

## WHY DO LOGISTICS AND TRANSPORT MATTER FOR DEVELOPMENT

**Nedelescu-Ionescu Daniela, Rujan Ovidiu**

*Faculty of International Business, University of Economic Studies Bucharest, Romania*

*daniela.ionescu@vait.ro*

*ovidiu.rujan@ase.ro*

**Abstract:** *In face of the challenges of global competition, business firms are concentrating more on the needs of customers and seeking ways to reduce costs, improve quality and meet the ever-rising expectation of their customers. To these ends, many of them have identified logistics as an area to build cost and service advantages. Logistical activities have always been vital to organizations, and therefore business logistics and supply chain management represents a synthesis of many concepts, principles, and methods from the more traditional areas of production, purchasing, transportation, economics, as well as from the disciplines of applied mathematics, and organizational behaviour. It concentrates on important activities of management such as planning, organizing, and controlling, and also on a three-way relationship of related transportation, inventory, and location strategies, which are at the heart of good logistics planning and decision making. Selecting a good logistics strategy may yield a competitive advantage. Transportation provides the flow of materials, products and persons between production facilities, warehouses, distribution centers, terminals and customer locations. The progress in techniques and management principles improves the moving load, delivery speed, service quality, operation costs, the usage of facilities and energy saving. A strong system needs a clear frame of logistics and a proper transport implements and techniques to link the producing procedures. The transportation takes a crucial part in the management of logistic. Without well-developed transportation systems, logistics could not bring its advantages into full play. A good transport system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality. The process determines the efficiency of moving products and energy saving. Improvements in transportation and logistics make valuable contribution to production and consumption activities. That's why the objective of this paper is to define and clarify the role of transportation in logistics and of logistics in development, for the reference of further improvement. The present study was undertaken to define and understand the elementary views of logistics and its various applications and the relationships between logistics and transportation.*

**Keywords:** logistics, transports, inter-relationships, costs reduction, development

**JEL classification:** F10, R40

### **Defining the Elementary Views of Logistics**

For many years, logistics were always an issue in war matters. During the time, those who won the wars were the armies or generals with strategic planning on logistics. This was a good inspiration for today's business environment.

Starting from the early '60s, many factors such as competitive pressures, information technology, globalization, or profit leverage, contributed to the growth of logistics science in the form we know it today.

Logistics refers to all the move-store activities from the point of raw materials acquisition to the point of final consumption. Its core elements include customer service, order processing, inventory management and transportation (Ballou 2004):

- *transportation* is concerned with the ways in which physical items are transferred between different parties in a supply chain
- *inventory management* is about managing appropriate inventory levels to serve the demand in a supply chain
- *customer services* relates to the quality with which the flow of goods and services is managed
- *order processing* involves all the activities in the order cycle including collecting, checking, entering and transmitting order information.

### The Scope of Logistics in Business

The expanding global competition, emerging new technologies and improved communications have increased customers' expectation of full satisfaction with the products and services that they purchase. These changes have, in recent years, brought to many manufacturing and service firms the challenges of improving the satisfaction of their customers and the quality of their products and services. Faced with these needlings, business firms worldwide are prompted to look for ways to reduce costs, improve quality and meet the ever-escalating demands of their customers.

In face of the challenges of global competition, business firms are concentrating more on the needs of customers and seeking ways to reduce costs, improve quality and meet the ever-rising expectation of their customers. To these ends, many of them have identified logistics as an area to build cost and service advantages. Therefore logistics in business aim to reach maximum customer service level, to achieve minimum possible costs, to ensure high quality, and to be flexible in the constant market changes.

Logistics is a diverse and dynamic function that has to be flexible and has to change according to the various constraints and demands imposed upon it and with respect to the environment in which it works.

One quite widely accepted view upon logistics shows the following relationship (Rushton, Oxley & Croucher 2000) :

$$\text{Logistics} = \text{Supply} + \text{Materials Management} + \text{Distribution}$$

Thus supply and materials management represents those flows into and through the production process, while distribution represents those flows from the final production point through to the customer or enduser, as per the Figure 1

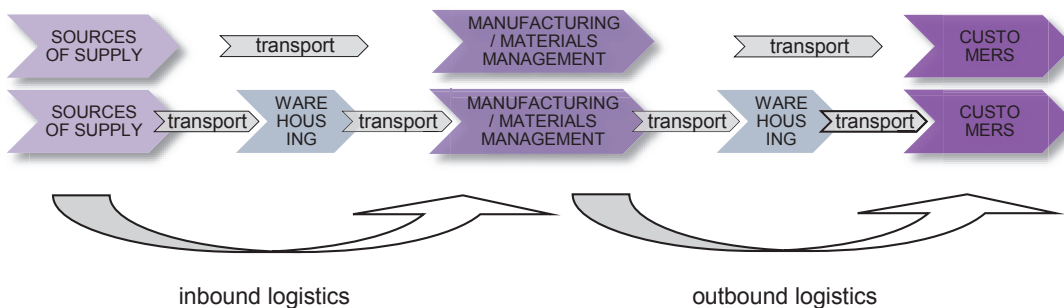


Figure 1

*inbound logistics:* the processes concentrating on purchasing and arranging the inbound movement of materials from suppliers to manufacturing or assembly plants or warehouses

*outbound logistics:* the process related to the storage and movement of the final product and the related information flows from the end of the production line to the end use

The logistics strategy should have as main objectives:

- services improvement by recognizing that revenues depend on the level of logistics services provided
- cost reduction by minimizing the variable costs associated with transports and storage
- capital reduction by minimizing the level of investment in the logistics system and maximizing the return on logistics assets

Logistics management must balance three basic targets: quality of service, right time, low cost. Thus, selecting a good logistics strategy may produce a competitive advantage.

The value chain concept of Porter (1985) provides further insights on how logistics can contribute to the cost and service advantage of firms and Figure 2 illustrates it:

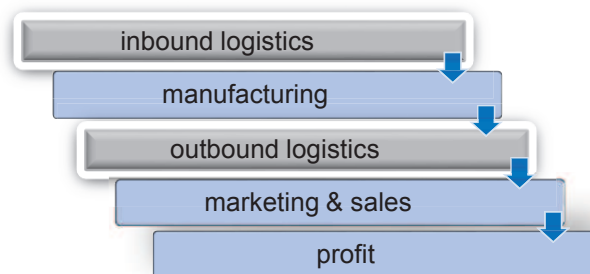


Figure 2

Transporting is required in the whole production procedures, from manufacturing to delivery to the final consumers and returns. Only a good coordination between each component would bring the benefits to a maximum.

Transportation system is the key element in a logistics chain. In fact, the backbone of the entire supply chain is the transportation management that makes it possible to achieve the 7 Rs: the right product in the right quantity and the right condition, at the right place, at the right time, for the right customer, at the right cost.

### **Logistics and its various Applications**

It is of vital importance for many companies to speed up the internal logistical process, due to the persistent cost pressures and the demand for continuous increases in productivity.

Optimisation of the handling process, transport and the storage of material flows are necessary, therefore the integration of various applications brings the convenience through promoting the system of information flow and business operations. They refer to:

- receiving and profiling goods
- transport management by different softwares like vWorkApp, My Yard, etc.
- stocks control by softwares like 3PL Warehouse Manager, Sellsy Stocks, etc.
- orders aggregation from multiple sales channels

- sorting and tracking
- shipping and manifesting
- loading vehicles

Lately, the IT techniques and products bring more and more efficiency and fluency to the logistics systems.

### **Relationships between Logistics and Transportation**

Transportation plays an important role in logistics system and its activities appear in various sections of logistics processes. Without the linking of transportation, a powerful logistics strategy cannot bring its capacity into full play.

Transportation and logistics systems have interdependent relationships because logistics management needs transportation to perform its activities and meanwhile, a successful logistics system could help to improve traffic environment and transportation development.

Without well-developed transportation systems, logistics cannot bring its advantages into full play. A good transport system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality. A well-operated logistics system increases a lot the competitiveness of the enterprise.

Transportation plays a connective role among the several steps that result in the conversion of resources into useful goods in the name of the ultimate consumer. It is the planning of all these functions and sub-functions into a system of goods movement in order to minimize cost maximize service to the customers that constitutes the concept of business logistics.

Transport affects the results of logistics activities and, of course, it influences production and sale. Value of transportation varies with different industries. For those products with small volume, low weight and high value, transportation cost simply occupies a very small part of sale and is less regarded; for those big, heavy and low-valued products, transportation occupies a very big part of sale and affects profits more, and therefore it is more regarded.

### **Interface between Logistics and Development**

A business is only as successful as its supply chain is.

For any company that is in the business of providing a variety of products and services to costumers, it is of crucial importance to the health of that business to implement a logistics strategy that will help keep service levels at their highest at all times, no matter what changes might be happening in other areas of the business organization. This is an even bigger imperative for companies that are more complex in structure, or that may have a very fluid or fluctuating supply chain, or that have specific product lines, specific countries or specific customers to cater to.

In the traditional context, many practitioners considered logistics as a source costs. They accepted these costs because the logistical activities were absolutely necessary for customer satisfaction and fulfillment of organizational objectives. The prospect focused on the costs generated implicit concern of reducing logistics costs. In essence practitioners have focused on increasing the efficiency of logistics activities by minimizing the resources involved. Priority given to efficiency resulted in better utilization of vehicles, reducing shelf life of products in stock, new procedures for handling materials, etc.. Cost

reduction to increase the efficiency is necessary to enhance the profitability of the organization.(Balan 2006)

But, for creating an effective logistics strategy first should be defined the goals which must be achieved. The logistics strategy supports the goals of the business, so its strategy must align with and help achieve the organization's goals. The second step is to articulate how the supply chain strategy works to achieve the higher level goals. So, the logistics plan is that it should be subordinate to corporate strategy:

- if the company's strategy is to always be the low price leader, then the prime goal of the logistics approach is to move stuff at the lowest possible cost.
- if the company's strategy is based on agility and the movement of goods faster than competitors, then logistics approach is based on speed rather than cost.
- if the company sets the standard for quality, then the logistics goal is to have perfect orders and to do whatever it takes to correct any error.
- if the company is growing by merger, one logistics strategy is to integrate the operations of the new acquisition into the existing logistics program.
- if the company is judged by its return on invested capital, then the logistics strategy is to remain as free of assets as possible by finding short term leases for warehouse real estate and transport equipment

Logistics is interposed somewhat extent between all functions of an enterprise, being particularly important in the normal productive development of a company.

## **Conclusions**

The role that transportation plays in logistics system is more complex than carrying the goods. The integration and promotion of business activities have to involve transportation systems at different stages. The integration of various applications brings the convenience through promoting the system of information flow and business operations.

Transportation complexity can take effect only through highly quality management. By means of well-handled transport system, goods could be sent to the right place at right time in order to satisfy customers' demands.

Transportation brings efficacy, and also it builds a bridge between producers and consumers. Therefore, transportation is the base of efficiency and economy in business logistics and expands other functions of logistics system.

It is virtually inconceivable in today's economy for a firm to function without the aid of transportation. Transportation is the most important sub-function of logistics that creates time and place utility in goods. Reviewing the current condition, a strong system needs a clear frame of logistics and a proper transport implements and techniques to link the producing procedures.

Transportation systems and techniques are needed in almost every logistics activity. If even customers and firms could make business easier through e-commerce and Internet, physical delivery still relies on the transportation system to finish the operations.

That's why logistics systems have a more and more important position in the society activities.

## References

Balan, C. (2006) *Logistica*, 3-rd edition, Uranus, Romania

Ballou, R. (2004) *Business Logistics Management: Supply Chain Management. Planning, Organizing, and Controlling the Supply Chain*, Prentice Hall International, US

Beckman S. L., Rosenfield D. (2008) *Operations Strategy: Competing in the 21st Century*, McGraw-Hill Higher Education, US

Porter, M. (1985) *Competitive Advantage: creating and sustaining superior performance*, The Free Press, US

Rushton, A., Oxley, J., Croucher, P. (2000) *The Handbook of Logistics and Distribution Management*, Kogan Page Limited, UK

Sreenivas, M. and Srinivas, T. (2008) *The role of transportation in logistics chain*, Journal of Mathematics and Mathematical Sciences, India

Tseng, Y., Yue, W.L. and Taylor, M. (2005) *The role of transportation in logistics chain*, Proceedings of the Eastern Asia Society for Transportation Studies, Australia