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Extending the network: Defining product delivery partnering preferences for omni-channel commerce

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Abstract

Omni-channel commerce involves combining traditional commerce with online commerce by integrating processes in a harmonious and complementary way throughout the organizational and IT chain, and includes external logistics partners in these processes. The objective of this research is to aid retailers in the decision on these third party logistics (3PL) partners for product delivery. The intended methodology is to develop a logistics capability framework for 3PL channel partner assessment. Based on a SERVQUAL methodology and gap analysis, a partner preference model is developed.

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1. Introduction

Within the availability of 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 webshops, 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. 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 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 [1].

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.

2. Omni-Channel leading to product delivery

In MIT's recent report, "Beyond the Checkout Cart" [2], the omni-channel consumer is described as "the central force shaping the future of e-commerce and brick-and-mortar stores alike". Omni-channel commerce is being designed "to satisfy demand wherever and whenever it is". The omni-channel consumer expects everything to be readily available at his or her fingertips and expects the overall brand experience to be similarly accessible. The omni-channel approach is where online (computer and mobile) shopping constitutes an addition to the traditional brick-and-mortar retailing.

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.

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 [3]. The functions performed by the third party can encompass the entire logistics process or selected activities within that process. The significance of an alliance between enterprises and 3PL depends on the following factors [4, 5]:

- (1) utilizing 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) making use of 3PL providers' professional capability and agility to improve the overall operating efficiency and level of customer service in the supply chain;
- (3) reducing or avoiding the investment of enterprises' logistics establishment to give more resources for improving the enterprises' core competencies;
- (4) developing a credit base through the supplier alliance to cultivate a symbiotic 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. [6]

3. Role of innovation in channel partner decision

Langley and Holcomb [7] suggest that the objective of supply chain management should be the synchronization of all supply chain activities to create customer value. Lambert, Stock, and Ellram [8] 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*" [9]. This translates to the fact that logistics service is part of the value of the product [10].

According to Langley and Holcomb [7], 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 [11,12]. 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** [13, 14]. 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 [15].

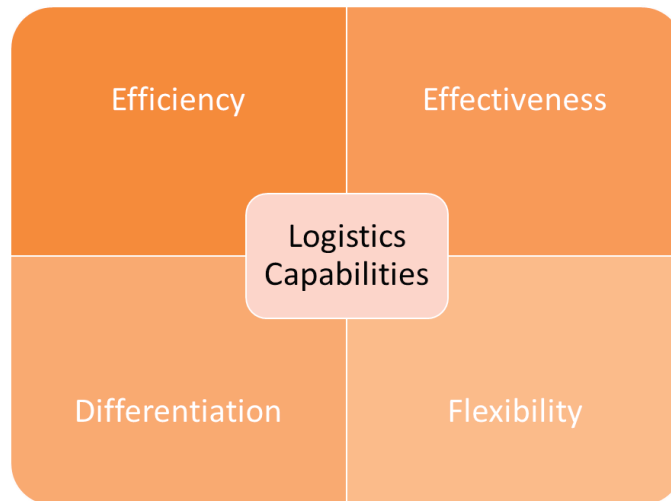


Fig. 1. Logistics attributes modified from [7]

4. 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 [11] 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 1.0 very low capability and 5.0 very high capability, the extent to which they required and perceived their companies capable of performing each of the 11 logistics service items with current resources, and 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 extent 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.

Table 1. Items for four logistics attribute areas as modified by [7]

Capabilities	Definition
1. Pre-sale customer service	The ability to service the customer during the purchase decision process (i.e. before the customer buys the product).
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).
3. Delivery speed	The ability to reduce the time between order taking and customer delivery.
4. Delivery reliability	The ability to exactly meet quoted or anticipated delivery dates and quantities (i.e. deliver correct orders on time).
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).
6. Delivery information communication	The ability to communicate shipping and delivery information with customers.
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.
8. Widespread distribution coverage	The ability to effectively provide widespread and/or intensive distribution coverage.
9. Global distribution coverage	The ability to effectively provide global distribution coverage.
10. Selective distribution coverage	The ability to effectively target selective or exclusive distribution outlets.
11. Low total cost distribution	The ability to minimize the total cost of distribution.

5. Next steps in this research

Using the 11 items in Table 1, we have created a SERVQUAL survey that examines the logistics gaps between what the retailer is currently using internally and what optimally the retailer would require. SERVQUAL [16] is one of the best known models for evaluating expectations and perceptions. The survey is managed in Qualtrics, and the survey link has been sent in late 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. At present, the survey is still being administered, so the response rate and analysis are not available at this time.

Once the survey responses have been gathered and analysed, we will map the gap seen by the retailers to the 3PL offerings in the market to see if we have enough information to develop a preference model to aid retailers in logistic partner choices. The results of this analysis are planned for presentation at the CENTERIS conference in October.

6. Initial results

The survey link was to go out initially in April 2014, but the publishing house was delayed in doing so, and the link for the Qualtrics survey went out in late May. As we only have some initial responses, we give an example of one of the respondents to highlight what is being said so far in this research and a few comments on general trends we see at this point.

Although the survey is anonymous, the respondent does provide information on their industry and location. We selected the survey of a medium sized firm in Flanders to show 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 retailers not expecting the 3PL to be involved in pre-sales or distribution cost reduction, but also the retailer appears also not that competent in these

areas either, which then leads to the question if pre-sales logistics is normally examined by these retailers as part of the logistical activities.

Overall, the point-allocation across the four areas (efficiency, effectiveness, differentiation and flexibility) varies 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 give 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. The publishing house is sending the invitation a second time for us in the June timeframe.

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