IMPORTANCE OF OUTSOURCING PROCESS FOR REVERSE LOGISTICS AND SUSTAINABILITY

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Abstract

The aim of this paper is to present the importance of the experienced 3PL to help companies through the process of reverse logistics easily and to develop insightful recommendations on how to best redesign, reengineer and optimize current processes to create a more sustainable supply chain. The paper presents the nature of outsourcing; its role recognized by the Reverse Logistics Association as a sustainable strategy proposal and gives some actual examples about the implementation of TPLs activities for the reverse logistics and sustainability.

Keywords: outsourcing, reverse logistics, sustainability, circular economy

Introduction

In 1981 for the first time Lambert and Stock outline another form of supply chain movement, different from the direct logistics and formulate the importance of reverse logistics as "going the wrong way on a one-way street, because the great majority of product shipment flow in one direction "(Lambert and Stock, 1981). In 1989 Murphy and Poist define reverse logistics as "movement of goods from the customer towards a producer in a channel of distribution" (Murphy and Poist, 1989). The direction set is connected with reverse distribution as collection and transportation of used products and packages or movement of material from customers to producers. (de Brito, 2004). Therefore, at this stage, this type of logistics management is connected with material

resources that have not been sold or have been returned by consumers. The principal activities of the reverse logistics include remanufacturing, repair, refurbishing, material substitution, reusing, recycling, salvage. Over the next decade, supply chains become more efficient and increase the need of capturing value through the reverse logistics by reducing energy and pollution from transportation. In 1998 Stock expanded his view of reverse logistics as an environmental efficient process, which could be benchmarked in two general areas of return operations: product and package (Stock, 1998). In 1999 the reverse logistics is defined by the Council of logistics management as "a process of planning, implementing, and controlling the efficient, cost effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal." Reverse logistics starts to be labelled green or environmental. Of course, these concepts have also their different interpretations. The green supply chain is an approach which seeks to minimise a product or service's impact. The concept of the green supply chain covers all the phases of a product's life cycle, from the extraction of raw materials through the design, production and distribution phases, to the use of products by consumers and their disposal at the end of the product's life cycle (reconditioning, reuse, recycling).

This concept has been applied in order to implement the production chain avoiding "leakages" and has addressed toward a larger concept- the circular economy model (fig 1). The circular economy can be intended as economy designed to "regenerate" itself. It is also an economy which aims to offsetting the impact on the environment, tracing and eliminating the use of toxic chemicals and reducing waste production, through careful design. The ideal model of circular economy, however, does not reflect today's reality of the production system and consumption especially, in recovering wastes: in each phase of the circular pattern large quantities of waste are produced, in relation to the amount of materials used during the same; while there are initiatives and actions to pursue the circularity, the current situation is still far from "closing the loop", or the ability to reuse, recover or recycle anything that would really discarded.

On the one hand it is still very large and growing the amount of quantities of raw materials used, on the other is undeniably the capacity to recovery them. Some studies show that by 2020 still approximately 82 billion tons of raw materials will be placed in the global economy to be exploited; only a third of the 60 most common metals does encounter recycling rate at end of life greater than 25%.The circularity of the economy also implies not only the ability to reuse, recover or recycle the waste materials which constitute the

leakages of the different phases (i.e. all those points of the circle in which there is a loss of efficiency through the leakage from the production system or of material consumption potentially more useful and exploitable), but also the ability to prevent such leakages, including reduce of flows and the quantities of raw materials and natural resources input into the economic system. It would, in other words, reduce in the circular pattern the magnitude of the incoming stream. In this way, the capacity of the system to recover a higher percentage of waste will increase.

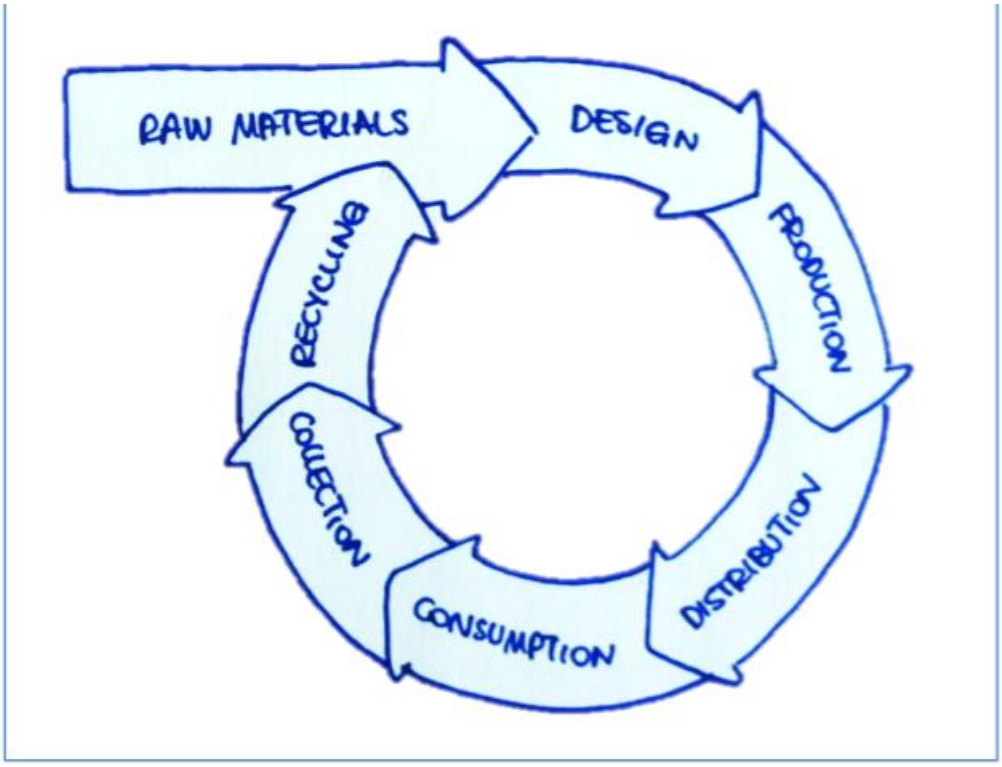

Figure 1. Circular economy model

Source: Based on communication from the Commission to the European Parliament, the Council, the EEDC and the Committee of regions (2014)

From this consideration emerges the importance to protect the environment, the natural resources for economical reason, as well.

Environmental supply chain has to protect the environment proposing solution which could link profits and environmental concepts. Environmental supply chain could be both process and service for many companies. With the establishment of ISO 14000 (standard for environmental protection) in 1996, the organisations are becoming more concerned about their actions on the environment, not only in order to gain competitive advantage , but also in response to customers' requirements.

Obviously, reverse logistics has gone by many different names over the years. Normally, it has been stated as is a sub-set of supply chain management and was limited to returns or recycling activities. Some associations have made their own definitions of reverse logistics, yet no institution has created a research- based, consistent and logical definition. Any case, reverse logistics is becoming a verifiable concern about environmental matters and sustainable development not only by identifying ways to reduce environmental impact, but also by reducing costs through increased efficiencies. One of the easiest ways a company can do to evaluate the importance of the reverse logistics is by partnering with a third-party logistics provider (usually abbreviated as 3PL, but sometimes as TPLs) that can offer expertise on making the entire supply chain more sustainable (Razzaque and Chang, 1998).

The aim of this paper is to present the importance of the experienced 3PL to help companies through the process of reverse logistics easily and to develop insightful recommendations on how to best redesign, reengineer and optimize current processes to create a more sustainable supply chain. Outsourcing is recognized by Reverse Logistics Association as a sustainable strategy proposal which consists to handle and reprocess the reverse product flow by external provider (TPLs specialists). These specialists normally are innovative companies which are looking to unlock the power of the supply chain and return management process as a competitive advantage. Furthermore, most of the Fortune 100 companies are outsourcing their reverse logistics process and as result their profitability is increasing.

In our paper, standard outsourcing issues are introduced. Their description is based on traditional approach. The paper also discusses some sustainable practices collected by the Reverse Logistics Association about the implementation of TPLs activities in reverse logistics.

1. The nature of outsourcing process

The globalization of the world economy and the complexity of business processes make companies seeking to obtain maximum results from their business without increasing their costs. Therefore, by carrying out outsourcing, they seek opportunities to free up resources and focus on the core activities of the company.

The main motives to make outsourcing recognized by the companies can be generally grouped into the following categories:

a) Organizational motives- increasing efficiency by focusing on the core business of the company; increasing flexibility to meet changing business conditions and demand for new products, services and technologies; increasing the shared value of the company and improving the quality of the product / service and customer satisfaction.

b) Financial motives- reducing investment in assets in order to release these resources for other purposes; generating capital by transferring assets of the company to the service provider; reducing costs through better performance and lower costs of the supplier; converting fixed into variable costs.

c) Striving for continuous improvement-improving operational workflow; acquiring new skills and technologies; improving monitoring, control and risk management; innovating manufacturing with successful ideas; improving the brand/image; guaranteeing better professional development of employees.

d) Striving for benefits-expanding export market access and business opportunities through the provider's network; accelerating internationalization and expansion through the use of the expertise, capacity and systems of supplier; increasing the level of sales and manufacturing during periods when such extension cannot be financed by the company.

Outsourcing allows the company to increase the efficiency in the execution of certain functions in the field of information technology, procurement and supply, service, finance, staffing and production.

Traditionally it is considered that outsourcing should be transmitted only to secondary and peripheral functions, which are non-critical to the competitiveness of the company. However, there are many situations where outsourcing of key/core functions can be not only useful but also necessary. For example, in cases where there is a technological gap, there is a need of innovations or awareness of important issues or partnerships. In terms of emerging markets (especially in the field of ICT), not every company has sufficient stocks of resources (financial and human) and it is necessary to adapt other technological capabilities in order to be competitive.

Schemes of realization of outsourcing are normally logical and simple, but to be effective it requires precise planning, clear targets and company information. The choice of contractors/vendors/providers and the nature of the contract are of great importance, since the optimal conditions of the contract permit to strike a balance between the interests of participants in the system.

For effective outsourcing is necessary to build effective partnership between outsourcing partners and clients. Right outsourcing partner must take part at all of the weight on a

project, to work with the company team to achieve the goals. But to be able to understand the essence of the problem and to propose the best solution, TPLs provider must have the necessary resources. An important aspect is also to provide positive image which reinforces and strengthens the company's position among customers, partners, shareholders (Bulgarian Ministry of economy and energy, 2006).

So, general conditions for the use of outsourcing by each company are the lack of competence and quality performance, the lack of necessary resources and the opportunity to reduce costs (Savov, 2007).

2. Advantages and obstacles of outsourcing

Outsourcing brings significant positive effects to the company's activities in both short and long term. R. Morgan outlines the potential positive effects of outsourcing from two positions: positive effects associated with the creation of value, and those associated with the dissemination of value (Morgan, 2003) Positive effects of outsourcing related to the creation of value allow focusing on innovation and performance improvement; allow also to share risks and costs with the contractor; allow using qualified personnel and enter to markets in order to synchronize the export development. Furthermore, the time to reach the product / service to market is shortened; the customer service and resource efficiency are improved.

Positive effects of outsourcing related to the dissemination of value are linked with better return on investment, with the storage of less resources by reducing/eliminating some manufacturing errors or losses from suspension of production. Furthermore, the operational and strategic flexibility are increasing and the company becomes more adaptable and flexible.

According to R. Morgan however, outsourcing can create some problems and risks for the organization as lack of ability of staff linked with the knowledge-intensive activities, threat of maintaining high costs, lack of technological transparency for the manufacturing process, lack of capacity for innovation etc.

The basic rule for implementing outsourcing is that the provider has greater competitiveness and higher ability. Outsourcing-consultants could share their experience with the buyer in order to maximize the return on investment seeking mutually beneficial relationships (win-win relationships).

3. Sustainability of reverse logistics through outsourcing process

According to Lieb (1992), outsourcing is one of the most widely discussed topics in the field of business logistics. Thus, the integration and the evolution of the process provide the same names for the process as contact logistics, TPLs providers or outsourcing. Their target is the same: to handle logistics activities such as transportation, distribution, warehousing, inventory management, order process etc. in order to obtain sustainable customer satisfaction. Muller (1993) proposes a classification scheme by suggesting different types of TPLs which optimize supply chain:

a) Asset-based vendors, which use their own assets;

b) Management-based vendors, which offer logistics management services by consulting or providing IT systems (except transportation and warehousing);

c) Integrated vendors, which integrate the above-cited categories by offering transport and warehouses;

d) Administration-based vendors which have experience in administrative management services.

Outsourcing of reverse logistics allow companies to focus on core competencies of the forward supply chain, thus the TPLs as a contracted company can focus on the items in the reverse supply chain. The precise choice of partner, of location of centralized return distribution centers gives the opportunity to TPLs to specialize on the serviceability of an item, to dedicate right time on the complicated operations of return or reuse of goods. Walden (2001) gives good example of win-win partnership in reverse logistics between Walmart and GENCO distribution systems which serves as a contracted operator on the reverse logistics for all of returned merchandise of Walmart. The reverse supply chain for Walmart represents approximately USD 800 million at product cost each year. Two thirds of the items in its reverse supply chain are serviceable merchandise. GENCO handles the reverse supply chain operations for K-Mart, Sears, Target, Macy's, Cheesebrough-Pond USA etc. Its expertise allows different companies to resale with profits or to select the items through the secondary market.

In the following lines it will be presented a summary of main positive effects from the use of outsourcing in the field of reverse logistics. They are drawn by the Reverse Logistics Association for the period 2013-2015 and are summarized as follows (Amling, 2015; Gordon, 2015; Harrington, 2013):

a) TPLs can help companies to evaluate and understand of the impact of the current reverse logistics process through the use of suitable tools as carbon footprint analysis. This

is a tool that helps to measure and manage greenhouse gas emissions. Furthermore, TPLs are much more prepared to verify and help the certification process of company as a measure for global competitiveness. Their experience is highly important for the issue of an annual sustainable report of the company. So, the latter obtains higher environmental awareness.

b) TPLs with deeper logistics specialization are ready to optimize faster reverse logistics process through the whole supply chain (from transportation to packaging and design of products). In this case, the choice of appropriate TPLs location from the logistics company is crucial in order to reduce costs and wasteful shipping materials. So, recycling programs and green decisions could be efficiently managed.

c) TPLs perceive growing customer interest by implementing recycling, refurbishment or end-of-product life disposal solution. This point can make bigger impact on investing in environmental projects and developing partnership strategies between companies and customers.

d) Experienced TPLs recognize better reverse logistics applications for market research, strategic planning, innovations and projects in common platforms as returns, recycling, recall, repackaging, cost/benefit process, communication. These TPLs providers transform the leadership within the reverse logistics pipeline thanks to the research data management completed.

e) During the last years companies realized the understanding and proper management of specific reverse logistics programs which cannot only reduce costs, but also increase revenues. Joint responsibility and partnership with TPLs will guarantee to the company a way to retain consumer loyalty and protect brand. Furthermore, in order to keep customers satisfied, company uses the capabilities of TPLs providers as JIT market differentiator to develop new logistics process, products and services, to manage inventory and cycle times, market process abroad etc. The possible benefits are linked with the elimination of lost shipments and products, reduced returns, improved delivery and profit margins.

f) The interest of TPLs to reverse logistics transforms the socio-economic model of reverse logistics to become a model with socio-economic ecological emphasis on quality and green innovations. For example, the role of TPLs providers in electronics and e-wastes is extremely increased during the last years. Nowadays, the customers keep on average their smart phones for two years. So, the companies take steps to incentivize green design for manufacturing. Electronics that are environmentally friendly contain less toxins, use less energy, have a longer life cycle and are designed to be disassembled and reused. The

companies which take care of e-waste management policies strive to work with logistics providers that can provide proper recycling and disposal of returned products. The social effects are positive and the customers could enjoy new green smart phones with higher quality.

However, some challenges for TPLs to practice reverse logistics should be mentioned. Firstly, the returned items of the companies go over to the TPLs partner for disposal or resale. This process could provoke brand conflict because of the customer confusion regarding new conditions (warranty, price, image etc.) for the return product on the secondary market. So, the lack of organizational confidence as outsourcing obstacle is addressed. Secondly, the inability of TPLs correctly to predict the quantity of returned goods, defective materials and furthermore to implement not proper management. A similar challenge is a signal for loss of control and will not only deepen the problem of sustainability, but over time will increase the various types of wastes.

Conclusions

The application of outsourcing in reverse logistics is identified as similar to forward/direct logistics. However, the impact of TPLs is deeper because of the provoked green and sustainable effects. TPLs as outsourcing partners have a much wider range of commitments regarding reverse logistics. Besides specialization of reuse or repair of product defects, recycling or remanufacturing of the product, TPLs take care to advise the company on the relevant strategies for sustainable development of the global market. TPLs are mostly companies that have similar ethical and environmental policies of principal companies. Therefore, research and development partnerships which give rise to innovative ideas are much more strongly assessed. Today, TPLs represent an integral part of all participants in the process of reverse logistics. Their presence in the process ensures a significant reduction of costs, of quantities of used products, of emissions into the environment. Their work creates prerequisites for sustainable secondary market for recovered goods as well as ensures profits for companies which are environmentally friendly.

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