

Relational integration of the logistics service provider and customer satisfaction: literature review and conceptual model

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Abstract— The outsourcing of logistics function has become more and more a global phenomenon [1], this practice has started in 1950's and in 1980 it has been adopted inside organization as strategy [2]. According to The 20th Annual Third Party Logistics Study Capgemini consulting report's, in only 2014 the total revenue of logistics service providers (LSP) in the world is estimated to 750.7 billion of US dollars with an annual growth of 6.5%. Also, the loyalty has become more and more an important challenge for de the LSP. Recently many authors in logistics has been interested on the LSP meanwhile a limited researches have treated the logistics from Marketing side [4]. In this paper we will consider the impact of logistics outsourcing performance on the customer commitment and we will develop a conceptual model that can explain this relationship.

Keywords— The outsourcing, Logistics service providers, customer commitment

I. INTRODUCTION

Research in the logistics field continues to grow accompanying the trend of the market. Globalization and the current changes in the environment make the management of the supply chain more complex and consequently the company is forced to choose between "to make" or "to outsource" to better manage the logistics function [4], [5].

To go with this mutation in the provider-customer relationship, some authors have focused their research on the relationship between loyalty and company performance [6] - [8], research in this direction have demonstrated the close relationship between these two variables. Whereas logistics is included in the "Place" variable, loyalty in marketing is considered as an important element and indispensable to an effective marketing strategy in terms of creating a mutual benefit for the company and its customers [9].

II. CONCEPTS OF LOGISTICS OUTSOURCING

A. Definition of logistics outsourcing

The concepts of logistics outsourcing, logistics service provider, 3PL or logistics contract are all words used to designate the practice of contracting externally part or all of the logistic activities that were performed before inside the

company [10], [11]. These different terminologies have made that several definitions can be adopted and which share several elements in common [12].

Berglund, Van Laarhoven, Sherman and Wandel define the 3PL by the activities carried out by the LSP on behalf of the shipper and which consist at least in the management and execution of transport and storage when this is part of the process [13], whereas Hertz and Alfreds define it as "an external service provider that manages, controls and delivers logistics activities on behalf of the shipper", highlighting the mutually beneficial relationship between the two parties [14]. These definitions are complementary and evolving, we will keep in our research the definition given by Hertz and Alfredsson because it represents the current evolution of the logistics outsourcing practice but also because the current trend is toward a win-win collaboration.

Finally, the strategic nature of outsourcing is determined much more by the proximity to the core business, in other words, the importance of the function in the process of value creation but also by the genesis of the function to be outsourced [15].

B. Logistics outsourcing characteristics

There must be a difference between outsourcing and subcontracting. Indeed, outsourcing permanently modifies the boundaries of the firm because part of the organization is outside the firm. Outsourcing is therefore much more about activities that contribute to the creation of added value for the company, which can be either support activities or activities that contribute to the quality of the product and can not concern the core business which is supposed to be kept by the company, here it is necessary to evoke the concept of "core competence" which is the core of the works of Prahalad and Hame, the company can lose its competitive advantage and its knowledge if core business is outsourced [16].

Barthélemy 2004 distinguishes between outsourcing, subcontracting, alliance and downsizing.

Outsourcing is always accompanied by a change in the structural configuration of its resources which aims to optimize and create a value. The transfer of personnel, transfer of machine, contract transfer or co-funding ... are a lot of

examples that can be accompanied with such a project enabling the company to achieve the objectives of cost, time and quality.

The outsourcing decision is always strategic. According to a study carried out in France by the newspaper "Les Echos" of 06 December 2000, the general management was involved in almost half of the cases and that the final decision belongs to him after the opinion of the department concerned. According to Quélin and Barthélemy, strategic outsourcing is characterized by four aspects:

- A transfer of the part of activity concerned by the outsourcing to the service provider and which can also be accompanied by the movement of certain assets of the customer as an example the machines and the employees, this of course does not include the core business which remains the focus of outsourcing debate (see table);
- A more elaborate contractual framework, this is a contract that governs relations between the two parties (in the absence of a dedicated regulatory framework);
- A medium and long-term commitment between the service provider and the customer showing in the contract. To include here the logistics projects co-funded by the customer and the service provider;
- A definition of the reciprocal obligations of both parties as well as the service level requested, KPI's, SOP ...

The strategic nature of outsourcing is determined much more by the proximity to the core business, that is to say, the importance of the function in the process of value creation. Barthélemy 2004 suggest a classification based on proximity to the core business and the genesis of outsourced activity. Since the transfer of resources is not a determinant of the strategic nature of outsourcing, the long-term outsourcing contracts and the important budget characterize strategic outsourcing (Table 1).

		Activity outsourced	
		Activity existing	New activity
Proximity to core business	Fort	Strategic outsourcing with asset transfer	Strategic outsourcing
	Faible	Basic outsourcing with asset transfer	Basic outsourcing

Fig. 1 Outsourcing typologies (Barthélemy, 2004)

III. THE DIMENSIONS OF LOGISTICS OUTSOURCING PERFORMANCE

The performance of logistics outsourcing is an antecedent of logistics performance. According to Sahay and Ramneesh, the latter supposes a compromise between the need to reduce inventories and deadlines in the entire supply chain but also simultaneously to achieve the economies of scale and the improvement of service quality provided to customers. This is became possible by the presence of Logistics Service Providers (LSP) that enable companies to turn fixed costs into variable costs by contracting their services [1].

Cooper, Lambert, and Pagh divided the supply chain into three essential components: processes, managerial components and the supply chain structure [17]. A better integration of these three components leads the company to a better performance of its supply chain [18].

Chow, Heaven, and Henriksson have emphasized the multi-dimensional nature of performance because it involves many parties and the expected results are different and range from customer satisfaction, CSR to efficiency and cost saving [19]. According to the same authors, research in logistics performance is dominated by the use of simple indicators. In the same context we always find the performance component of logistics processes managed directly by the customer of the LSP and the performance component of outsourced processes under the responsibility of LSP.

Stank, Goldsby, and Vickery propose a three-variable model for measuring logistics outsourcing performance, which are: operational performance, relational performance, and economic performance (costs), which are directly related to customer satisfaction. According to them, relational performance is an antecedent of operational and economic performance having a direct positive effect on both variables while only the relational performance that positively influences customer satisfaction [20].

For Wilding and Juriado, performance indicators play an important role in assessing the performance of LSP, these indicators should cover all aspects related to outsourcing (costs, service, productivity, asset management and customer satisfaction) [21], while Cahill see that since the operational performance is defined when the outsourcing contract is concluded, the outsourcing performance can be measured by the achievement of the agreed contractual objectives with the service provider. However, the author added the objective exceedance as a variable to measure the degree of excellence and orientation of the provider towards a loyalty-customer approach [7].

Finally Cheng and Tongzon subdivided the company's performance into two parts, the strategic logistics capabilities (which contains the operational dimensions) and the financial efficiency to study the effect of the complexity of the outsourcing contracts on the Australians exporters performance's [22].

IV. LOYALTY AND LOGISTICS OUTSOURCING PERFORMANCE

Recently several logistics authors have been interested in LSP in time or a limited number of research focused on logistics from a marketing point of view [23].

According to JF Trinquécoste, loyalty constitutes a defensive barrier against competition and provides the firm with a temporary monopoly, it is also a criteria that can be used for assessing its value because it reflects the presence of an important brand asset [24].

Anderson and Sullivan designed a model linking expectations, perceived quality, feedback mechanism, and satisfaction to predict and explain the antecedents and behavioural consequences of satisfaction. The latter has been

linked to the purchase intention, one of the loyalty dimensions [25].

The customer satisfaction model, which is based on the comparison between the customer's expectations and his perception of performance as it was developed by Olivier in 1993, does not specify the possible dimensions of perception of performance since it groups together tangible and non-tangible elements and the perceived difference between expectations and the observed performance may be intangible and sometimes can arise from the perception of the customer alone [23].

According to the same authors, customer dissatisfaction can increase in the absence of LSP performance if it always refers to the customer's contractual or perceptual framework or even the selection criteria adopted during the outsourcing process.

Many authors have been interested on the issue of the selection criteria of the LSP like [26] and [27], also the international association of warehousing and logistics carried out in 2003 an empirical study with the LSP customers and it has shown a significant change in the ranking of selection criteria adopted, between 1994 and 2003, price, reliability and service quality are becoming increasingly crucial factors in the selection of providers.

Among the dimensions that define the service quality, we find reactivity, assurance and empathy [28], which are much more intangible dimensions, hence the importance of the relational aspect in the evaluation of service quality performance of any LSP from a customer side.

Customer satisfaction can be dependent on the achievement of the contractual performance objectives or on the LSP's compliance with the criteria on the basis of which it has been selected [23]. From this point of view, Wilding and Juriado grouped the performance indicators adopted by the customers for the evaluation of their LSP to 12 categories to study those which are the most used, the researches were completed so that the indicators of the delivery, the cost and the service quality (in order of importance) are the most used and that among the reasons for non-renewal of the outsourcing contract with a service provider, service quality (68%) and cost (52%) come in the first ranking [21].

To keep examining the couple cost and service quality, Wallenburg and Lukassen examined the effect that a proactive improvement in LSP's costs and performance can have on customer loyalty represented by the three dimensions: retention, expansion and refers, the results confirmed the positive effect for both variables on the three dimensions of customer loyalty [5].

Salam has studied the impact that behavioural determinants (continuity, communication, power and trust) can have on integration and commitment (through its three dimensions of affective, normative and continuity) within the supply chain. These determinants have a significant impact on commitment and processes. Managers should take them into consideration to develop the performance of the supply chain but also to achieve customer satisfaction [18].

the relationship between service quality and loyalty was analysed by Juga, Juntunen, and Grant, with the customer

satisfaction variable in the outsourcing relationship, in terms of service quality, three dimensions were adopted, these are the operational dimension (planning, speed and capacity), personal (service, contact and expertise) and technical (the technical quality of physical resources, information system and information flow). The results confirmed the role of service quality perception in customer satisfaction and loyalty especially for both dimensions planning and quickness [30].

With the current development in the services offered by the LSP, customer expectations have also evolved and the customer considers the LSP as an extension of its internal services and seeks an adaptation of logistics process to its needs so that we can see the importance of customized approach [31].

Zailani designed a model that links the influence factors of the outsourcing decision with the extent of outsourcing and the performance of the logistics outsourcing. Three dimensions have been adopted for assessing the performance of logistics outsourcing which are similar to the work of [22], these are the strategic, operational and financial dimensions [32].

Finally, Yang has studied the way in which the performance of logistics outsourcing is influenced by relational mechanisms and by transactional uncertainty, for the measurement of outsourcing performance the authors have distinguished between operational performance and customer satisfaction. The research has shown that relational standards can develop satisfaction far more than the contractual framework. Moreover, in an environment characterized by the volatility of the technology, the customer tends to use both of contracts and relational norms at the same time [33].

V. COMMITMENT AS KEY ELEMENT IN THE RELATIONSHIP

The loyalty according to [34] supposes the generation of a strong and favourable attitude towards the partner in comparison with the other alternatives, this cannot be the work of the simple stimulus of the transactional marketing, nevertheless it is a long-term relationship follow up but also favourable attitude that commitment has an important role in its generation. The emotional attachment generated by the affective commitment is reflected in the formulation of a strong positive attitude that leads the customer to maintain a close relationship with his partner [35]. Similarly, negative calculated commitment can develop loyalty through the mechanism by which the customer who remains locked in a relationship because of the lack of alternatives or the cost of change, may well develop over time an emotional attachment and will not attempt to evaluate the other party because of the lack of alternatives or the significant cost of change perceived.

In terms of behavioural loyalty, affective commitment contributes to the maintain of a long-term relationship and the emergence of the partnership relationship. Consequently, more development of the current activity but also the development of the practice of refers that the customer can adopt it for his partner (Fullerton 2003). On the other hand, customers who have this emotional attachment to the partner are more likely to pay a high price (in the case of an

increasing or a non-competitive price) than those who are cognitively committed that think more rational.

VI. HYPOTHESES AND CONCEPTUAL MODEL

From the literature research preceding and following [20] frameworks on logistics outsourcing performance as well as the loyalty approach formed by [34], we can formulate the following hypotheses:

H1a: Relational performance has a positive impact on customer satisfaction;

H1b: Economic performance has a positive impact on customer satisfaction;

H1c: Operational performance has a positive impact on customer satisfaction;

Also referring to [35] research, we can use the customer satisfaction variable as being the direct effect of the performance which supports the previous hypotheses.

On the other hand, the comparison between the performance of the service provider and the alternative existing in the market, which can find the origin from the theory of social exchange [36], is represented here by introducing the variable of alternative performance in order to identify its existence and that will have a significant impact in forming a positive attitude. Similarly, satisfaction will lead to the formation of a positive attitude towards the provider and the type of contract will act as a moderating variable, since long-term contracts will lead to maintain partnership relationship and therefore more opportunities for the customer to experience his provider. We assume the following hypothesis:

H2a: The existence of an alternative performance has a negative impact on the triggering of a positive attitude on the customer side;

H2b: Customer satisfaction has a positive impact on customer attitude;

H2c: The type of contract plays a moderating role in forming a positive attitude;

Customer satisfaction may have a direct impact on the behaviour adopted by the customer with the intervention of the moderating variable of the current outsourcing scope. A satisfied customer who has outsourced part of its logistics, may intend to extend the current scope of outsourcing to other activities.

H3a: Customer satisfaction has a positive impact on the customer's buying behaviour;

H3b: The current scope of outsourcing plays a facilitating role in adopting positive customer behaviour;

And finally the mixed approach of loyalty [34] as well as the work of [37] on the relation between attitudinal loyalty and commitment find their place among the hypotheses, the generation of a favourable attitude alone can lead to affective commitment while when accompanied with a manifestation of a behaviour then we can talk about cognitive commitment. The following assumptions can be added:

H4a: The attitude has a positive effect on the commitment to the provider;

H4b: The customer's behaviour has a positive effect on the commitment to the provider;

Satisfaction and commitment are the main endogenous variables. The conceptual model can be represented as below:

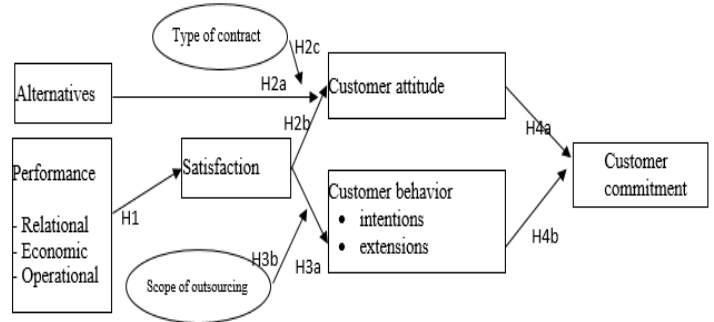


Fig. 2 The conceptual model for outsourcing performance and customer commitment

VII. DISCUSSION AND LIMIT OF THE MODEL

The study of loyalty in the context of logistics outsourcing highlighted the problem of categorization of key performance indicators. Several indicators are adopted and different depending on the context, but it is important to set up a performance evaluation system of the LSP in order to be able to measure the impact that can have on customer loyalty.

On the other hand, research dealing with loyalty in relation with outsourcing has given a lot of importance to the behaviourist approach of loyalty and the role of the attitude formed from the customer side has been neglected for simplification or measurement. However, the literature revue on marketing clearly shows the determining role of attitude formation in repurchasing decision, Dick and Basu suggested a matrix of the relative attitude crossing the degree of attitude with the differentiation of attitude, for them, the relative attitude is influenced by the individual perception of the differences felt with the brands, it is at its strongest level when the company is associated with a strong attitude and that its presence in the spirit of the interlocutor is really differentiated from other brands [34].

Including the attitude in a model with external variables highlight the problem of attitude measurement that is subject to many approaches that we have neglected some of them for simplification. And also the attitude can be approached more by longitudinal studies since it is changed over time. These limit can be taken into consideration for future research.

The model proposed above will be subject of testing with a sample of companies that used the services of a logistics provider in Casablanca through a questionnaire with Likert scales reflecting each variable of the model.

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