OUTSOURCING OF LOGISTICS FUNCTIONS: A CASE STUDY OF A MOROCCAN RETAILER

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Abstract

For large retailers and manufacturers, the issue of outsourcing logistics activities to specialized service providers arises for thirty years. It resulted in the creation of powerful companies like Kuehne + Nagel, Norbert Dentressangle whose job is to offer their clients a personalized logistics services, including a multitude of components (e.g. transport, order picking, inventory management, creation of promotional items, etc.). Therefore, the aim of this paper is to provide theoretical insights into the logistics outsourcing phenomenon and to trace the evolution of the job and offer of LSP. We are also interested in the characteristics of shipper-LSP relationship. A qualitative study was conducted with a major player in the Moroccan mass retail industry, who has outsourced some of its logistic activities to a world-renowned LSP few years ago.

Keywords: Logistics outsourcing, logistics service provider, inter-organizational relationship, Retail, Morocco.

1. Introduction

The overall scope of outsourcing is continuing to grow, as companies focus on their core competencies and shed tasks perceived as noncore (Sanders et al., 2007). As a result, outsourcing has become a megatrend in many industries, most particularly in logistics and supply chain management (Boissinot and Kacioui-Morin, 2009). This have enabled logistics service providers (LSP) to become almost strategic actors in supply chains (Fulconis, 2014).

Besides the problems in the basic phenomenon of logistics outsourcing, the role of LSP and the development of their activities in recent years have drawn the attention of management science researchers. Research conducted by Marasco (2008) on 152 articles published between 1989 and 2006 in 33 highly ranked international journals demonstrates the
growing interest in the topic of outsourcing. In this sense, the recent study by Langley et al. (2013) noted that 65% of shippers are using the services of LSP to manage their logistics activities. Furthermore, if the logistics service industry in Europe and North America has reached its maturity, increasing logistics outsourcing practices are noticed in other regions, such as Asia Pacific, America Latin or North Africa.

From this observation and the lack of researches on logistics outsourcing in these regions (North Africa in particular), this paper seeks to throw more light on logistics outsourcing practices in Moroccan mass retail market. This industry is one of the most dynamic with a high level of logistics outsourcing.

The remainder of the paper is organized as follows: the subsequent section presents theoretical background, beginning with the concept of logistics outsourcing and continuing with describing LSP’s offer and the characteristics of the relationship between shippers and LSP. We will also analyze logistics outsourcing decision from the transaction cost theory perspective. The third section describes the research methodology and the Moroccan mass retail industry, while the fourth section presents the data analysis and the results obtained. The last section provides a discussion of the findings including theoretical and managerial implications, study limitations and future research directions.

2. Theoretical background

In this section, we will discuss the state of the art issues of logistics outsourcing. First, we will review the definitions of outsourcing (1.1). Then, we will present LSP’s business evolution and responsibilities (1.2). Finally, we will depict the nature of shipper-LSP relationship before analyzing it under the relevant terms of transaction cost theory (1.3).

2.1. Definition of Logistics Outsourcing: towards a consensus…

There is a vast literature on outsourcing, however, there is no real consensus on the definition of the term and even fewer on logistics outsourcing (Aktas et al., 2011; Gilley and Rasheed, 2000; Marasco, 2008). In fact, most studies have agreed on the lack of a uniform definition of the outsourcing, particularly because of the proliferation of approaches¹ used to address this issue (Marasco, 2008; Selviaridis and Spring, 2007, Murphy Knemeyer, 2005; Halldórsson and Skjoett-Larsen, 2004; Skjoett-Larsen, 2000). Murphy and Poist (2000) have

¹Different disciplines have been mobilized to address the phenomenon of logistics outsourcing: Economics, Strategic Management, inter-organizational Marketing, Human Resource Management, etc.
considered that the lack of consensus on the definition of logistics outsourcing has thus resulted in the differences over the growth of LSP. Although, in the English literature several terms are synonyms (Maloni and Carter, 2006) which are referred to the outsourcing of logistics, such as third-party logistics, logistics outsourcing, contract logistics, and logistics alliances or contract distribution (Selviaridis and Spring, 2007, Bourlakis and Melewar, 2011; Razzaque and Sheng, 2008, Jung and al., 2008).

If the definitions found in the literature reflect each of the different aspects of logistics outsourcing, it is possible to bring these definitions into two categories each one containing aspect of the logistics activities that had been outsourced to LSP. The first distinguishes the scope and type of outsourced activities. In this context, Lieb (1992, p. 29) considers that “third-party logistics involves the use of external companies to perform logistics functions that have traditionally been performed within an organization. The functions performed by the third party can encompass the entire logistics process or selected activities within that process”. Berglund et al. (1999, p. 59) consider that “third-party logistics are activities carried out by a logistics service provider on behalf of a shipper and consisting of at least management and execution of transportation and warehousing. In addition, other activities can be included, for example inventory management, information related activities, such as tracking and tracing, value added activities, such as secondary assembly and installation of products, or even supply chain management”. The second category definitions reflect the duration and nature of the relationship between the shipper and the LSP. Bask (2001, p. 474) describes logistics outsourcing as “relationships between interfaces in the supply chains and third-party logistics providers, where logistics services are offered, from basic to customized ones, in a shorter or longer-term relationship, with the aim of effectiveness and efficiency”. This expanded definition range logistics activities supported by LSP (from basic to customized logistics activities) and refers to the length (short and long term) and the expected goals of this relationship (effectiveness and efficiency).

Whatever the term used, logistics outsourcing can then be understood as an organizational practice that appeals to a third party or an outside supplier to perform one or more logistics activities that were previously performed in-house. As part of this research, we define logistics outsourcing as choosing a LSP to perform all or part of logistics activities, previously carried internally, as part of a short- or medium-term contract, in order to incur business-level benefits.

2.2. LSP, a key player of supply chains
The extensive use of logistics outsourcing within the distribution channel has fostered the emergence of a new player, i.e. the LSP (Boissinot and Kacioui-Morin, 2009). Indeed, the logistics service industry has changed considerably over the past thirty years, stimulated both by the development of the supply and demand of LSP (Langley and al., 2013). LSP today increasingly offer activities in broad and specific areas of expertise. They work throughout the supply chain (upstream and downstream) from raw material transport, storage, product assembling, etc. Some of them have established themselves in developing activities closer to the heart of their customers’ activities (Bonet and Boissinot, 2012).

In order to identify the boundaries of logistics services industry, Roques and Michrafy (2003) identify three dimensions in the range of services provided by LSP: the first dimension is called "core business", the second "additional customer services" and the third "new businesses" (see Table 1).

Table 1: The three dimensions of LSP offer

<table>
<thead>
<tr>
<th>Core business</th>
<th>Additional customer services</th>
<th>New businesses</th>
</tr>
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<tbody>
<tr>
<td>-Order preparation</td>
<td>- Customer Service</td>
<td>- Installation of site</td>
</tr>
<tr>
<td>- Storage / warehousing</td>
<td>- Billing for customer account</td>
<td>- Co-manufacturing</td>
</tr>
<tr>
<td>- Inventory Management</td>
<td>- Archiving</td>
<td>- Call center management</td>
</tr>
<tr>
<td>- Transport</td>
<td></td>
<td>- Co-packing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Information technology</td>
</tr>
</tbody>
</table>

Source: Roques and Michrafy (2003), based on a survey conducted in France with the Observatory of Logistics Services

The results of Roques and Michrafy (2003) study’s and recently those by Langley et al. (2013) demonstrate that traditional services such as transportation, warehousing, inventory management and order picking occupy the forefront of activities offered by the LSP for all studied regions (Europe, North America, Latin America and Asia Pacific). These results also emphasize the commitment of the LSP to their traditional business but also show a broadening in their offerings to suit the changing needs of shippers. Consequently, the offers of LSP has grown to incorporate para-industrial and para-commercial activities that have little relation to what concerns logistics (such as call center management, co-manufacturing\(^2\) and co-packing\(^3\), etc.). Since mid-2000s, several LSPs have moved towards "new businesses" by offering value added services and still looking for a more comprehensive and modular solution that meets the individual needs of their customers (Roques and Michrafy, 2003).

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\(^2\)Co-manufacturing is a tool of mass customization in which the LSP receives on behalf of a shipper, a set of modules and ensures that these final assembly, according to customer orders.

\(^3\)Co-packing is a packaging operation which aims to bring together, in the same packaging, same or different products. Most often it is for promotion operations.
Furthermore, the literature in logistics and supply chain management proposes to classify LSP into different categories according to their service offering. Delfmann et al. (2002) identify three profiles of LSP: the "Standardizing LSP" offering standard logistics services, the "Bundling LSP" assembling existing modules, and "Customizing LSP" providing personalized services to their customers. Hertz and Alfredsson (2003) propose a classification of LSP according to two criteria: their general ability for problem solving and their ability for customer adaptation. They distinguish between "Standard Third-Party Logistics provider" supplying standardized logistics services. "Service developer" offering value-added services developed on the basis of sufficiently standardized offer, that could be combined according to each customer need. "Customer adapter" whose business is to support logistics activities of his customers improving the efficiency of these activities but actually not making development much development of services. Finally, "Customer developer" is considered by Hertz and Alfredsson (2003) as the most advanced and difficult form of LSP. It involves a high integration with the shipper taking over its whole logistics activities. Thus, Such LSP are involved in the co-construction of logistics systems of their customers and rely for this on their know-how, innovation skills and mastery of IT systems.

Beyond the types of LSP that exist in the academic literature, Accenture Consulting filed designations to identify different categories of LSP. We find the 1PL (First Party Logistics) and 2PL (Second Party Logistics) that handles only transportation and warehousing activities. The name 3PL (Third Party Logistics) is given to the LSP, which in addition to ensuring the implementation of physical operations, also provides value-added services. Finally, 4PL (Fourth Party Logistics) are part of the family of dematerialized logistics providers. They have no physical assets but are based, to build their supply, on the control of IT systems and the ability of networking of a set of actors such as carriers and warehouses’ providers (Selviaridis and Spring, 2007; Fattam, 2014).

2.3. Characteristics of the shipper-LSP relationship

The nature of the relationship between the LSP and the shipper has been studied by many authors. By examining outsourcing relationships, Sanders et al. (2007) have identified different levels of these relationships. The two dimensions adopted are the scope of the task outsourced, and the criticality of the outsourcing activities. The first dimension refers to the nature and number of activities supported by the service provider and therefore determines his
level of responsibility. The second dimension reflects the importance of the outsourced activities to the company (see Figure 1).

**Figure 1 Outsourcing relationships**

![Diagram of outsourcing relationships](image)

*Source: Sanders and al., p. 8, 2007*

Indeed, higher the level of responsibility of the provider- due to the number and the importance of the activities they are assigned with- the outsourcing relationship will switch from a contractual relationship between actors (non-strategic) to a relational such alliances or partnerships. For Bagchi and Virum (1998, p. 193) logistical alliance allows the construction of "along-term formal or informal relationship between shippers and logistics providers to render all or a considerable number of logistics activities for the shipper. Shippers and logistics providers see themselves as long-term partners in this arrangement”.

Moreover, Gibson et al. (2002) have explored the success factors of logistics outsourcing projects. To evaluate the relationship with their LSP, shippers pay attention to the degree of cost control, efficiency, confidence and flexibility. In this sense, Hofer et al. (2009) have emphasized the importance of five factors in the development of a successful and sustainable outsourcing relationship. These factors include: sharing information, sharing risks and rewards, planning logistics operations, and the establishment of an associated control system. The authors also emphasize how trust is important in the shippers-LSP relationship.
2.4. The logistics outsourcing decision apprehended through transaction cost theory

Companies are perpetually questioning whether to "make or buy", i.e. choose to either manufacture themselves or buy from the market (Quin and Hilmer, 1994; Boissinot and Bonet, 2012). They are looking for the most satisfactory organizational form. In this sense, several theoretical framework tried to inform the decision of outsourcing.

Among all theoretical corpus mobilized to justify logistics outsourcing, transaction cost theory (denoted TCT) is the most used. Inspired by the work of Coase (1937) and mainly developed by Williamson (1975, 1979, 1981, 1985), the TCT believes that any transaction between two partners creates specific costs. These costs are called transaction costs. They include research provider fees (or information costs), negotiating costs and concluding contracts, control costs of the management and the monitoring of the signed contract (Williamson, 1985).

TCT considers that the choice of governance form to be adopted (hierarchy, market or hybrid form) should match the characteristics of the transaction to coordinate. These are four in number: asset specificity, uncertainty of the transaction, the frequency of the relationship and evaluation facility of the provider’s service\(^4\). It is recommended when the assets are highly specific to maintain them internally in order to avoid the risk of dependence with the LSP. This risk can encourage the adoption of opportunistic behavior. When the level of uncertainty is high, TCT recommends vertical integration as the most appropriate organizational structure.

In logistic, two forms of uncertainty can occur: first, the "internal" uncertainty corresponding to a shipper difficulties in defining future requirements for logistics activities management (Stank and Maltz, 1996), second, the "external" uncertainty that is on the growing complexity of the institutional and regulatory environment, the globalization of markets with new organization practices, culture differences, etc. (Sohail and Sohal, 2003). The frequency reflects the degree of repetitiveness of the relationship. Finally, the provider evaluation facility must also be taken into account in the outsourcing decision. Indeed, when the performance of a service provider is difficult to measure, it is recommended to internalize the transaction. Conversely, outsourcing is desirable when the company has a good

\(^4\)Attribute added by Williamson 1991
knowledge of the operation and the performance of the outsourced activities and also when it is easy to evaluate the provider.

TCT provides relevant insights in choosing outsourcing as a corporate governance structure. Given the robustness of its premise, it remains the most mobilized theoretical approach for understanding the phenomenon of logistics outsourcing.

3. Methodology and empirical research

We present in this section, the methodology adopted to conduct our research and characteristics of Moroccan mass retail industry.

3.1. Qualitative research

To give answers to our research question (the role and weight of the LSP in the logistics outsourcing process from mass retailers in Morocco), the methodological positioning chosen for this research is qualitative. Several semi-structured interviews were conducted with many managers working for a Moroccan mass retailer (director of the logistics department, 3 other managers in logistics department, director of PGC department, a manager in a hypermarket, a manager from, a manager of manufacturer’s relationship) and managers working for suppliers (commercial director of a fruit juice manufacturer, commercial director of a cereal manufacturer). We choose this retailer because it’s not only the leader in the retail market in Morocco in terms of sales but also has large number of outlets (hypermarkets and supermarkets) throughout the territory of Morocco. Its position of leadership and growth in Moroccan supermarket has pushed it to initiate the first logistics outsourcing project in this sector since 2005. Interviews conducted with managers of this retailer followed the protocol composed of three main themes: the factors explaining logistics outsourcing by mass retailers, the LSP selection process and finally the nature of this outsourcing relationship. The interviews were transcribed and analyzed. In addition to primary data, research also relies on secondary sources from the trade press and annual reports of the company. Evrard et al. (2009) pointed out that the interviews as documentation are the main sources of information. They allows to directly obtain a description of a constructed managerial situation and take into account the situational context in which the behavior takes place.

3.2. Characteristics of Moroccan mass retail industry
Today mass retail industry in Morocco enjoyed unprecedented success. The arrival of new competitors in the market since 2009 is among the main stimulants for the launch of RWAJ plan by the government to modernize commerce and changing consumer habits of Moroccans (Bahha and Chanut, 2014). Medium and large areas have experienced an average annual growth of 15% over the last 5 years and 600% in past 10 years. Currently, the number of food-based hypermarkets and supermarkets is over 250. Four groups share the retail sector in Morocco: SNI owner Marjane hypermarket chain and supermarket ACIMA, Ynna holding Group owner of the hypermarket chain Aswak Assalam, Best Financial Group (franchise between Label’Vie and Carrefour) owner of the hypermarket chain Carrefour, Carrefour Market supermarkets and the Cash & Carry ATAKADAIO, and the last came on the market is the Turkish group with its chain of Hardiscout BIM.

The first three mass retailers are present in most major cities; however, the Turkish BIM has chosen initially to limit its openings in the Casablanca-Kénitra area. Sources in the professional press suggest the possibility of new openings in other major cities such as Fez and Meknes.

### Table 2 Supermarkets and hypermarkets in Morocco

<table>
<thead>
<tr>
<th>Group</th>
<th>Points de vente</th>
<th>Creation</th>
<th>Market share</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNI</td>
<td>Marjane (hypermarkets) ACIMA (supermarkets)</td>
<td>1994</td>
<td>60%</td>
</tr>
<tr>
<td>HYPER SA</td>
<td>Carrefour (hypermarkets) Carrefour Market (supermarkets) ATAKADAIO (Cash&amp;Carry)</td>
<td>2009</td>
<td>285%</td>
</tr>
<tr>
<td>YNNA HOLDING</td>
<td>ASWAK ASSALAM (hypermarkets)</td>
<td>2004</td>
<td>8%</td>
</tr>
<tr>
<td>BIM</td>
<td>BIM (supermarkets)</td>
<td>2009</td>
<td>-</td>
</tr>
</tbody>
</table>

*Source: Personnal developpement*

### 4. Presentation and discussion of the results

In the third section, we will present the results of our research in terms of explanatory factors of logistics outsourcing (3.1), the LSP selection process (3.2) and the management and monitoring mechanisms of this relationship (3.3).

#### 4.1. Factors explaining the logistics outsourcing

The mass retailer in our study has started a reflection on the reorganization of its logistics activities, a few years ago. The choice was to outsource parts of its logistics activities. Activities outsourced included warehousing, inventory management, and transportation of certain reference products marketed by the retailer from the warehouse of LSP to the stores. The outsourcing of these activities can be explained by a desire on the part of leaders to focus on their main business (supermarkets) and strengthen their competitive advantage. The logistics manager of this retailer note that "in the beginning, logistics was considered as a support to our business [...] the expansion of our business in recent years, with the opening of new stores more and more distant, pushed us to review the management of our logistics activities which now acquires a strategic dimension [...] Logistics is more and more present in our business and we see this as a mean to achieve our goals especially in terms of customer satisfaction through the linear replenishment of our stores". Control of logistics costs is an important factor in choosing outsourcing logistics activities of the retailer, a manager among food sector notes that "the crisis has increased the prices of several commodities for several segments including custom duties and hence logistics costs. All this affects the price". She adds "we have one warehouse because it is a new creation. We had some deposits before but we decided to build a warehouse for food and another for non-food. Suppliers who wish to go through this warehouse [...] almost pay a percentage for logistics and transportation costs. Because currently, we have stores in Berkane, Oujda, Taza which are faraway. So, they prefer not to deliver directly stores. Transportation costs of the truck are expensive anyway, the forth costs 5000dh and back 5000dh and especially when truck is empty in the return. So they prefer to go through our warehouse, they deliver a single "One shot" location. So there is one bill! »

The reasons given by the retailer to initiate the process of outsourcing is consistent with those outlined in the literature. However, beyond the motivations that are based on research cost reduction (reducing the breakeven, reduced investment in physical assets and the cost of labor) and performance improvement, Outsourcing logistics has involved in the implementing or strengthening, by the business customer, a competitive advantage. It also allows the company to concentrate on the strategic aspects of their activities, by giving providers responsibility for managing the operational details (Carbone, 2004; Barthelemy, 2007; Fulconis and al., 2011; Alami and Hdidou, 2012).
Recognizing the strategic and managerial challenges of outsourcing logistics, the company object of our case study, started the outsourcing process relying on the skills of an external actor.

4.2. The LSP selection process

For help in choosing the LSP, the company has made use of a consulting office that is responsible for the organization of the tender and provide the selection process that meets the criteria set out in beforehand. The main criteria are: the maturity of the LSP, expertise and know-how in managing the activities assigned to it and control of logistics costs. Once this analysis, the choice of the sign fell on a world-renowned LSP, present on the Moroccan market for several years and has to his credit many companies operating in different sectors. The first contract was signed in 2005 and renewed in 2011. The average duration of the contract is 5 years. The specification explicates, amongst other matters, the nature of logistics activities supported by the provider, the terms of rating and billing services and governance mechanisms to ensure the execution of logistics activities.

4.3. Controlling and supervising the outsourcing relationship

In order to ensure the success of the outsourcing relationship, the company prefers implementation of close relationship with the LSP marked by trust, shared values and commitment to grow together. One of the officials interviewed noted that "[...] operations managers responsible for managing the relationship with our supplier maintain close relations with it. We work every day to carry this project through durable communication. Each of us does his best. [...] The provider is our partner with whom we share our expertise and exchange the necessary information [...] for example, we involve our service provider in the management of national operations (the school year, during the month Ramadan, the feast of Eid al Adha, etc). It offers us solutions and helps us to replenish all stores". Trust, long-term commitment in the relationship, and the information sharing has been emphasized by many authors as key factors for successful outsourcing relationships (Gibson and al., 2002; Hofer and al. 2009).

Furthermore, to ensure the flow of information with the provider, the retailer has chosen to keep its own information system. This system manages order taking activities, planning of deliveries, stock inventory, etc. The company opted for this solution because it considers that the information system is a strategic investment rather to keep it in-house. The logistics
manager points out, "we never know what we hide the future ... Our company might decide one day to return logistics activities outsourced. It is therefore vital for us to master all the informational aspects."

To measure the performance of outsourced logistics activities, the company has developed with its LSP a dashboard that includes indicators such as the level of service delivery, the truck occupancy rate, the rate of breaks, etc. These indicators are continually assessed at monthly meetings that allow both partners to review the performance of logistics activities. The LSP is not only evaluated with respect to its degree of flexibility and responsiveness, but also in relation to its ability to offer innovative solutions (services and processes).

5. Conclusion

The aim of this paper was to analyze logistics outsourcing decision of one of the leaders in Moroccan mass retail industry. Semi-structured interviews conducted with managers of this company allowed us to investigate several issues, including factors explaining the logistics outsourcing, the process of choosing the LSP and the governance mechanisms of the outsourcing relationship. We noted in this regard that the mass retailer in our study was oriented towards outsourcing a part of its logistics operations (warehousing, inventory and transportation management) for reasons relating to cost efficiency and refocusing on its main business. The choice of the LSP was precise and made on the predefined criteria by the retailer. It concerns the maturity of the LSP, its expertise and know-how, and also its mastery of logistics costs. In addition, we noted that the relationship between the mass retailer and the LSP is considered as a sustainable relationship (outsourcing contract renewed twice) characterized by the set of a climate of trust and collaboration between the two actors.

This paper allows to make theoretical perspectives on logistics outsourcing as a strategic approach that has grown significantly over the last three decades. We have traced the evolution of LSP’s business and supply. LSP was initially only in-charge of basic operations such as transportation and warehousing but has seen its responsibility expanded to take more strategic activities in order to bring greater value to its customers.

However, our research has some limitations: We have mobilized TCT to understand the logistics outsourcing phenomenon. Although this theory is widely used in the literature, other theoretical perspectives can provide insights on the outsourcing decision and offer a better understanding of the phenomenon. Such theoretical perspectives could be the Resource-Based
View of the firm or the Network approach. In addition, our unit of analysis focused on the case study of a single player in the Moroccan mass retail industry. It would therefore be relevant in future researches to investigate other companies and compare their logistics outsourcing process. A more ambitious research could focus on a comparative study of outsourcing logistics of mass retailers in other Maghreb countries: Algeria and Tunisia as examples. As emphasized by Perrin (2002), these countries on the southern shore of the Mediterranean share not only a common cultural background (geographic location, history, language, religion, customs, etc.), but also have points of divergence especially at the influence of politics on the economic and social spheres.

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