LOGISTIKA TREĆE STRANE U FUNKCIJI CENTRALIZIRANE DISTRIBUCIJE

THIRD PARTY LOGISTICS IN THE FUNCTION OF CENTRALIZED DISTRIBUTION

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Sažetak

Temeljna je zadaća logistike treće strane pružanje usluga vanjskog poduzeća za dio lanca opskrbe ili za cjelokupni proces. Logistika treće strane djeluje u funkciji i po nalogu primatelja usluge koji je fizički vlasnik robe, odnosno koji upravlja dijelom ili cjelokupnim procesom. Odgovornost za funkcioniranje cijeloga procesa koji pruža logistika treće strane snosi pružatelj usluge, odnosno operator te logistike. Modelom korištenja logistike treće strane dokazuju se prednosti centralizacije roba većeg broja kompanija i prikazuju se uštede u skladištenju, transportu i manipulaciji robom. Informatičkom integracijom između kompanija koje primaju usluge centralizirane logistike treće strane znatno se ubrzava cjelokupni proces, od narudžbe do isporuke krajnjem kupcu, te se postižu maksimalna efikasnost i efektivnost. Svrha i cilj istraživanja je uputiti na važnost i opravdanost logistike treće strane upotrebom centralizirane distribucije i integrirane informatike.

Ključne riječi: lanac opskrbe, logistika treće strane, centralizirana distribucija, integrirana informatika

Abstract

The basic task of the third party logistics consists of providing external company services for a part of the supply chain or for the entire process of the supply chain. Third party logistics works in function and by order of the service recipient who is a physical owner of the goods, that is, who manages a part or the entire process of the supply chain. The responsibility for the functioning of the entire process, which provides third party logistics, bears the service provider, that is, the third party logistics operator. This model proves the advantages of the centralization of goods from a number of companies through the usage of third party logistics, as well as demonstrating the savings in storage, transport and handling goods. IT integration between companies which are service recipients, centralized third party logistics, the entire process from the order to delivery to the final customer becomes much faster, therefore enabling achievement of maximum results in the sense of efficiency and effectiveness. The objective and aim of this research is to indicate the importance and justification of third party logistics through centralized distribution and Integrated Informatics.

Keywords: supply chain, third party logistics, centralized distribution, Integrated Informatics

1. INTRODUCTION

The importance of modern logistics in daily operations has only recently come to the fore. Logistics has become an activity to which more and more attention is being paid. Daily increase of logistics services is increasing or decreasing the share of costs in total costs.

In every major manufacturing and sales operation, logistics costs represent a significant item. In order to optimize the entire business, it is necessary to make a breakthrough in costs. Taking into consideration that every company cannot be the best in all areas, it is necessary to relinquish a part of the business to specialized companies. Such companies engage in consolidation of all activities within the scope of the logistics, from primary transportation, warehousing, picking to the delivery of the goods to the customer, thereby working on behalf of the client. Consolidation of goods provides faster, safer and cheaper circulation of goods. Third party logistics represents the providing of services outside the company for the part of the supply chain or for the entire process, acting on function and on behalf of the service recipient who is the physical owner of the goods, or who manages a part of or the whole process. Responsibility for the functioning of the whole process provided by third-party logistics bears the service provider, that is, the operator of that logistics.

2. MODELS OF LOGISTICS OUTSOURCING' CONCEPTS

Logistics is a process of planning, implementation and controlling the effectiveness of an acceptable cash flow and storage of goods, supplies, finished products and information from the point of origin to the point of consumption, with the intention of satisfying the needs of users and consumers (Topolšek&Žnidar, 2005, p.91). Following this definition, the basic task of logistics is to ensure that the goods are in the right place at the right time and at low cost.

In most cases, the companies are incapable of performing the logistics process in an optimal way, and without highly specialized companies dealing exclusively in logistics services. For that reason, that process is being outsourced. Up to which level will the company outsource logistics services depends on its needs. Below is a list of the levels of outsourcing (Ogorelc, A, 2007, p.374):

1PL-In house logistics, or in-sourcing logistics. In-sourcing logistics is any logistics' activity owned, managed and executed by a company's own in-house resources. The company owns the transport, warehouses and handling equipment, including the staff to provide the logistics activities.

2PL-logistics service provider is the management of traditional logistic functions-transport, material handling, and warehousing.

3PL- Third party logistics, or forwarding logistics. It means that the external provider performs all logistics activities, such as transport, warehousing, inventory management, etc.

4PL- fourth party logistics, or supply chain logistics. This is a new business model integrating resources, capabilities and technology of the lead enterprise(s) to design, build, and run comprehensive supply chain solutions.

5PL-fifth party logistics is developed to serve the e-business market.

Third party logistics (3PL) is the usage of an external company for the part of the supply chain process, or for the whole supply chain. Third party logistics performs warehousing, commissioning, the primary and secondary transport of goods, or the entire distribution process from the client to the customer. Third party logistics operator is the service provider and he works exclusively on behalf of the client. Stock is managed by the service users who themselves define the desired inventory level they want the 3PL operator to have at any given moment in stock. Warehouse operations such as receiving goods in stock, warehousing and storing goods are managed by the 3PL provider. The buyer orders the goods from the 3PL user pursuant to orders. The user gives the order for picking to the 3PL provider on the basis of which the goods are

prepared for delivery to the buyer. 3PL operator groups the commissions of all 3PL services' users and delivers the goods to the customers.

3. INTEGRATED INFORMATICS IN THE FUNCTION OF THE 3PL OPERATOR AS A CONDITION FOR CENTRALIZED DISTRIBUTION

IT systems form an important segment of any business entity. As a basis for the use of third party logistics, it is important that all participants in the process are computer connected, in order to do the whole process as quickly and optimally as possible. All inputs collected from various service users are centralized. Orders from the buyers arrive in the 3PL user's system, and after the confirmation from the 3PL user, the order is created into an order for picking. Third Party Logistics receives the order for picking on the basis of which the picking of the goods is then made. All users' goods are grouped by places of delivery. 3PL user has insight into inventory, which is monitored and managed by him. Besides the warehousing, IT support is likewise important in transportation. Transport optimization in both primary and secondary sense is performed with the help of software for vehicle routing. The system functions in the way that all orders which are in the system are being transport optimized. The system creates the cargo by itself, and determines the routes which the vehicle will follow, as well as places where the goods will be loaded and unloaded. Not all companies can afford such complex IT tools, therefore it pays off to centralize logistics and resort to specialized companies which have the subject tools.

4. OUTSOURCING OF STORAGE AND INVENTORY MANAGEMENT

The need for storage outsourcing arises because the manufacturers do not have a well-developed storage network, while the market requires the goods to be available at any time and any place. A well-developed storage network enables delivery of the desired goods at any moment. The owner of the goods in stock is the client who uses the 3PL operator's services. The client determines and controls the inventory which he wants to have in 3PL operator's stock. 3PL operator does the picking of the goods on the basis of the client's orders and produces shipping documents that will accompany the goods. The owner of the goods is always the client who self-monitors and supplies the warehouse. The warehouse is managed by the warehouse management system which enables the most optimal goods management. Merchandise is received in the warehouse; and the system places the goods at specific locations in the warehouse, according to preset rules. The data on the merchandise placement is entered in the database. When picking the goods, warehouse management system offers the picker the merchandise with the shortest expiry time (First Expiry, First Out). Commissioned goods are grouped by buyers and then delivered to the buyer.
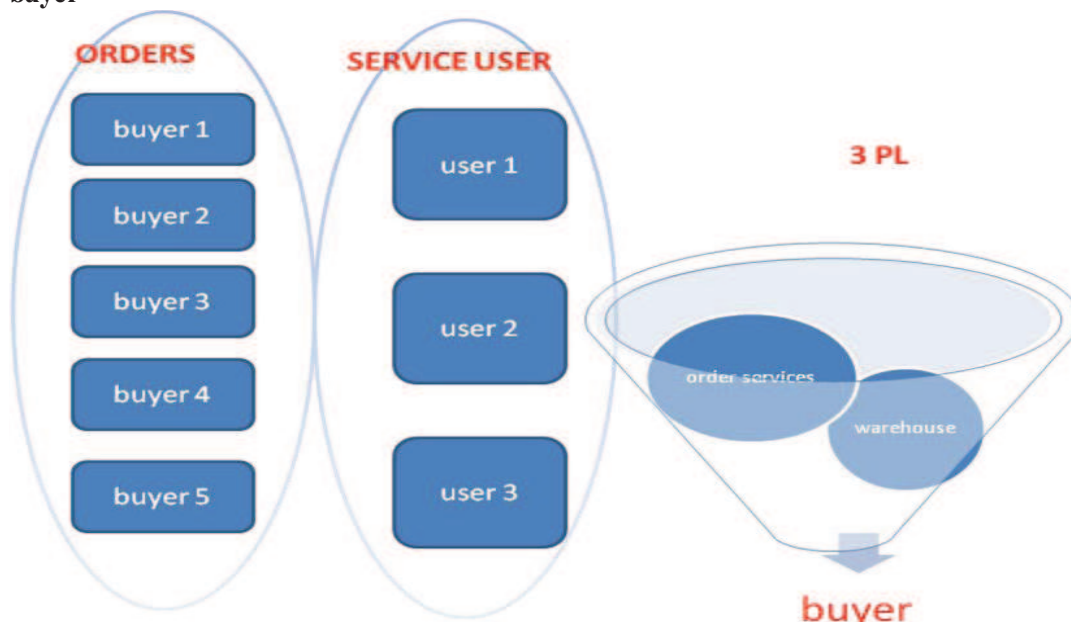
Graph 1: Model of 3PL logistics
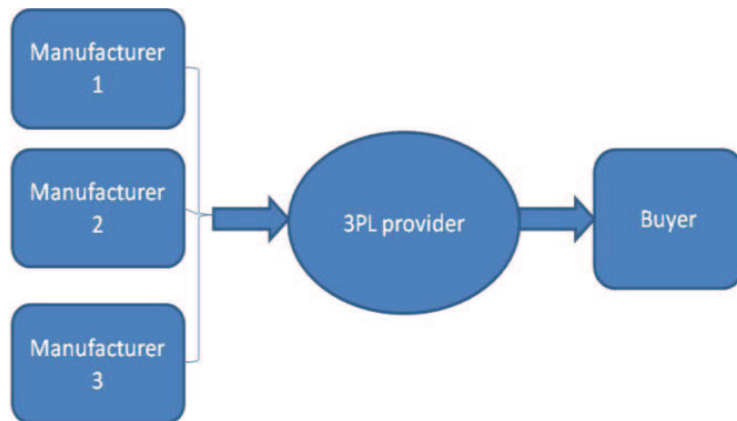
4.1. Order reception

Buyers' orders are turned in electronically and reach the 3PL service buyer from each client in particular. The buyer of 3PL services confirms the order, so his confirmation gives an automatic order for commissioning to the 3PL operator. Received orders are processed, grouped and sent to the warehouse for commissioning in the 3PL operator's system. 3PL operator's warehouse receives an order for picking on the basis of the order, so it prepares the goods for the delivery to the buyer on the same basis.

Graph 2. The process of order reception, commissioning and delivery of the goods to the buyer

5. TRANSPORT CENTRALIZATION

Transport is combined for all of the customers and the goods are delivered to a central delivery location. Thanks to a centralized transportation, goods are now (in the primary and secondary transport) transported by a 3PL operator, instead of each client driving commodities to its customers on his own.

Primary transport involves the transport of goods from the client to the 3PL warehouse operators, while the secondary transport refers to the delivery of goods to customers at delivery locations. Before the transport itself is routed, the cargoes created from individual orders of various clients need to be combined, in order to deliver the goods by one delivery vehicle. This maximizes the effect of centralization, which brings the clients significant cost reductions. The total cost of distribution, i.e. the total logistics costs associated with the transfer of finished goods between production and storage, can have a significant impact on the profitability of enterprises, especially those with small profit margin (Rezzi, 2000, p.68). Well-organized and equipped transport can offer quality transportation service. Beside a technologically state-of-the-art vehicle, an essential factor is the driver who contributes to the quality of the service with his knowledge, experience, motivation and precision. (Vukadinović & Tomasović, 2005, p.76).

Graph 3: Transport centralization
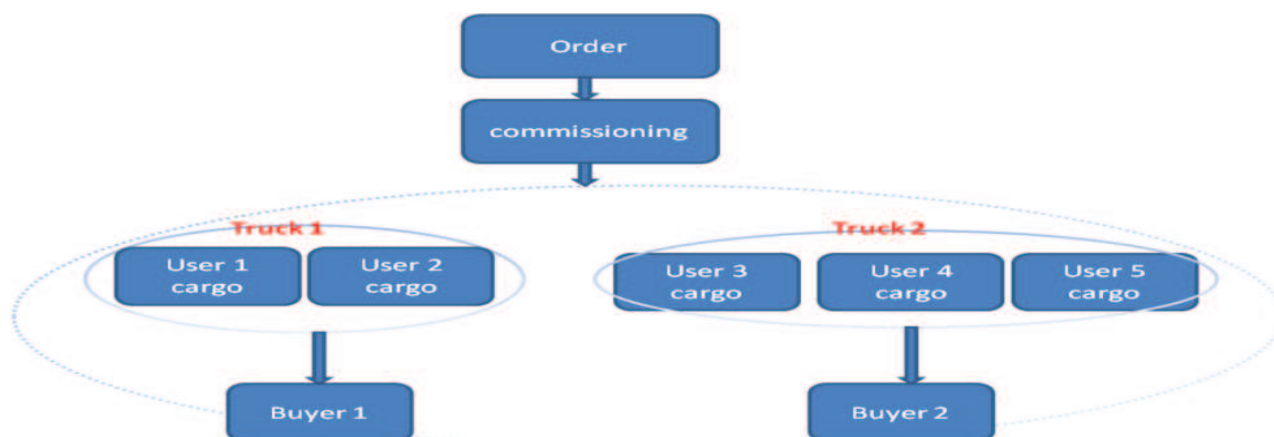
Source: Created by author.

6. CONCLUSION

In most cases, the companies are unable to perform the logistics' process in an optimal way, and without the help of highly specialized companies dealing exclusively in logistics services. To make the whole process effective, it is necessary that all participants in the chain are connected to a compatible computer information system; from the reception of orders, to storage facilities and up to the transport. Storage is done by cutting-edge information systems such as warehouse management system, which controls the entire process from the entry and accommodation to the exit of goods from the warehouse. The system ensures, according to predetermined rules, that the goods from the warehouse come out regularly, meaning, that they do not surpass their expiration date in stock.

Transport is combined for all clients and is delivered to a central delivery location. Thanks to a centralized transportation, goods are now (in the primary and secondary transport) transported by a 3PL operator, instead of each client driving commodities to its customers on his own. By

combining the entire process of a company's logistics, and by the use of external companies specialized in logistics, it is possible to achieve significant cost reductions through the transport, storage and order picking of the goods. IT integration between the companies that receive the services of a centralized third-party logistics considerably speeds up the entire process, from the order to the delivery to end customers, therefore achieving maximum efficiency and effectiveness. The usage of 3PL operator is definitely a strategic decision, which would influence the entire business, as well as having a negative influence on the company's employees as the usage of an external company lowers the need for workers in warehouses, transport and other parts of logistics.

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