



TRANSPORT AS A SUPPLY CHAIN INTEGRATION FACTOR

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Abstract:

Transport in supply chain is a factor that gives mobility to logistics processes and is a basis for reliable, on-time and complex services. Well organized transport processes determine the free flow of goods and semi-finished goods from the consignor to the consignee, creating integrated supply chains at the same time.

Introduction

Contemporary production and service companies cannot be imagined without road transport, i.e. companies without an effective possibility of being supplied with raw materials and goods. Therefore, the problem of rational and effective use of transport leads to research on defining its role in logistics systems and the possibility of supply chains integration.

Now, company's success depends much on improvement of its performance in flexible, easy adaptable supply chains and proper use of their resources on the way to achieve the goal. It requires perfection of task fulfillment of each company and, in particular: extension of the range and intensity of cooperation, optimization of actions and resources utilization, current multilateral connection, continuous improvement of logistics processes and measurement of their effectiveness and efficiency, making the reaction to changes quicker, making the information clearer and immediate and effective solving of current problems³.

The material and product flows also go beyond single companies and they contribute to creating physical and regulative logistics connections between companies which are the next links in the supply chain (including production companies either). Therefore, as a result of mutual cooperation of suppliers, producers, transport-forwarding companies, brokers and final customers, groups of business units, called "chains of goods", are created⁴.

It is the mutual cooperation of many subjects involved in the moving of goods that is a big challenge for transport and, as a consequence, for its integrative role.

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⁴ Ibidem.

1. Transport as a supply chain integration factor

Contemporary economic development is characterized by visible globalization and specialization of social and economic processes. This tendency is opposite to the ideas and slogans propagated in Polish conditions, which say that the economy must be fully liberalized, the small is beautiful and that all that is not forbidden is allowed. Contemporary world tendency leads, as a consequence, to intensification of trade exchange between business entities, i.e. to a situation when the flows of raw materials and finished goods are systematically growing. The intensification requires looking for new organizational and technical solutions guaranteeing effective moving in terms of the customers' requirements. For the time being the processes are handled by logistics operators who plan, fulfill and control the moving in the whole supply chain – from places of acquiring raw materials through production to the final customer, meeting customers' requirements of time, place, quality and appropriate price. It may be stated that both inside the companies and between them there is a supply chain in a form of logistics systems which reveal system, flow and functional and cross-sectional orientations. It makes it possible to achieve solutions which are optimal for the whole logistics system and harmonious and quick goods flows in the supply chain with the support of computer systems and participation of all supply chain actors.

In the first stage of organizing transport processes, logistics operators make a detailed analysis of all processes and its conditions. Next, they offer customers prepared variants of solutions.

The following tendencies on the contemporary transport market may be observed⁵:

- development of bulk goods flows, which according to customer requirements need to be delivered in the door-to-door system;
- due to increasing specialization of production and the number of small and medium enterprises, there appears a need for general cargo transport;
- customers' requirements of delivery time, truck availability, taking care of the transported freight, quality of the whole transport process and low prices;
- increasing demand for logistics operators complex services.

Increasing customer requirements seem to force logistics operators to extend the range of offered services. Obviously, the range depends on particular customer's requirements, which next depends on their needs, spatial range of activity and type of business (Burnewicz, 2003: 81).

The issue of providing customers with the whole package of logistics services is one of the most difficult ones. On one hand, it results from the fact that the issue is relatively weakly recognized in Polish conditions, on the other hand, proper supply chain management requires extensive knowledge, proper methods and techniques.

2. Premises of transport integration in supply chains

One of the most important premises of logistics processes integration is the fact that creating spatial configurations of logistics networks is the basis of logistics. It should also be added that the biggest share in the logistics cost structure belongs to transport costs. Hence, the effectiveness of logistics enterprises will not depend on logistics management methods or

⁵ J. Burnewicz, K. Szałucki, Wpływ członkostwa w Unii Europejskiej na transport w Polsce, Warszawa, 2003, s. 80.

company's position on the market but on communications availability and the size and structure of material and human resources in the region⁶.

The supply chain integration process is two-dimensional. The dimensions are the following⁷:

- in the sphere of regulations: coordination of decisions on logistics processes and coordination of logistics with other functions inside and outside the company,
- integrating logistics processes at the operational level by means of appropriate material, production in progress and finished goods flow management systems.

The general idea of the logistics management integration mechanism in company consists in multilateral integration of successive pairs of logistics activities with the functions that are not related to logistics processes⁸.

Transport / logistics chain integration is another area of integration and it is best for the transport user since they expect reliability and complexity of services. It is also best for the service provider, for whom quality, competitiveness and modernity are the most important.

In this aspect, the lowest integration level is⁹:

- integration of contract partners,
- integration of transport chain actors,
- integration within distribution channels etc., which are characterized by vertical and horizontal connections.

It must be clearly emphasized that road transport is not only responsible for the moving process but is also the basic element of particular logistics systems. Without any knowledge on road transport it is impossible to create an effective and efficient logistics system for customer in contemporary economic conditions¹⁰. The issue should be analyzed by both theoreticians and experienced persons since it will be of significant influence on road transport performance in logistics systems. It also results from the idea of logistics, whose main role is rationalization of goods and services flows in space and time, which is strictly dependent from the transport process effectiveness. The role is undoubtedly different depending on the complexity of logistics process and delivery service level. Nevertheless, it is in each case important, which may be confirmed by the 40%-share of transport costs in total logistics costs¹¹. It is also a reason for more interest in organizational and technical solutions which allow to reduce the time of transport activities in each link and the whole supply chain.

Summary

In the last years, changes in logistics market service placed production and service companies in a new situation, in which their existence and development depend on the ability

⁶ Współczesne kierunki rozwoju logistyki, (red.) E. Gołemska, PWE, Warszawa 2006, s. 11.

⁷ D. Kisperska – Moroń, op.cit. s. 14.

⁸ Ibidem.

⁹ I. N. Semenov, L. Filina, M. Pluciński, I. Kotowska, A. Wiktorowska – Jasik, Zintegrowane łańcuchy transportowe, Wyd. Difin, Warszawa 2008.. s. 56.

¹⁰ Ibidem s. 66.

¹¹ Mindur L., (red.), Współczesne technologie transportowe. Wyd. Politechnika Radomska, Warszawa 2002, s. 355.

to adjust to the changes. The situation enforces deep structural changes in their behaviours. The necessity of change concerns all systemically planned activities such as operational decision making, strategic activities, market activity plans, fleet replacement schedule, increase of effectiveness of transport-forwarding production factors and the sources of capital.

The problem of integrative role of transport systems in supply chains is a new issue and it becomes more and more important within the conditions of continuous improvement of the logistics service market. The importance results mainly from the fact it increases transport service quality and becomes a competitiveness factor.

Transport is an important link of the supply chain. It integrates the existing processes by giving them the necessary mobility and it conditions their performance.

Recognizing the essence of the integrative role of transport systems, identification of the phenomenon in terms of supply chain handling is undoubtedly of educational meaning. Hence, the purposes of investigating the problems seem to be justified.

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