

LOGISTICS: EMERGENCE OF THE TERM AND HISTORICAL DEVELOPMENTS

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ЛОГИСТИКА: ПОЯВА И РАЗВИТИЕ НА ПОНЯТИЕТО В ИСТОРИЧЕСКИ ПЛАН

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Abstract

Logistics is an activity which is of vital importance to any economic system. It has emerged in the dawn of human activities and has existed long before the term itself has been coined. Initially relating to primarily transportation activities of goods, as time passes and as economic activities became richer and more various, it encompassed more and more operations. The aim of the current paper is the concept of logistics to be presented in a modern times perspective, and the main stages characterising its historical development to be systematized and briefly analysed.

Key words: logistics, transportation, goods, materials

Резюме

Логистиката е дейност, която е от съществено значение за всяка икономическа система. Тя възниква в зората на човешката цивилизация и съществува много преди да бъде утвърден самият термин. Първоначално понятието "логистика" обхваща дейностите, свързани с транспортирането на стоките, но с течение на времето и обогатяването на икономическите дейности започва да обозначава все повече операции. Целта на настоящата разработка е понятието "логистика" да бъде разгледано в перспективата на съвременността, а също така и да се открият и анализират накратко основните фази, характеризиращи неговото развитие в исторически план.

Ключови думи: логистика, транспортиране, стоки, материали

1. Introduction

Logistics as economic activity has existed since the very start of the human civilization. In the beginning, it was associated mainly with the various activities related to the mere transportation of goods. With the development of economic systems, associated with the intensification of national and international trade, logistics started to embrace many other activities related to the carrying of goods. In the current paper the contemporary definition of logistics, and the main stages characterising its historical development are presented and analysed. The aim is to shed light on the development of the term and the enrichment of the services which are being embraced under its umbrella.

1. Definition and scope of logistics

The term 'logistic', originating from Latin language, is derived from the compound of the words 'logic' and 'statistics'. From this point of view, we can name logistics as 'statistical logic'.

In general, the concept of logistics is the transfer of the goods from the manufactured spots to warehouses, stocking of it, delivery of the goods to the desired places in the desired way and the planning of these deeds to be carried out in the most productive and the fastest way. In other words, it is an updated version of the transportation in the past (Çevik and Kaya, 2010: 22). The most prevalent definition of logistics was made by The Council of Logistics Management (CLM) and by Supply Chain Management Professionals (CSCMP). In accordance with this definition, logistics is the planning, the implementation and the controlling of materials, goods and services and the flow of information in the supply chain in order to meet the needs of the customers. It also includes the stages of receiving goods from the production spot and delivering these goods and services to their end-use spot. The two-way mobility is provided in an efficient and productive way (Gülenç, Karagöz, 2008: 3).

To comprehend the definition of logistics, the seven characteristics of logistics should be taken into account. These are namely (Çekerol, 2013:10):

- The right product;
- The right quantity;
- The right conditions;
- The right place;

- The right time;
- The right consumer;
- The right price.

Moving from this line of view, we are to say that logistics is the delivery of the product to the right consumer for the right price, in the right place and time range in the right conditions.

The product here can be raw material, semi-product or end product. The right time for logistics operators is the quickest time possible. Profitability is the aim of every commercial business, so the delivery of goods to the receiver in the lowest cost possible is another important point for the businesses.

In businesses, either in pre-production stage, during production or in post-production stage, flow activity of raw materials and supplies, semi-products and end products are defined around the concept of logistics (Gümüş, 2009:98). In line with this point of view, all activities of the raw materials and semi-products until the production line are called inbound logistics, and all activities in post-production stage regarding the delivery of the goods and services to the customers are called outbound logistics.

While inbound logistics include the activities which regulate the acquisition of raw materials from the supplier, the storage of these materials and their production in the framework of the supply chain, outbound logistics is realized with the functioning of the system that provides the storage of end-product by acquiring them from the supplier and the delivery of these products, which is a supplementary factor to the inbound logistics process. This whole process enables the control of activities through the bilateral notification of the parties, and therefore provides the delivery of services to the customer under the most proper circumstances (Çekerol, 2013: 10, 11).

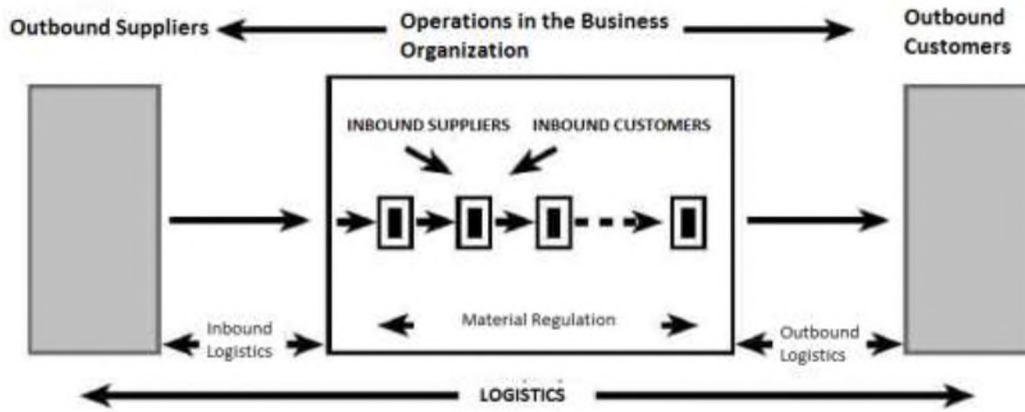


Fig. 1. Logistics Flow (Çekerol, 2013:10,11)

We can see the whole logistic flow of a company in Scheme 1.

2. Historical Development of Logistics

Although the term logistics was first used in the military jargon, in the historical course, logistic activities firstly began with the preparation and storage of the food that primitive people hunted or gathered. Later on, logistics was used in all military operations ranging from storage of ammunition to planning of military mess hall, and the logistics was defined in military for the first time.

In literature, logistics was defined as the implementation and design of all elements that would support the operation capability of the military troops, and as securing efficiency at war and peace by supplying the related equipment and materials (Tutar, Tutar ve Yetişir, 2009: 192). With the transition of the world from war economy to trade economy after the World War II, logistic activities also changed in form and integrated to the commercial activities.

When we analyse the historical development of logistics, it was developed and shaped in parallel with humanity, showing a quality that contains all fields of science within.

Table 1. Historical Development of Logistics

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I. ERA	II. ERA	III. ERA	IV. ERA
Primitive Logistics	Military Logistics	Commercial Logistics	Modern Logistics

The first logistic activities started. There was no planning. The production activities remained on the forefront. There was no control over the operational activities such as storage and distribution.	This era encompasses all activities that involve the procurement, supply, storage, transportation, distribution, maintenance, repair and discharge of the materials of the military inventory.	With rapid changes occurring in the technological and economical need in commercial field, new organizations containing all functions of logistics began to form. This era encompasses the link between material management and physical distribution.	As a result of the modernization of the activities, logistics began to be applied in managerial and operational levels. Managerial Logistics • Supply Logistics • Logistics Management Operational Logistics • Management of Materials • Management of Production-Operation • Management of Distribution
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Source: Çekerol, 2013: 6

As can be seen in Table 1, the first era is named the “primitive logistics era”. No planning exists and production activities are more important in this era.

The second is the military era. It includes all processes that involve the procurement, supply, storage, transportation, distribution, maintenance, repair and discharge of the materials of the military inventory.

The third era, identified as “modern logistics” is the era when the world quits war economy, and logistics occur as a preface in commercial activities with the changing commercial needs. Material management and physical distribution links are added to the picture.

In the fourth, Modern Era, as a result of the modernization of logistics activities, logistics began to be applied to managerial and operational levels. In this era, logistics was divided into departments of professions such as supply chain management, logistics management, material management, production and operation management and distribution management.

Stages of logistics with a modern look are given in detail on Table 2 below.

STAGES	ADMINISTRATION	ORGANIZATIONAL DESIGN
1960s		
Stocking and Transfer	Sales Marketing	Scattered Logistic Activities
	Storage	Weak Interconnectivity of
	Stock Control	Logistic Activities

	Transportation Activity	Weak Management of Logistics Authority Affects the Success of a Business
1930s		
Total Cost	Centralization of Logistics Total Cost Management Process Optimization Logistics as a Competitive Advantage	Centralized Logistic Activities Growing Logistic Management Authority Computer Applications
1990s		
Integrated Logistics Management	Logistic Planning Supply Chain Strategies Integration with Business Operations Integration with Process Channels	Expansion of Logistic Activities Supply Chain Planning Support for Total Quality Management Logistic Management Activities
2000s		
Supply Chain Management	Strategic Supply Chain View Usage of Extranet Technology Cooperation in the Total Quality Management Parameters of Supply Chain in order to Use the Channel Power as a Joint Enforcement Instrument	Commercial Partnership Virtual Organization Changes in Demand Benchmarking and Reorganization
2000 and beyond		
E-Supply Chain Management	The application of Internet to the Concept of Supply Chain Instantaneous Low Cost Share of Database Electronical Info Supply Chain Management Synchronization	Commercial Partnership with the Network of Supply Chain .com. Add-in and Market Changes As such Organizational Agility and Measurability

Sources: Karagöz and Gülenç, 2008;77

3. Developments signifying the enhancement of the concept of logistics after WW II

3.1. Globalisation

When looking from only a commercial point of view and putting aside its socio- cultural effects, a lot of companies aim to assert themselves in the international arena. In a world where rivalry is seen on a daily basis, all companies dream of opening up to different markets,

and carrying out product or service trades. In this sense, the only way to cross the border in a rapid and reliable way and form commercial relations is to work with a good logistic source provider or for the company to form a robust logistics network within its scope.

3.2. Increasing Rivalry Between Companies

The increasing rivalry between companies has brought with it the necessity to offer the highest quality products and services to the consumer. As a consequence, companies use external sources rather than creating resources for logistics and use this resource to develop their existing products or to create new products.

Aside from this, the cost of transport as an important logistic sub-process has a notable share in the overall cost; moreover in some industries it is indicative in the rivalry (*i.e.* mines, core chemistry, iron and steel, cement).

Another point to be made is the desire to instantaneously meet client expectations. Meeting client requirements without losing time and keeping the client waiting is also an outcome of the desire to create rivalry advantages. As a result distribution networks and storages have expanded.

3.3. The Forming of Radical Changes in Stockpiling Philosophy

Retailers have undertaken half the function of stockpiling, while wholesalers and manufacturers have undertaken the other half. In the beginning of the 1950's, especially in the field of raw vegetables and fruits, more complicated stockpiling techniques have been developed and the ratios have changed to 10% retailers, 90% distributors and manufacturers (Çekerol, 2013:8).

Moreover, new insights in the field of production such as on time production have also brought new viewpoints to the distribution and stockpiling concepts.

3.4. The Revolution in Computer and Communication Technologies

As specified below in studies in logistics, there is a need for a lot of detail and information. This information is related to (Çekerol, 2013: 9):

- Where clients are,
- The size of the order,
- The centres where the product is produced, stored, and distributed,
- The cost of access to the client from storage and factory,
- Where the suppliers are,

- Current stock levels at the storage and distribution centre,
- Knowledge of the process of products and raw materials.

It is not possible to manually analyse the information listed above. Therefore new technologies and computer programs are used.

3.5. Green Logistics and Counter Logistics

While not harming nature, keeping the environment clean, providing the consumer with ecologic products and services are part of green logistics, recycling used products so as not to consume natural resources and reusing them is a part of recycling logistics. Aside from these two concepts having cost cutting effects, as a marketing strategy they also position the manufacturer and service provider as environmentally friendly in the perspective of the consumer and therefore aim for it to have an effect in the increase of market shares.

4. Conclusion

Logistics is a relatively new term for an ancient activity, vital for the economy. Without logistics the functioning of the economy is practically impossible. Though simple at first sight, logistics actually can be an extremely complex activity in some cases. It is related not only to the transportation of certain goods from one location to another, but also to the optimization of storage space and time for the goods, insuring them and meeting both the needs and the expectations of the customers. Observed from a historic perspective, four eras of development of logistics services could be defined. All these four eras reflect the development of economic relations in society and are intertwined with technological advancements. Certainly computer technologies and digitalization are playing an important role in ensuring that logistics respond to the needs of the present dynamic times.

REFERENCES

ÇEKEROL, Gülsen Serap (2013), Lojistik Yönetimi, (Ed.: Mehmet Necdet Timur), Anadolu Üniversitesi Yayını, No: 2823, No: 1781, 1. Baskı, Eskişehir.

GÜMÜŞ, Yusuf (2009), “Lojistik Faaliyetlerin Rekabet Stratejileri ve İşletme Kârı İle Olan İlişkisi”, Dumlupınar Üniversitesi Uygulamalı Bilimler Yüksekokulu Muhasebe ve Finansman Dergisi, 41: 97-113.

KARAGÖZ, Bihter, İ. Figen Gülenç (2008), Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 2008/1, 77.

TUTAR, Erdinç, Filiz Tutar, Handan Yetişen, Türkiye’de Lojistik Sektörünün Gelişmişlik Düzeyinin Seçilmiş AB Ülkeleri (Romanya ve Macaristan) İle Karşılaştırmalı Bir Analizi.

<http://dergi.kmu.edu.tr/userfiles/file/ara1%C4%B1k2009/190-216.pdf> Eriřim Tarihi, 17. Kasım, 2015.
KAYA, Sait, Seil evik (2009), “Türkiye’nin Lojistik Potansiyeli ve İzmir’in Lojistik Faaliyetleri Açısından Durum (SWOT) Analizi,” K MU İİBF Dergisi, Yıl: 11, Sayı:17, Aralık

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