APPROACHES TO LOGISTICS IN CONTEMPORARY ECONOMY

Ph.D. **Ştefan NEDELEA**
"Athenaeum" University Bucharest

Abstract

Logistics development at the present moment of economic evolution has been influenced by a series of factors related to: the rise of research-development, impact of the competition environment, diversifying of products and services, evolution of technological processes, complexity of management approach, as well as by the way logistics has been defined and approached (from the organizational, systemic and procedural points of view).

Key – words: direct logistics, inverted logistics, organizational approach, systemic approach, procedural approach.

JEL Classification: M21

From the definition point of view, there are several opinions in the expert literature. Thus, the American organization **Council of Logistics Management** admitted the importance of the logistics concept, more thorough and appropriate to economic realities than that of physical distribution. According to the definition formulated by the organization, logistics is a process which consists of planning, achieving, and controlling the flux and efficient storing of raw materials, products to be processed, finite products, and related information, from the point of origin to the point of use, in order to adapt to the client's requirements.

The definition proposed by the American organization is not singular. For the **European Logistics Association,** logistics means organizing, planning, controlling and ongoing of goods flux from their conceiving, supplying, up to the production and distribution to the final customer, having met the exigencies of the market with a minimum cost.

The French Logisticians' Association includes in logistics the overall of the activities aiming at producing, at the lowest cost, a determined quantity of a product, at the place and moment when there is a demand.

In **John Gattorna's** view, logistics is defined as the "process of strategic management of purchasing, movement, and storing of materials, semi-finished

products, and finite products (together with the informational flux appropriate to these processes) within the organization and marketing channels, for fulfilling the orders with the lowest costs for the company".

Other meanings of logistics are:

- Overall of the activities aiming at making available, with a minimum cost, a quantity of products at the place and moment of a demand;
- Management and optimization of physical fluxes from suppliers to clients;
- Overall of the activities aiming at achieving the lowest cost for a determined quantity of a product or group of products, taking into account the place and moment when a request is created or already exists.

At a general level, logistics includes an amount of activities systematized by **three categories** to which the material and informational fluxes are added: *basic activities* (supply, distribution, storage, stock management, customers' service), *support activities* (transport, packing, handling), and *maintenance activities* (marketing, planning, human resources, providing quality).

The above mentioned components have determined a procedural and systemic approach of logistics. At the same time, the components of logistics also allow its segmentation by specialized categories of logistics, meaning logistics of supplying (also known as upstream logistics), distribution logistics (downstream logistics), storage logistics, etc. In expert literature, the activities of support and maintenance of production are considered as forming the internal logistics, but all the components can be gathered under the generic name of global logistics.

Achieving performance in logistics entails the observance of certain **principles** by all structures:

- Providing a relation between logistics and strategy of the organization
- Achieving a global organization
- Capitalizing the power of information
- Stress on human resources
- Forming strategic alliances
- Stress on financial performances
- Establishing the optimal level of services
- Importance of solving details
- Optimizing the volume of goods.

These essential principles are valid regardless of the activity sector, type of organization, and geographic location.

Behind all these principles of logistics, there stand two essential **objectives,** namely:

1. Coordinating logistics to the strategy of the organization so that it can fully support the organizational objectives and allow their achievement in a most profitable manner.
2. Focusing of logistics on efficiently serving the customers leading to the achievement of goals.

Logistics, defined as a sum of activities and processes meant to provide the proper quantity of the proper goods, at the proper time, of a proper quality, at proper costs, at the proper location, accompanied by the proper information for all participants has been described and alternatively defined by a series of **approaches** which detect different aspects of its content, namely the **procedural approach** and **systemic approach.**

Procedural approach of logistics consists of defining logistics as an overall of sequential activities which have the object of treating the elements of the flux (process) with a complexity depending on the number of activities composing the flux. The procedural approach of logistics is possible because its decomposition into processes observes the conditions of defining logistics as well as the existence of:

- *inputs and outputs* (processes are characterized by a beginning and an ending marked by the resources and results)
- *entities* (processes link the entities to each other by inter-organizational, inter-functional, interpersonal, etc. relations)
- *objects* (processes handle physical objects, information)
- *activities* (processes can cover two types of activities: management and operational).

Despite all these, the procedural approach is not enough to entirely and thoroughly define logistics, as it ignores the causal relationships established between its components and does not take into account certain characteristics of logistics such as: dynamicity, its evolving character, controllability, etc. These characteristics and cause-effect relationships are specific to dynamic systems, which motivates the necessity of a **systemic approach** of logistics.

The systemic approach allows studying logistics on three levels:

A. Elementary level – in this respect, logistics is divided into a succession of elementary, basic, supporting and maintenance functions lying at the base of the activities included in the logistics chain. According to the definition presented in DEX (Explicative Dictionary of Romanian), function represents the role which an element fulfils within a complex system, or, in other words, the dynamic side of the system, while activity means an overall of operations performed in order to obtain a certain result, therefore it represents the static side of the system.

B. Aggregate level – refers to grouping the activities by sub-systems of organization (supply, production, distribution, etc.), and represents an approach leading to a re-grouping of logistic operations into three areas of responsibilities that may belong to a distinctive management:

I) up-stream area:
- scheduling the acquisition – purchase
- supplying the production units, transport and storage

II) internal area:
- planning and passing for payment of production
- supplying the working points
- circulation of unfinished production

III) downstream area:
- physical distribution
- transport
- after-sale service.

C. Global level, which proposes a unitary approach of the product concept and after-sale service. The global logistic system considers all the logistic operations performed along the line starting from forecasting the sources of raw materials to the final customer, including the supply – upstream logistics, production – internal logistics (industrial) and distribution – downstream logistics (commercial).

This classification by hierarchical levels allows highlighting the functioning of each and every sub-system, its inter-correlation with the other sub-systems, therefore the possibility to take organizational and decisional measures to lead to a better functioning of the whole. Regarding this classification from *the point of view of the space factor,* a certain ranking can be noticed, on different levels of sub-systems, while from *the point of view of the time factor,* it can be noticed that these sub-systems are of a discrete type (analogue to the sampling systems in technology), meaning that both sending the signals of command at lower levels and receiving their effects, at higher levels is performed at certain intervals of time. At the global level, the relations (links, connections) between subsystems are studied related to the existing resources and their objectives, and then recomposed and integrated into a system the designing or redesigning of which, in order to obtain an enhanced efficiency represents the objective and at the same time finality of analyzing the logistic system.

Logistics, defined as a system, thus has a series of **external properties** (dynamicity, entropy, complexity, a random/stochastic character, self-adjustment), and **internal** (accessibility, controllability, observability, sensibility, stability, finiteness, and adaptability).

The approach of logistics as a system is therefore motivated by the overlapping of its structure of the elementary components of a system: objectives, performance indicators, action variables, fluxes, resources, activities and processes. According to the two approaches mentioned, **the structure of logistics includes the following forms:**

- A distinct structural component within an organization (productive or service providing);
- Organizations specialized in logistics or in one of the component activities (storage, transport, etc.);
- Commercial dealers;
- Strategic alliances in the domain of logistics;
- Networks of organizations;
- Logistic parks (lands close to the important transport roads, such as motorways, on which there stand warehouses, hotels, restaurants, petrol stations and even independent office buildings and showrooms);
- Institutions of training in the domain of logistics (national and international).

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