running of the logistics processes, such as the flow of goods, information and decision, inventory management and logistics infrastructure, as well as the cost of these processes [11].

### **2 The definition of conflicts within logistics system of an enterprise**

In the functioning of contemporary organizations, conflicts arise within all kinds of projects, processes and tasks carried out by co-operating organizational units, cells and positions. They are a natural and inevitable phenomenon, stemming from the essence of the enterprise as a special kind of organization.

It is worth pointing out a general interpretation of the notion of organizational conflict as a starting point for the concretization of the subject matter. J.A.F. Stoner and Ch. Wankel [12] define it as a dispute between two persons or between members or groups, resulting from the need to share limited resources or work, or from the different

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positions, different goals, values or perceptions. In the course of the dispute, the members or departments of the organization strive to make their case or point of view override the issue or viewpoint of others. According to R.A. Webber [14], the possibility of the occurrence of organizational conflicts is mainly determined by three factors: incompatibility of objectives, sharing of scarce resources and interdependence of activities.

Considering the conflict in the logistics system, one can assume that it is a hostile behavior aimed at hurting, creating obstacles or causing harm to another person or institution. It rests on a masked discord and grows out of the subjective perceptions of the participants. It is a situation in which one member of the distribution channel thinks that another member is his opponent involved in proceedings aimed at injuring, hindering or acquiring scarce resources at the expense of other members [4]. The basis for investigating the determinants of conflicts within the logistics system of an enterprise may also be D. Waters' approach [13], who has highlighted the problems of integrating logistics in the enterprise and in the supply chain. In general terms, the causes of the conflicts in question may stem from the lack of integration of all logistics activities. A symptom is the lack of one organizational unit responsible for the overall decisions regarding the movement of goods and accompanying information, in particular when logistics activities are subordinated to production decisions or to marketing and sales. In addition, conflicts relating to the competence of logistics decision makers may also be involved.

Among the main types of conflicts associated with the separate shaping of logistics subsystems, differences can be distinguished between:

- 1) sourcing and production by failing to properly match the quantity of raw materials, materials and semi-finished products to ensure continuity of production, production delays, restrictions on the flow of information from manufacturing activity to supply;
- 2) production and distribution activities caused by insufficient adjustment of quantitative and qualitative productive capacity to the needs reported by customers and delays in deliveries related to delays in production;
- 3) supply, production and distribution, and logistics of returns, waste and recyclables resulting from delays in the disposal of waste and recyclable materials, and restrictions on the flow of information on their quantities and types generated in the supply, production and distribution activities.

In addition, the company's logistics system faces conflict in the flow of resources within this system and in the supply chain [9].

**3 The classification of structural determinants of organizational conflicts**

As a methodological basis for systematizing and describing conflict determinants in the logistics system of an enterprise, we can adopt the concept of intra-organizational, direct determinants of business negotiations developed by A. Kozina [5], resulting from the seven typical functions of organizational structure [6]. This concept is described in Table 1.

*Table 1 Internal direct determinants of business negotiations in a company (Source: own study based on [5])*

Features	The dimension of cooperation (concord)	The dimension of competition (conflict)
Objectives	Formulation and alignment of goals (adequately to the capabilities and requirements of the environment) and their decomposition (aggregation) and prioritization.	Divergence between the objectives of the individual elements and the whole and between the individual elements, different priorities and incompatibility of the objectives with the needs of the environment.
Tasks and functions	Setting up tasks and functions (as a result of the decomposition of goals) and design and coordination of the task execution process.	Excessively detailed or generalized tasks, incompatibility of functions with objectives and related problems of implementation.
Grouping of items	Selection of criteria for company fragmentation adequate to tasks and functions and design of internal organization of teams.	Use of improper grouping criteria that causes duplication, failure to perform the tasks or incomplete execution of tasks, and over-diversity and incompatibility of team status.
Functional dependencies	Establishing the principles of co-operation, coordinating task execution and design of the necessary communication processes.	Interdependence of activities, inadequate coordination measures and communication problems (deficiencies, delays, poor quality of data, etc.) - horizontal conflicts.
Hierarchical dependencies	Preferred style of targeting and establishing superior - subordinate relationships.	Tensions in superior - subordinate relationships (vertical conflicts).

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Decision-making powers	Breakdown, specification and allocation of responsibilities appropriately assigned to tasks and responsibilities.	Pressures and constraints resulting from excessive (de) centralization of powers, ambiguities and/or too narrow or too wide powers causing conflicts of competence between managers.
Formalization of activities	Developing regulations (rules, procedures, guidelines, etc.) that condition the efficient execution of tasks.	Problems resulting from insufficient (too much freedom of action) or excessive (too rigorous) degree of formalization hindering the implementation of tasks.

The coexistence of the dimensions of cooperation and competition in negotiations makes the same traits of structure the basis for distinguishing the preconditions for both interaction between the elements of the organization and conflicts between them, and therefore in Table 1 both dimensions are taken into account. The difference between these two dimensions, and thus between the two types of determinants of business negotiations, is that in the first case they provide the basis for mutually agreed arrangements necessary to ensure interoperability, while in the second case they indicate the direction of the search for possible means to resolve conflicts in order to reduce or eliminate obstacles on the way to achieving the assumed level of effectiveness.

**4 The characteristics of structural determinants of conflicts within logistics system of an enterprise**

Taking into account the methodological approach outlined above, seven major types of structural conflicts in the logistics system can be identified and described.

1. Irregularities in the formulation of objectives. There are discrepancies between the objectives and/or priorities of each subsystem and elements of the logistics system. The goals can also be redundant, outdated, inadequate, etc., to the needs of the environment, or goals that from the standpoint of these needs should be achieved as significant in the changed operating conditions are not set. Most often, this is done through misdiagnosis of logistics strategy and plans resulting from this strategy concerning distribution, manufacturing and supply needs. There may also be an improper implementation of logistics management, i.e. planning, execution and control of activities related to the flow of goods, information and financial resources within the enterprise. The next case includes incorrectly defined objectives related to shaping the purchasing policy, choosing suppliers, negotiating prices, setting the terms of contracts with suppliers, ordering, coordinating delivery dates, controlling contract terms, and making current evaluation of suppliers. There are also errors in shaping the overall policy of the logistics system of an enterprise, including e.g. decisions to expand or build warehouses, purchase of machinery and equipment, outsourcing certain areas of service to service providers, etc.

2. Misrepresentation of tasks and functions of organizational units in the logistics system. Tasks and

functions may be overly aggregated or fragmented or inadequate for purposes that should be properly detailed. This is usually due to improper implementation and coordination of the supply of raw materials, materials, semi-finished products, parts, components and finished goods, and errors related to their use in the manufacturing process and in sales or service delivery. In addition, this situation may include improper management of returns, defects and imperfections in the organization of work, in planning and management of the production, sales and distribution, and disparities in procurement of materials and services, including, among others, preparation, review, approval and dispatch of orders.

3. The way of grouping elements of an organization as a whole and/or within a logistics system is not adapted to the specificity and conditions of its operation. This can lead to the use of inappropriate organizational structure, such as rigid team-linear structure instead of more flexible matrix or process structure. This often happens also through improper organization or harmonization of logistics processes between suppliers and manufacturers, or between producer and customer. There may be errors in the selection of technical resources, human resources, financial resources for the implementation of logistics process and imperfections in logistics control techniques, as well as lack of integration of materials management with the physical distribution of goods.

4. Incorrectly defined functional relationships, which usually result in mutual misalignment between individual components of the system and, consequently, in an inadequate performance of tasks. Coordination mechanisms are ineffective. There are also problems arising from communication constraints and barriers related to improper functioning of logistics channels and incorrect exchange of information between elements of the system. Consequently, the data used and transmitted are incomplete, unreliable, delayed, etc. There may also be conflicts arising from the incomplete integration of all logistics activities, e.g. lack of one organizational unit responsible for all decisions regarding the flow of goods and accompanying information, especially when the logistics systems are subject to production decisions, or marketing and sales.

5. Conflicts may also be caused by improperly designed hierarchical relationships, especially through tensions in relations between parent and child units of an organization, in particular interference in fulfilling by the selected unit its role of the leader/coordinator in the system

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and/or lack of respect paid to this unit by all its links. Then the pursuit of particular objectives and interests follows, the pursuit of subsystems in the logistics system to dominate over others, and also insubordination of the executive units to those responsible for coordinating and supervising the implementation of logistics process.

6. Disagreements and discrepancies may also be the result of misalignment of decision-making powers, i.e. their over-centralization or decentralization, which often happens as a result of discrepancies in the planning, organization, implementation and control of the flow of goods and accompanying information from suppliers of raw materials and materials to final recipients. Potential problems are also due to improper decision-making competencies in relation to the flow of goods and data between different cells and organizational positions responsible for the supply, production and distribution of goods. These competencies may be either too narrow or too wide, formulated in an unclear or ambiguous way, overlapping or divergent.

7. Conflicts may also result from the wrong scope and/or formalization of activities. Rules, regulations, laws and procedures governing the organization and operation of the logistics system may be insufficiently formalized, resulting in over-activity combined with non-formal and interfering interoperability between elements of the system, or they may suffer excessive formalization, which stiffens their activities and reduces their effectiveness. There are also conflicts between the principal and the carrier for not understanding the client's expectations, e.g. incomplete information on the terms of the transaction. There are also errors in the choice of suppliers and preparation of contracts, including in particular supplier selection, certification and validation of suppliers, contract negotiation and management of contracts.

## 5 Conclusions

The systematic and structural characteristics of conflicts in the logistics system presented in this article may provide useful tools for the identification and analysis of such conflicts. The proposed concept is complex, which means that it covers all sorts of structural determinants of the conflicts in question, and universal, which means that it can be applied in logistics systems of enterprises of different industries, sizes, locations, etc.

On the other hand, the presented concept requires refining, and as such is only a preliminary presentation of the issues under consideration. Within the framework of the studies carried out by its authors it will be necessary first and foremost to specify the structural determinants of conflicts in the logistics system of an enterprise by creating appropriate sets of dimensions and parameters. Also empirical research of a comparative nature is required to verify and possibly improve the proposed concept.

## References

- [1] BEIER, F. J., RUTKOWSKI, K.: *Logistics*, Szkoła Główna Handlowa w Warszawie - Oficyna Wydawnicza, Warszawa, 2014. (Original in Polish)
- [2] BLAIK, P.: *Logistics*, Polskie Wydawnictwo Ekonomiczne, Warszawa, 1999. (Original in Polish)
- [3] CHRISTOPHER, M.: *Logistics and Supply Chain management. The Strategies of Decreasing Costs and Improving Service Performance*, Polskie Centrum Doradztwa Logistycznego, Warszawa, 2000. (Original in Polish)
- [4] KISPERSKA-MOROŃ, D.: Conflicts within Supply Chains, *Gospodarka materiałowa i logistyka*, No. 2, 1999. (Original in Polish)
- [5] KOZINA, A.: *Negotiations Planning in a Company*, Wydawnictwo Uniwersytetu Ekonomicznego w Krakowie, Kraków, 2012. (Original in Polish)
- [6] NALEPKA, A., KOZINA, A.: *The Fundamentals of Organizational Structure Research*, Wydawnictwo Akademii Ekonomicznej w Krakowie, Kraków, 2007. (Original in Polish)
- [7] NOWICKA-SKOWRON, M.: *The Effectiveness of Logistics Systems*, Polskie Wydawnictwo Ekonomiczne, Warszawa, 2000. (Original in Polish)
- [8] PFOHL, H. C.: *Logistics Management. Functions and Tools. The Implementation of Logistics Concept in a Company and within Relations between Enterprises*, Bibliotek Logistyka, Poznań, 1998. (Original in Polish)
- [9] PIECZONKA, A., KOZINA, A.: *Conflicts within Logistics Systems – Research Concept*, In: Business management – Aspects of Logistics and Marketing, Dudzik-Lewicka I., Madyda A., Malara Z. (ed.), Wydawnictwo Akademii Techniczno-Humanistycznej w Bielsku-Białej, Bielsko-Biała, 2016. (Original in Polish)
- [10] SCHARY, PH. B., SKJØTT-LARSEN, T.: *Managing Global Supply Chain*, Wydawnictwo Naukowe PWN, Warszawa, 2002. (Original in Polish)
- [11] SKOWRONEK, CZ., SARJUSZ-WOLSKI, D.: *Logistics*, Wydawnictwo Centrum Informacji Menedżera, Warszawa, 1995. (Original in Polish)
- [12] STONER, J.A.F., WANKEL, C.: *Management*, PWE, Warszawa, 1992. (Original in Polish)
- [13] WATERS, D.: *Supply Chain Management. An Introduction to Logistics*, Palgrave Macmillan, New York, 2009.
- [14] WEBBER, R.A.: *The Principles of Managing Organizations*, Państwowe Wydawnictwo Ekonomiczne, Warszawa, 1996. (Original in Polish)

## Review process

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