What is the Role of Third Party Logistics (3PL) Partners in an Omni-Channel Strategy?

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ABSTRACT

The logistical infrastructure of the supply chains of online and offline sales channels of suppliers have been historically often completely separate. In the growing mobile commerce market, customers interact with suppliers using multiple touch points in one overall stream of information and goods which is considered an omni-channel.

For larger suppliers, this can be an intricate chain of either their own resources or global partners. For many smaller suppliers, this is a chain of third parties adding value to the core competency of the supplier. The selection of a logistics partner for a small and medium-sized enterprise (SME) is a substantial investment in both infrastructure and a trusted relationship. But do SME suppliers know what they are looking for in an omni-channel strategy, and why?

This article examines what characteristics an SME looks for in a 3PL partner in an omni-channel strategy, and discusses how an omni-channel strategy can be developed for these players.

Keywords: Omni-Channel, 3PL, Logistics, Value Chain, SME

INTRODUCTION TO THE OMNI-CHANNEL CONCEPT

Brick-and-mortar retail stores have allowed consumers to touch and feel merchandise and provide instant gratification; online retailers tried to entice consumers with a wide product selection, very low prices and informational content such as product reviews and ratings. As the retailing industry evolves toward a seamless "omni-channel retailing" experience, the distinctions between physical and online are starting to disappear, creating a world that is becoming a showroom without walls. The retail industry is shifting toward a value-based 'concierge model' geared toward consumer-orientation, rather than a volume model which was focusing only on transactions and deliveries.

Classical retailers and manufacturers use in addition to distribution through physical stores also increasingly the Internet and e-shops as a sales channel. There are also providers who work primarily through e-shops but also provide products in physical stores (one example in The Netherlands is Cool Blue). Each of these sales channels / had its own specific characteristics and their specific needs in terms of supply, availability, and delivery.

Within the availability of online ecommerce, the range of products available for purchase to the consumer is increased. The delivery options and choices for consumers makes the complexity of doing e-logistics for traditional retailers quite challenging. The demand for rapid access to products, both in retail stores and online web shops, has retailers needing to use external logistics partners for ecommerce to reach the edge of this customer network. Given this customer urgency to have products quickly, innovative delivery options such as multimodality and time window delivery options have become very important.

The logistic chains of both channels historically are often completely separate from each other (e.g. multi-channel). In order to meet the customer requirements and modified in order to increase the efficiency of the process it is necessary to integrate as much as possible both logistic chains. The omni-channel for a supplier is an integration of online and offline logistics to maximise availability and efficiency. Logistics integration consists in implementing mechanisms to ensure fluidity of physical and information flows, accuracy of information, and application of decisions within the supply chain (Gélinas & Bigras, 2004).

The economic objective of suppliers in having an omni-channel strategy is the integration of the (currently separated) 'online' and 'offline' logistics for customer-centric selling as well as improved efficiency. Omni-channel retailing has evolved with the objective of aligning physical and digital sales channels by the use of technology, thus providing uniform customer experience and operational effectiveness across the channels (Hansen & Tambo, 2011, as cited in Tambo, 2014).

The aim of this research is to outline the evolution of the need for omni-channel, what drivers exist for suppliers to create these efficiencies and from empirical research, try to define what role an external third party logistics (3PL) partner is expected to bring to these efficiencies.

The objective of our study is to try to gather information for creating a future preference model to aid retailers in logistic partner choices. Our study is

primarily motivated by our research involvement in Belgian e-commerce logistics as well as a publishing house that provides retail oriented digital media publications that allowed us to survey their members for our research.

The paper is organized as follows. Section 2 provides a survey of the relevant literature. The basic setting for the model is presented in Section 3. Section 4 discusses the methodology, approach and implementation of the model in a gap analysis survey. Section 5 discusses the limited findings and areas for future research. We conclude with a summary of the work.

ECONOMICS AND STRUCTURAL LOGISTIC CHOICES

The rise of e-commerce throughout the past two decades has left suppliers and retailers convinced that online operations are a necessary part of a competitive strategy. A 2012 study conducted by PricewaterhouseCoopers (PwC) suggests that consumers are increasing their total purchase volumes, as opposed to simply switching their spending to online channels (PwC, 2012).

The concept of a multi-faceted system directly serving the consumer existed before the existence of e-Commerce. In their Harvard Business Review article, Moriarty & Moran (1990) examined the effects of adding additional channels in their publication entitled "Managing Hybrid Marketing Systems". They examined the idea of a hybrid marketing system, which they describe as "a business model that allows customers to directly purchase goods through several different channels". They mentioned IBM as an illustration, as IBM formed a hybrid marketing system by allowing customers to purchase goods through the mail in addition to through specialized salespeople. Moriarty & Moran (1990) also looked at the approaches of several other companies that they found utilized multiple channels effectively and stated: "a company that makes its hybrid system work will have achieved a balance between its customers' buying behaviour and its own selling economics" (Moriarty & Moran, 1990). Companies using multiple distribution channels in their B2C operations have been found to greatly increase their customer base and subsequently their revenue generating potential.

Omni-channel strategies are being developed due to a shift in focus to the back-end supply chain to enable and support those new consumer e-commerce expectations. The supply chain is at the very heart of profitability and service. The key to enabling omni-channel is a supply chain that provides complete visibility into all inventory and investments, including goods that are in holding across all channels, in transit or at consolidation points.

Companies should find the most suitable logistics strategy in terms of goals and actions depending on the business characteristics and on the context in which they are operating, where a supply chain strategy can be defined as the set of objectives that a company wants to achieve by undertaking specific supply chain management decisions (Lee, 2004).

By integrating their operations across channels, retail firms can increase the difficulty of imitation because of the interconnectedness of integrated resources. Consequently, competitors would find it more difficult to isolate and identify the factors of success (King, 2007; Lavie, 2006; Pil & Cohen, 2006).

SMEs and go-to-market strategies

Online retailers, especially SMEs, are watching what logistics partners can do to help in them build the most effective go-to-market strategy. This includes strategic partnerships with their existing physical outlets or expanding their presence using online marketplaces. The retailer has a choice to make between internalized, vertically integrated structures, and the use of external market agents for carrying out activities that constitute its value system (Sarkar, Butler, & Steinfield, 1995).

SMEs are challenged with the problem of developing an efficient retail channel. However, e-commerce represents a relatively low cost alternative to any other solution, and efficiently serves the purpose of enabling the firm to reach a significant number of customers without having to invest heavily in the channel development (Santarelli & D'Altri, 2003).

Research has previously highlighted that the organizational structures of SMEs are very operations-oriented (e.g. Gupta, 1988). This relationship between organisation and operations is thought to have a positive impact on logistics integration. Gupta (1988) also proposed that the transfer of information between the organisational and operational levels can be less formalised for SMEs and that the division of responsibility is also shown to be less precise, perhaps because of the smaller number of managers and that it is often the owner-manager in charge of the production management role.

The task of developing logistics skills and using them as competitive tools appears to be difficult for SMEs (Bagchi & Virum, 1998) because they are subject to contradictory pressures forcing them to provide better logistics contributions and to develop and to maintain closer relationships with their trading partners despite their limited resources. Kasouf and Celuch (1997) showed that SMEs in fact can benefit from partnerships or strategic alliances as vehicles to help them develop logistics skills even with limited resources. Technological changes (and their implementation) as logistics integration mechanisms also are linked positively to the relationship focus of SMEs. This may suggest that where technological changes become necessary, SMEs will seek partners to develop their skills.

Third party logistics providers (3PL) are defined as the use of external companies to perform logistics functions that have traditionally been performed within an organization (Lieb, Millen & Wassenhove, 1993).

Logistics for SMEs

For SMEs, logistics integration is a significant challenges of modern management. SMEs can find themselves under pressure to change their traditional management styles, both operationally and organizationally, replacing them with integrated systems that help increase the speed and fluidity of physical and information flows, help synchronize demand with supply, and help manage transactions more accurately (Gélinas & Bigras, 2004).

Pre-sales activities

Part of the challenge of market distribution is creating the right presence in the marketplace. Besides having the correct mix of distribution partners, there are a number of activities necessary in the pre-sales area that online presence can be useful to address. For example, online presence means making correct choices to be in product databases. This can be highlighted in the concept of showrooming. This term can be defined as "a phenomenon that describes a consumer's behaviour of collecting information about a product or service in a physical store and purchasing it in an online store afterwards" (Zaubitzer, 2013). Customers often evaluate products at brick-and-mortar stores to identify their "best fit" product, but end up buying this product not at the store but at a competing online retailer to take advantage of lower prices (Mehra, Kumar, & Raju, 2012).

In the context of retail sales, customers may use one channel to research products but purchase in another. For example, customers may use the online channel for product research but then buy at physical store (Verhoef, Neslin, & Vroomen, 2007) or, conversely use the physical store for research but ultimately purchase online for convenience (van Baal and Dach, 2005; Kucuk and Maddux, 2010). Neslin and Shankar (2009) define competitive research shoppers as those customers who search in one channel but buy in a different channel of a competing firm.

For a supplier, this means being present both in the physical shop and available online in one or more product databases for purchase. In terms of the information logistical supply chain, this can be a challenge if the supplier is not listed in the online catalogue.

For retailers, this behaviour can be a major opportunity or threat. To give insights into the phenomenon, Zaubitzer (2013) performed an empirical study collecting data of 334 respondents via an online questionnaire. There were 149 showroomers and 185 respondents who did not showroom during a recent product purchase were compared regarding their perceived difference of channel attributes in the offline and the online channel. Further, both groups were compared in various customer characteristics. The results of the binary logistic regression reveal that among all observed channel attributes the difference in price, service, purchase convenience, enjoyment and risk perception between the online and offline shop have a significant impact on the likelihood of showrooming, whereas the assortment and after-sales services did not show significant impact. Among the observation of customer characteristics, a positive attitude towards free riding, towards shopping and retailer loyalty were found to have a significant impact on the showrooming likelihood. The internet experience and the level of price-consciousness showed no significant impact.

The results supported physical retail stores to adjust the design of channel attributes in order to avoid showrooming behaviours of their customers. It also helps retailers to identify customers that are more likely to attend showrooming and target them specifically to prevent them from attending showrooming (Zaubitzer, 2013).

The challenge with showrooming for suppliers is to make sure that your product is well-represented in both the physical and online showrooms. For an SME, showrooming can help visibility if the smaller player can get into the catalogue data base.

Post-sales activities

As shown below from the work of Vaidyanathan (2005), a 3PL can provide a number of functionalities to support post-sales activities:

Global warehousing. For just-in-time delivery, the warehousing component requires the strategic placement of global mini-distribution centres. 3PL providers are investing in new fulfilment equipment and advanced technologies for their warehouses (Vaidyanathan, 2005).

Global transportation. Movement of goods and services must be completed by a freight carrier who can move multi-sized units by land, sea, rail, river, and air in a timely manner. A partnership effort between the customer and a 3PL provider may be extended to a 4PL provider, but 4PL providers must work with 3PL providers to bring synergy to the information flow and to realize cost savings (Vaidyanathan, 2005).

Global customer services. 3PL providers offer a wide range of customer services including warranty parts recovery, financial services, automating letters of credit (LOC), auditing, order management, fulfilment, carrier selection, rate negotiation, international trade management, and help

desk or call centre activities. In addition, with the increased returns generated by e-business, 3PL providers are playing a key role in developing and executing reverse logistics (Vaidyanathan, 2005).

Global inventory management and logistics. This function includes global inventory visibility, back-order capability and fulfilment, order-entry management, forecasting, cycle count and auditing, shipment management, supply pool planning, and customs documentation (Vaidyanathan, 2005).

There are two critical areas for an SME in post-sales functionality, which is delivery and reverse logistics for returns.

Given having a control factor is important to SMEs engaging in e-commerce, they are likely to use an external provider right from the beginning for delivery and customer support (Feindt, Jeffcoate, & Chappell, 2002). SMEs will not have the competences to carry out all the processes internally themselves - they will rely on partners to carry out certain processes. It is important that they have, right from the start, systems in place to control processes external to the company as well as internal processes, because the customer perception is that the SME is responsible for both. Control means reliability of partners in terms of timeliness and delivery, but also trust in, and the integrity of the partners, particularly in knowledge-based ventures (Feindt et al., 2002).

As well, the lack of electronic integration which is often required to move to more complex e-business processes (such as reverse logistics, for instance), may very well restrain SMEs from moving more quickly along their e-commerce adoption trajectories (Lefebvre, Lefebvre, Elia, & Boeck, 2005) without the help of an external 3PL.

Rationale for the use of a 3PL usually is also driven by the need for extended coverage outside the local catchment area of physical sales. To be available for others outside of the local area, SMEs turn to logistics suppliers to reach a wider audience for the product, with the possibility of cross-border sales and delivery. This includes partners that provide cross-border payment possibilities, and connect to local delivery partners who can share their delivery schedules in a way to connect to SME systems. For example, in The Netherlands, this can be seen in the use of a 4PL provider such as Vos Logistics Organizing that does not provide physical transport, but simultaneously interacts with customers, 3PL shippers and the open market in a negotiation capacity for bidding for logistics services (Van Der Putten, Robu, La Poutré, Jorritsma, & Gal, 2006). The Netherlands is quite advanced in this manner, where consumers can request quotes from several 3PL providers for shipment of the same white good, for example, prior to purchasing the good so they get the best deal on logistics and time windows for delivery.

According to a 2011 study on Intra-Community cross-border parcel delivery done for the European Commission by FTI Consulting (Meschi, Irving & Gillespie, 2011), there are two groups of barriers to cross-border e-commerce: those which are related to delivery, and those which are related to other aspects of e-commerce transactions.

Barriers that are related to delivery include, price related barriers: worries about, and issues with high prices in comparison to domestic prices; quality of service barriers: worries about length of delivery times, worries about delayed, damaged and/or lost item; and, information barriers: worries about address delivery standards; worries about poor quality and complaint procedures for delayed, damaged and/or lost items; and, worries about returning goods (Meschi, Irving, & Gillespie, 2011).

These barriers are directly or indirectly related to (postal) delivery markets, and result in lower cross- border parcel flows (Meschi, Irving, & Gillespie, 2011).

3PL functionality

The challenge for an omni-channel retailer, one who is doing both online and physical selling, is to understand how many logistics partners are necessary for their situation, what value these partners need to provide and where the delivery options need to be in relation to any physical presence of a bricks and mortar store.

Consumers have significant choices on how they buy products whether it be in person or via other means, including catalogue, mobile phone or online purchasing. The delivery of the product can depend on a number of factors, including size of the good, location of the consumer, and product perishability and availability. For a company whose core business is not product delivery, the use of a third party logistics provider can extend their reach further into this marketplace.

The functions performed by a 3PL can encompass the entire logistics process or selected activities within that process. The significance of a beneficial relationship between enterprises and 3PL depends on the following factors (Ballou, 1999; Yan, Chaudhry, & Chaudhry, 2003):

(1) Capitalising on the resources and capability of 3PL to acquire the scale benefits of logistics operation by reducing the enterprises' own logistics cost and transaction charge;

(2) Utilising 3PL providers' professional capability and agility to improve the overall operating efficiency and level of customer service in the supply chain;

(3) Minimising or avoiding the investment of enterprises' logistics establishment to give more resources for

improving the enterprises' core competencies;

(4) Creating through the supplier alliance a mutually beneficial relationship by increasing the overall competition advantage of each firm. The 3PL evaluation and subsequent selection of a strategic alliance partner in a logistics value chain has an important strategic outcome to a firm to achieve superior competitive advantage. (Büyüközkan, Feyzioğlu, & Nebol, 2008)

DEVELOPMENT OF 3PL MODEL

Langley & Holcomb (1992) suggest that the objective of supply chain management should be the synchronization of all supply chain activities to create customer value. Lambert, Stock, & Ellram (1998) define a supply chain as the alignment of firms that brings products or services to market. Part of the value that a company creates for its customer with product delivery is "the ability to deliver the right product in the right amount at the right place at the right time for the right customer in the right condition at the right price" (Shapiro & Heskett, 1985). This translates to the fact that logistics service is part of the value of the product (Mentzer, Rutner & Matsuno, 1997).

According to Langley & Holcomb (1992), logistics creates customer value through three generic ways: efficiency, effectiveness, and differentiation or relevancy. When the traditional attributes of logistics services are modified to create value-added services or innovations, they result in unique logistics capabilities that can be a source of innovation and competitive advantage (Morash, Droge, & Vickery, 1996; Lynch, Keller, & Ozment, 2000). Part of the innovation for the customer is flexibility in delivery, both in terms of time and location. Physical supply, physical distribution and demand management are key components of logistics flexibilities (Lambert & Stock, 1993; Porter, 1985). Demand management flexibility is a market sensing and customer-linking capability that creates and manages close customer relationships where firms and customers share interdependence, values, and strategies (Day, 1994). These attributes in our 3PL model is highlighted in Figure 1.

RESEARCH METHODOLOGY

The assessment of logistics capability based on internally available assets in this study is important as one of the primary research objectives concerns an understanding of the gap in the relationship between a firm's internal logistics capability and their use of logistics outsourcing that would lead them to choose a particular partner to extend their reach.

To measure the logistics capability required by the retailers vs. comparing where the gaps are in their own capabilities, we utilised a modified (Morash, 1996) list of 11 items, as shown in Table 1, covering the four different logistics services areas that are generally expected. The targets of the survey were requested to indicate, using a five-point Likert scale, where a score of 1 was for very low capability and a score of 5 was for very high capability, the extent to which the respondent believed they required and perceived their companies capable of performing each of the 11 logistics service items with current resources, and then showing the value of each of these items to their capabilities (weighting factor). And then they were also asked to indicate for these 11 items to what extend that item would be crucial for extending their logistics reach with a third party partner. The gap between current ability and perceived need should be useful for assessing the value proposition of a 3PL partner.

IMPLEMENTATION AND RESULTS

Using the 11 items in Table 1, we created a SERVQUAL survey that examines the logistics gaps between what the retailer is currently using internally and what optimally the retailer would require (Fairchild, 2014). SERVQUAL (Parasuraman, Zeithaml, & Berry, 1988) is one of the best known models for evaluating expectations and perceptions. The survey has been managed in Qualtrics, and the survey link was sent in April 2014 and again later in May 2014 via the publishing house Best to the subscribers of Digimedia, a leading e-commerce publication in Belgium with a subscriber list of 5,000 e-commerce participants.

Unfortunately, the survey response ended up being quite small, even after two rounds of survey requests, so we had no significant results to report empirically. However, as to make the best of the situation, we then examined the handful of the individual responses for patterns and trends to see what indicators may be available for future research follow-up.

Although the survey was anonymous, the respondent does provide information on their industry and location. We give an example here of the survey of a medium sized firm in Flanders to highlight where some of the initial gaps are between perception and expectation. This firm supplies telecom equipment distribution, after sales service and recycling to consumers and businesses. The gaps appear to be in the areas of lowering the cost of distribution (a fairly neutral point for most surveys seen so far), pre-sales activities, and distribution outside of the current geographic coverage area. In examining the other surveys completed to-date, there appears to be a trend of firms not expecting the 3PL to be involved in pre-sales or distribution cost reduction, but from their own statements the respondents are also not that competent in these areas either, which then leads to the question if pre-sales logistics is normally considered as part of the logistical activities.

If we compare these preliminary findings in relation to the literature examined on SMEs, particularly the work of Santarelli & D'Altri (2003) who showed SMEs may in general benefit from adopting e-commerce as a way to reduce their distributive costs and to reach a higher number of potential customers, we can see that more than ten years later, the focus tends still to be on the actual movement of goods and information after the sale and not so much on marketing logistics.

Again referring to the model based on the work of Langley & Holcomb (1992), overall the point-allocation across the four areas (efficiency, effectiveness, differentiation and flexibility) varied widely between firms. It may be a function of the role of the respondent or of the industry sector of the firm, but we do not have enough data yet to test that supposition. Many of the firms gave themselves full marks on efficiency competencies, but somewhat lower marks on differentiation. The gap over coverage for distribution appears to be an appeal for wider coverage than the retailer is able to handle themselves. This may be more of a driver than cost, efficiency or effectiveness, but again this needs to be tested with a wider set of surveys.

In their work, Gélinas & Bigras (2004) stated that the SME's focus on effectiveness rather than efficiency, their tendency to underutilize information technologies, and their short-term strategic planning make integration to a logistics partner unfavourable. We see that our limited survey respondents thought they were efficient, but need the differentiation that a 3PL may be able to provide. We would further examine an integration aspect in a future work, as leveraging the resources of the 3PL would be of benefit.

CONCLUSION

Although omni-channel retailing is already known for certain pre-sales features that are related to e-commerce (notably the ability to compare prices and generate targeted ads), it is not yet clear to the market how integrated the multiple channel needs to be to maximise efficiency. Retailers could start by adapting best practices from both the offline and online worlds in areas including pricing, designing the shopping experience and building service-oriented relationships with customers.

The role of 3PL partners for an SME has diversified over the initial implementations of e-commerce in the early 2000s to include pre-sales and post-sales functionalities. The gaps found in the initial response to our survey included lowering the cost of distribution, pre-sales activities, and distribution outside of the current geographic coverage area. However, we did not have enough responses to our survey to yet better understand the gap in the logistics capabilities that we could model that would lead them to choose a particular partner to extend their reach.

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Appendix

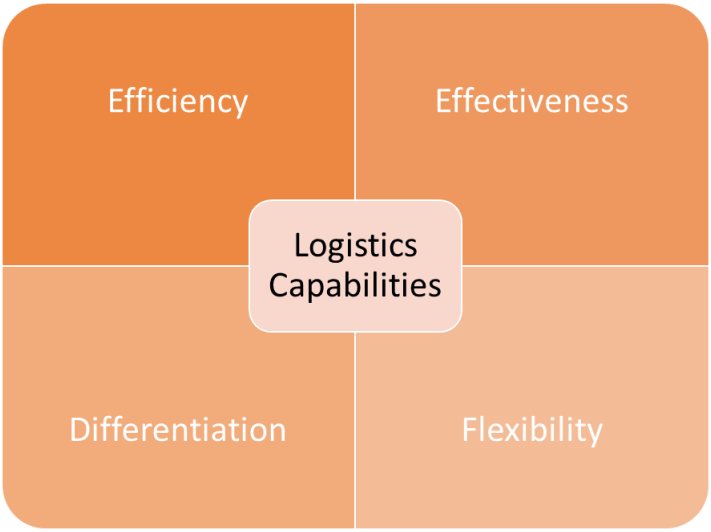

Fig. 1. Logistics attributes modified from Langley & Holcomb (1992).

Table 1. Items from Morash (1996) used in the four logistics attribute areas as modified by Langley & Holcomb (1992).

Capabilities	Definition	Logistics attribute area
1. Pre-sale customer service	The ability to service the customer during the purchase decision process (i.e. before the customer buys the product).	Differentiation
2. Post-sale customer service	The ability to service the customer after the sale of the product to ensure continuing customer satisfaction (i.e. return product handling).	Differentiation

3. Delivery speed	The ability to reduce the time between order taking and customer delivery.	Efficiency
4. Delivery reliability	The ability to exactly meet quoted or anticipated delivery dates and quantities (i.e. deliver correct orders on time).	Effectiveness
5. Responsiveness to target market(s)	The ability to respond the needs and wants of the firm's target market(s) (i.e. handle small, frequent orders).	Effectiveness
6. Delivery information communication	The ability to communicate shipping and delivery information with customers.	Differentiation
7. Web-based order handling	The ability to handle and fill orders using a web-based order handling system. This also includes logistics information sharing with other channel members.	Efficiency
8. Widespread distribution coverage	The ability to effectively provide widespread and/or intensive distribution coverage.	Flexibility
9. Global distribution coverage	The ability to effectively provide global distribution coverage.	Flexibility
10. Selective distribution coverage	The ability to effectively target selective or exclusive distribution outlets.	Flexibility
11. Low total cost distribution	The ability to minimize the total cost of distribution.	Effectiveness