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**Analysis of the Logistics Service Provider/principal relationship
In the light of innovation as a LSP strategy**

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Abstract:

The stakeholders in logistics outsourcing are logistics service providers (LSP). The trend towards outsourcing logistics operations by manufacturers and trade companies makes these providers widely sought and recognized professionals.

Motivated by a search for cost efficiency, this orientation is nowadays similar to a need to acquire skills not internally available or difficult to preserve. The construction and execution of innovative value-creating offers for companies are, therefore, at the heart of the PSL strategies.

The relationship that the LSP has with its principal is central to the innovation process and determines the nature and type of the implemented innovation. In this regard, the innovation is perceived by the PSL as a means of perpetuating their relationship.

An analysis of the LSP / User Logistic Services dyad (producers, distributors) seems interesting to us as it allows for emphasizing the aspects of this relationship from different angles: logistics, contractual as well as the partnership level.

The first part of this paper will set up the theoretical foundations of a reflection on the PSL offer, and in particular their current practices in terms of innovation.

In the second part, we explain, through an extensive review of the literature, the main theories used to study the relationship between the PSL and its principal.

The work aims at presenting not only testable hypotheses on a conceptual analysis, but also theories derived from the relation LSP/Principal.

Keywords: *Innovation, Logistics outsourcing, LSP, Principal, Relationship*

Track: *Management & Leadership*

Word count: 8.264

1. Introduction:

The current flow tension, the pressure of tight deadlines and the quality of service make of logistics a strategic function or essential at least to the business strategy. This strategic dimension favors the increasing use of outsourcing logistics services to professionals who are challenged to develop and consolidate a dual competence related, on the one hand, to its organizational capacity, and on the other, to its innovation ability (Brulhart and Claye-Puaux, 2009). The construction and execution of innovative value-creating offers for companies are at the heart of LSP strategies to differentiate and destabilize the competitive game.

It is in this perspective that a review of the literature in logistics and strategic management is conducted to highlight the role of logistics service providers (LSP) and the challenges of innovation for these third parties. Thus, in a first part, this article will lay the theoretical foundations of a reflection around the supply of LSP and in particular their current practices in terms of innovation. In a second part, and through a review of extensive literature, the article highlights the main theories mobilized to study the relationship between the PSL and the shipper. This work aims to present testable propositions based on a conceptual analysis, but also derived from theories on the relationship LSP/Principal.

Logistics outsourcing and the use of LSPs

Beyond the strategic dimension of logistics, the emergence of the logistics delivery market is based on the disengagement of companies from activities considered "peripheral" and by refocusing on the core business, that is, activities deemed "essential" (Paché and Sauvage, 2005). This disengagement is reflected by a tendency towards outsourcing.

Outsourcing can be defined as the use of an external service provider, for an activity that was previously carried out within the company. It is often accompanied by a transfer of material and/or human resources to a provider responsible for replacing internal services in the context of a medium or long-term relationship (Barthélemy, 2000). Based on a contract, outsourcing can include at the same time the transfer of material and/or personnel, the commitment of different parties to a lasting relationship, as well as the reorganization of outsourced services, with the aim of increasing competitiveness (Chesbrough & Teece, 1996; Dumoulin & Martin, 2003; Barthélemy, 2004; Hoole & Houland, 2005; Proulx, 2006; Ramanujan & Sandhya 2006). However, it can go beyond the framework of the contract by getting involved into inter-organizational relationships. Applied to the field of logistics, outsourcing is the fact of entrusting all or part of the supply chain, previously provided internally, with a possible transfer of resources, to an external service provider with a view to performance (Lieb & Randall, 1996; Langley, Dobrey & Newton, 1997; Murphy & Poist, 1998; Skoejtt-Larsen 2000).

Businesses first organized their own logistics with their own resources (fleet of vehicles, warehouses ...); however, the majority of companies today have outsourced at least the "low layers" of logistics, starting with transport operations. As a result, the service offered by LSP has expanded considerably (Tixier *et al.*, 1983), so as to match supply and demand (Hertz & Alfredsson, 2003; Fulconis *et al.*, 2011; Zacharia *et al.*, 2011). They evolve from a simple control of operations of the activities to a control of design of the logistic systems (Fulconis *et al.*, 2011).

Sink & Langley (1997) define the logistics provider as a service provider capable of assuming some or all of a firm's logistics activities. Third-party logistics service providers are external suppliers "who manage, control and perform logistical activities on behalf of a shipper" (Hertz & Alfredsson, 2003). LSPs are companies that perform logistical activities on behalf of third parties (Delfmann *et al.*, 2002).

Activities carried out by a LSP on behalf of a shipper consist, at least, of the management and carrying out of transport and storage. In addition, other activities may be included, such as inventory management, activity-related information, such as tracking and tracing, value-

added activities such as secondary assembly and product installation, or even supply chain management (Berglund *et al.*, 1999).

It is deduced that the LSP is above all a third and external supplier of logistics services in charge of performing all or part of the logistics activities of a company (a shipper) which can relate to:

- Storage operations: reception, unloading and control of materials and goods, handling, storage.
- Para-industrial operations: after-sales service and repair, assembly, finishing, packaging.
- Para-commercial operations: order preparation, picking and constitution of promotional lots, sales forecasts, price marking, and tracing-tracking.
- Proper Managerial operations: order tracking, expiration dates, pallet return, and inventory management.
- Consulting activities and transport operations: traction, chartering, purchase-negotiation of freight, insurance ...).

LSP: What typology?

Stemming from maritime, road, rail or freight forwarders or courier activities, the origin of logistics providers explains their diversity. In order to meet the increasingly demanding requirements of principals, the modern trend of service providers is to offer services that are as broad as possible, when originally these activities were particularly segmented (Roques & Michrafy, 2003). For some LSP, it is a matter of tending towards total integration of the various logistical operations of the principal.

The supply of LSPs is varied, ranging from the simple transport of goods to complex, customized and modular solutions.

According to Fulconis *et al.* (2011) three historical stages of the logistics service can be distinguished: from simple executives and operational actors at the outset, in a second phase, the service provider becomes a real expert to meet the client's request, on more or less complex logistics activities. Finally, in a third phase, the service provider actively participates in the co-definition of processes in a strategic vision of the company. It is even possible to say that the LSP become in a later stage, co-designers or even designers and supply chain managers, in an innovative and creative approach.

For their part, Filser and Paché (2008) distinguish logistic service providers on the basis of the complexity of their offer. Indeed, they cite three families of LSP: the 2PL (second party logistics), traditional service providers whose only offer is the execution of simple physical operations related to transport, the 3PL (third party logistics) which, in addition to transport, offer value-added services including industrial, commercial, informational and administrative operations. In the end, 4PLs (fourth party logistics), dematerialized actors and having

practically no own assets, real "developers of turnkey solutions" (Roques & Michrafy, 2003) are called by mobilizing resources from different partners and ensuring coherence through complete control of information flows.

According to another classification, more specific names were given to LSP to identify them (the Accenture firm). In addition to 1PL (first party logistics) whose exclusive activity is the outsourcing of transport or warehousing, the 2PL (second party logistics) which are responsible for the sole outsourcing of transport and warehousing, distinguishes the activity of 3PL (third party logistics) which groups together the first two families mentioned above and, finally, that of 4PL (fourth party logistics) which belongs to the dematerialized PSL family. They distinguish themselves from the 3PLs that manage flows using their own means of transport and storage, and aim to provide their customers with tailor-made logistics solutions (particularly information) by grouping a network of skills (transport, storage, etc.). They then offer purely informational services by playing the role of intermediary between the shipper, its various service providers (transport, logistics, etc.) and its market.

A third classification is to quote according to the professional press which introduces two other names: LLP (lead logistics providers) and LLM (lead logistics managers). They come together and refer to the case where a single partner, itself using subcontractors, oversees all of the logistics flows of its client in a large area.

On the basis of the classifications quoted in our literature, we propose the following synthesis of the typology of LSP:

Table 1: Summary of the typology of LSP		
Typologies of LSP	Characteristics and nature of the offer	
1PL	<ul style="list-style-type: none"> • Subcontracting of transport or storage 	3PL
2PL	<ul style="list-style-type: none"> • Classic provider • Performing simple physical operations related to transportation and storage 	
3PL	<ul style="list-style-type: none"> • Value-added services, including, in addition to transportation, operations of industrial, commercial, informational and administrative characteristics • Uses own resources (means of transport and storage) 	
4PL	<ul style="list-style-type: none"> • Dematerialized LSP • Having virtually no own assets • Mobilize resources from other partners • Total control of information flows • Groups a network of skills • Develops Customized logistics solutions 	4PL
LLP et LLM	<ul style="list-style-type: none"> • Only partner of the principal • Uses subcontractors • Supervises logistics flows over a wide area 	

Source: personal elaboration

Given the typologies of LSP present in the literature, the scope of competences of the actors on this sector and the variety of the offer is clear. Indeed, the creation of new offers and their differentiation are levers of performance and profit for the market players (Selviaridis & Spring, 2007), especially in a highly competitive and uncertain sector, as is the logistics service delivery sector. It is thus possible to consider innovation as a strategy for differentiating the supply of services. The LSP seeks to be everlastingly rooted in the relationship with its shipper through the implementation of complex and diversified strategies. Hence forward, there are real challenges to service innovation in LSP.

Innovation at the service of LSP:

Before highlighting the increasing resort to LSP for innovation, it is important that we first define this notion of innovation, which is widely presented in management literature. According to Tidd, Pavin and Bessant (1997), innovation is a process of transforming possibilities into practical use. This definition is completed by that of Wissema (2005), who sees innovation as the successful introduction of something new. Success results in acceptance on the market or by any other use. Of these two definitions, innovation will be presented as the newness of something following the introduction or transformation of what exists and which success depends on the perception that the user may have of this change. Applied to logistics, this definition makes it possible to consider that logistics innovation includes within it any novelty that affects logistics in the broad sense, which would be introduced, accepted by the market and used. It may include innovations that are not specific to logistics from the moment they are retained and used in logistics. This innovation capacity of companies can be applied within the supply chain (Prahalad & Krishnan, 2008) and can result in the design, development and deployment of new business processes, new information systems or new managerial processes (Ageron, Lavastre and Spalazani, 2013). There are, however, few articles that define the concept of "logistical innovation". For some, it is limited to technological innovation by Logistics Service Providers (Lin, 2008; Tsai & Tang, 2012). Others provide no definition of logistical innovation. However, we retain some definitions, relevant though incomplete for some, of logistical innovation in our literature review:

- (1) Van Klink & Visser (2004) present logistics innovation as: "the development and implementation of new elements in logistics management. This can take the form of new processes, new products (logistics concepts), new positions in the supply chain (system innovation), and a shift to new supply chains (market innovation) ".
- (2) Flint *et al.* (2005) argue that: "Logistic services from a 'basic to complex' level considered new and useful for a particular target. This target could be internal with innovations that improve operational efficiency or external with innovations that better serve customers."
- (3) Daugherty, Chen & Ferrin (2011) who stress "the ability of a company to develop new innovative logistics services".
- (4) El Bahraoui, Claye-Puau and Guieu (2016) recall that: "logistics innovation is above all an innovation. The elements of definition of innovation apply with regard to the nature of logistics innovation (product innovation, technology, process ...), its intensity (level of radicality) and its dimensions (organizational / technological). But these authors also stress

that "the singularity of logistical innovation is expressed in characteristics related to the activity (multi-actors, transversal, inter-organizational) and to the very purpose of logistics (more and more noted in the principles of sustainable development) ".

The four definitions come together on the presentation of innovation as the introduction of a novelty in the management of logistics. Moreover, these definitions complement one another in the sense that: • (1) highlights the various forms that logistics innovation can take: innovation in processes, products, systems and markets; • (2) considers that it is the nature of the target that defines the nature of innovation in logistics services. In the case of an internal target, innovation will focus on improving operational efficiency, whereas if it is an external target, innovation will focus on customer satisfaction ; • (3) presents the concepts of "innovation in services", as well as the "capacity to design" logistics innovation by companies, concepts that are particularly relevant to our research theme. However, it should be emphasized that logistics innovation cannot be reduced to a simple innovation in services, but is one form among other logistical innovations. Examples include RFID and logistics pooling that go beyond an innovation in logistics services. On the other hand, this definition cites the concept of logistical innovation as the only approach to logistics innovation, while there is another one that can be associated with the first: we talk here about the design and/or adoption of logistics innovation by the company. • (4) states that the classic dimensions of innovation are applicable to logistical innovation. The latter can relate to an innovation of product, technology, process, it can also be technological or organizational, but also, it takes again the degrees of intensity of the classic innovation (incremental to radical). However, the singularity of logistical innovation is expressed in terms of two characteristics that are its scope of deployment and the scope in which its effects will spread. It is also manifested by its pursued objectives, not only economic, but also anchored in the practices of sustainable development. At the end of these definitions, we notice that the logistic innovation can be of different types and natures that it would be wise to present.

Typology and nature of innovation:

Many typologies of innovation are presented in the literature. For the most part, they are constructed from one of two characteristics: (1) the element affected by the innovation: product, process or organization (Hamdouch & Samuelides, 2001); (2) the degree of novelty of innovation in terms of incremental, radical or total innovation (Birkinshaw *et al.*, 2008).

Incremental innovations are part of a short-term vision of the company and aim to improve what already exists as well as the return on investment by slight increases (related to products and services, processes, technologies, etc.). We also speak of "exploitation innovations". Radical innovations drive the horizon in the long term and aim to secure the future of the company through greater changes and breaks that render existing knowledge obsolete. They are also called "exploration innovations". The two-time horizons are to be considered by the companies which must combine the two types of innovations with different stakes, but with the interdependent performances.

However, we will retain another classification according to which innovations in services can belong to two groups differentiated by their analytical approach. While the first group supports studies that reduce innovation in services to the adoption of technical systems

introduced and disseminated by suppliers of industrial companies (in this case, the innovation is then reduced to its technical dimension, i.e. the technical improvement made), The second group, on the other hand, deals with the non-technical dimension of innovation. These two innovation groups in the services, the technical/technological group and the non-technical/service group, have a different influence on the exploration and exploitation activities of innovation by the services (F. Djellal & F Gallouj, 2007).

The work on innovation focuses more on networks of technological innovations and little on the actors at the origin of innovation in services, because there are almost always intellectual property rights. Services remain, in general, the "poor relation" of innovation management literature (Gallouj & Weinstein, 1997; Dumont, 2001).

The innovative offer of LSP:

The analysis of the typologies of PSL and their capacity to innovate allows us to note that they combine different innovation situations classified according to four criteria: the degree of complexity of the services provided, the degree of client adaptation, the degree of mastery of the process by the LSP and the degree of integration of the LSP into the supply chain underscores

The degree of complexity illustrates the scope and value-added of LSPs' services. Indeed, we are witnessing a real development of logistics services that have moved from "simple" transport, "the purely operational" (Berglund et al., 1999, p.66), to the implementation of complex solutions that may include after-sales service or direct marketing, billing and consulting activities (Delfmann et al., 2002). Services can be standardized, assembled or highly customized (Delfmann et al., 2002). It can, thus, be deduced that PSLs are likely to combine different innovation situations. However, the degree of complexity of the offer is not comparable to the number of services entrusted to the PSL, but highlights the level of difficulty of the service offered by the LSP.

The degree of client adaptation is that LSPs can develop and implement services to meet the needs and requirements of the client, or not (Hertz & Alfredsson, 2003). In the first case, they are in a reason of demand while, in the second, they follow a logic of supply. It is thus a question of knowing if it is the customer who is at the initiative of the development of the offer by the LSP which undergoes its requirements, or, on the contrary, it is the LSP which makes its customers benefit from the offers that it has been able to implement on behalf of several industrialists and/or several distributors. The mutualized management of supply is an example to mention in the latter case.

The degree of mastery of the process by the LSP refers to the know-how and expertise of LSP and the fact that they are able to perform their own service or subcontract all or part of it. The control here illustrates the execution of the service and not its control. According to Persson and Virum (2001), LSPs are to be classified according to the ownership of assets and the type of response provided to clients. Four types of LSP are thus identified as being logistics operators or TPLs, agents or integrators.

The degree of integration of the LSP into the supply chain underscores, in the end, the importance that the role and place of the LSP in the supply chain can have. In fact the LSP

might not have the same impact, or the same degree of knowledge on the processes according to the client under consideration, their outsourcing policy, the prior background, and the climate of the relationship maintained between the actors.

We will remember that LSPs are likely to offer complex, standardized, personalized services, to consolidate and recombine existing offers (Kacioui-Maurin, 2012), and to set up innovation strategies of different nature and degree; innovations that may relate to the service offered or the process for carrying out this service.

Analysis of the theories mobilized on the relationship LSP/Principal :

In order to build a conceptual framework for our research, we will first focus on the organization of the market and relationships between firms. The strategic management, in which our research claims to place itself, is strongly influenced by these market mechanisms, which, applied to logistics and particularly to the logistics delivery market, lead us to examine a number of theories on the relationship PSL/shipper to highlight the basic assumptions of our research work. These are the theories of agency supplemented by the theory of rooting, the theory of resources and skills, and finally the theory of innovation.

• Theory of the agency supplemented by the rooting theory

PSLs are making themselves increasingly indispensable to manufacturers and distributors by making significant investments in marketing and logistics (Lepers, 2003).

The relationship between a shipper and an LSP can be studied according to the theory of the agency (Jensen & Meckling, 1976; Sauvage, 1997; Song, 2003) which can, however, be completed by the theory of rooting. Indeed, for the theory of agency, the shipper (the principal) makes a contract with a LSP (the agent) who undertakes to achieve objectives, such as increasing productivity, reducing costs, etc. "An agency problem arises when there is a divergence of interests between the principal and, in the face of uncertainty, imperfect oversight of the agent's efforts, in the presence of contract costs" (Rojot, 2003).

In the context of an inter-organizational relationship, a company may set itself the goal of extending, as long as possible or even sustaining the relationship in order to continue to enjoy the benefits that flow from it. However, an extensive academic literature reveals that this increased use of power by the actors of a relationship can negatively affect its long-term survival and, thus, impact the keys to its success, namely commitment, trust, cooperation and conflict resolution. On the other hand, a good combination of these variables improves the performance of this relationship.

In a logic according to which the work of the manager is essentially determined by various solicitations coming as well from the interior of the organization as from its environment, one understands that they condition its conduct in the matter of the relations, and speaking of the strategies of rooting of a company in an exchange relationship clearly means that it is the top management that finds particular interest and thus seeks to procure all means to achieve this goal.

According to J.B. Heide, a symmetrical interdependence promotes the alignment of the interests of the parties involved, encourages an attitude of flexibility and removes the presence of opportunistic behavior, which can allow the continuity of the relationship. Indeed, according to a large number of authors, the performance of a relationship increases when the interdependence of companies becomes symmetrical and stronger. It is in the parties' interest to cooperate and coordinate their actions in order to implement the means to create value and to fairly share the benefits that will potentially be generated in the relationship. It follows that in an inter-organizational framework, the parties must seek a balance of power to extract maximum benefits from the relationship.

Therefore, it seems relevant to explain, given the theory of rooting, the process that can allow the relationship between the LSP and their customers to become sustainable. We present two basic postulates:

- Basically, it is the LSP that develops the interest of continuing the relationship to increase the benefits this can generate. It is more of a result of the economic performance and potential benefits that the industry can derive from it than the primary purpose of that relationship. Good execution by the LSP is therefore necessary for this approach.

- We presume that it is an agency relationship that connects the LSP and its client since the latter (in the role of the principal) appoints the LSP as their representative (the agent) and delegates the fulfillment of specific logistics activities. This relationship requires three conditions to be considered as an agency relationship: 1) there exists between the agent and the principal conflict of objectives that generate opportunistic motives; 2) there is a sufficient level of uncertainty about the incomes of the actors, in particular the sharing of the created value and the continuity of the relationship; and 3) it is difficult to assess the behavior and performance of the actors, especially given the possible existence of informational asymmetries between the principal and the agent.

Finally, we note that, according to Medina (2006), the rooting of the agent is a process that is divided into three stages: valuation of the relationship, positive rooting and ingrained rooting.

Valuating of the relationship: At first, the agent must be satisfied with the relationship. The LSP must ensure that their agent has a positive perception of this relationship and is beginning to value it. The LSP will, therefore, have to effectively carry out the activities assigned to it (Medina, 2006). The valuation results in the sharing of the created value, the extension of the contract, as well as the perpetuation of the contract between the LSP and its shipper.

Positive rooting: This occurs when one or both parties decide to seek a lasting relationship, and work to "set up rooting strategies that can guarantee long-term powers in the relationship" (Medina 2006). These rooting strategies consist of developing the expertise of the third party provider. In which case, the LSP becomes essential to the functioning of the company by expanding their service offer (Fulconis & Paché, 2005).

Finally, ingrained rooting appears when the two organizations become interdependent, which brings about a balance in their powers. The risk arises if "the effects of the rooting strategies set up in the relationship fail to balance the power relationship in the long run, in which case serious conflicts could arise and cause the termination of the relationship" (Medina, 2006).

Thus, by both parties jointly possessing resources and skills, this has the direct consequence of "lengthening the duration of joint projects" (Lepers, 2003), bearing in mind the costs that may be incurred by the break-up of such a relationship, both parties have every interest in perpetuating the relationship.

We will retain the following hypotheses:

H1: There exist between the LSP and the charger conflicts of objectives that generate opportunistic motives.

H1-1: The performance of a relationship increases when the interdependence of the parts becomes symmetrical and stronger.

H1-2: Symmetrical interdependence promotes the alignment of the interests of the parties involved, encourages an attitude of flexibility and removes opportunistic behavior.

H2: The valuation of the relationship between the LSP and their shipper results in the extension or even the perpetuation of the contract.

• **Resource based View supplemented by the Core Competence Based View**

The resource approach is the subject of several currents including the undisputed precursor Penrose (1959) (Prévot *et al.*, 2010). While the emphasis was on a competitive logic, based on the nature of the products and services offered by the company, it addresses the issue of competition from the point of view of internal resources to the firm that constitute its competitive strength according to the management applied to maintain this force indefinitely and in an unlimited way. According to Penrose, the company has a "technological base" composed of tangible resources (materials, factories, equipment, etc.) and human resources (labor, skills, organizational resources, etc.). These elements form a basis for the growth of the company. If some of the elements of this technological base are rare, they give the company that holds them a competitive advantage. The company will stand out thanks to the experience and competence of its staff. The evolution of the firm will depend on the resources available to it and the ability of the manager to bring out the competence of his staff. The main question raised by the resource approach is that of the company's performance and the conditions for developing a competitive advantage through the identification of resources. Indeed, the identification of strategic assets, and more specifically the nature of resources, allows firms to perform better. According to Grant (1991), the main categories of the firm's resources are financial resources, physical resources, human resources, technological resources, reputation, and organizational resources, knowing that resources relating to the intangible elements of the firm are the most important and have more value including the competence of the staff.

The Resource theory has been used as the basis for more recent skills models (Prévot *et al.*, 2010). Its emergence has strongly contributed to theoretical developments in strategic management (Rumelt, 1994). The competency-based approach is rooted in the work of Prahalad and Hamel (1990), who refer to the “core competence” or competence of organizations. This notion concerns skills already acquired by firms and their appropriation in order to derive maximum value from them. The main issue of this approach is the development and transformation of the company's skills with the ultimate goal of creating value for the organization (Hamel, 1994; Hamel & Heene, 1994). The creation of value by the skills makes it possible to orient the competition between companies on competences (Hamel & Prahalad, 1989; Stalk *et al.*, 1992). According to this approach, the concept of management by competence is approached according to the dynamic, systemic, cognitive and holistic dimensions (Sanchez, 2004), which make it possible to apprehend the firm and its environment as well as the interactions between the two of them. These four conditions are the cornerstones of the competency approach:

- Dynamic: the extent to which the environment, the market, and also the organization are subject to many changes leading to changes in the competition environment of firms. The skills must make it possible to face these external changes and also internal ones to the firm by allowing for the creation of value. The notion of sustainability is also discussed and refers to internal disorders in organizations that the firm must overcome (Sanchez, Heene and Thomas, 1996; Sanchez, 2004).
- Systemic: knowing that the competences of the organization must make it possible to meet the requirements of the organization, seen in the form of a system, but also to be effective within the framework of the relationships between organizations. This is how asset coordination is approached, both in an internal logic (assets under the control of the firm) and in an external logic (assets related to the firm, yet outside its borders: subcontractors and customers). The objective of the organization is to be both effective and efficient in its internal organization, as well as in positive interaction with its environment.
- Cognitive: given that the skills must allow for the identification of the strategy adapted for the organization, in order to be able to develop assets able to create value through specific activities, it is the management of the firm that must guide the organization's strategy towards these activities in logic of efficacy but also of efficiency.
- Holistic: taking into account the fact that the organizational skills must be at the service of all the professionals and individuals in the holistic sense of the organization as well as all the actors in interaction with the organization, called the stakeholders, the organization, from this perspective, is subject to internal and external pressures, performance requirements whatever the period.

The advantage of the approaches of resources and competencies is to identify the strategic resources of the LSPs (tangible or intangible) that can be held and then combined with specific skills and will allow the provider to acquire a reputation; that of being able to offer manufacturers a competitive offer and, thus, develop a cutting edge. Successful experience and customer satisfaction can maintain and strengthen the claimant's reputation.

Table 2: The tangible and intangible resources of the logistics provider related to its delivery offer

Tangible resources of the provider related to his offer	
Physical Resources	Warehouses, vehicles, material resources on own or subcontract, reliable, adaptable, mobilizable and varied to meet the specific needs of customers.
Human resources	Experts in information systems, supply chain management, devoted to partners, with knowledge of all players in the supply chain, in a proactive way.
Financial resources	Sufficient to make investments without automatic or immediate outcome.
Intangible resources of the provider	
Technology Resources	Simultaneous management of physical and associated information flows. Expertise in IS: adaptation of information systems to the specificities of loader customers.
Organizational Resources	Mastery in the modular layout of the services available.
Reputation	Reputation in the field of concrete logistics outsourcing projects: marks of Trust from client, shakers, length of contracts, ease of communication.
Staff skills	Substantial and extensive know-how: in management, in supply-chain management. Expertise in management control for both the service provider and the client, for the financial viability of the partnership (contract costs, data collection costs of partners, etc.), negotiation skills, relational skills.

Source: Adapted from MICHON, 2014

We will retain the following hypotheses:

H3: The tangible and intangible resources of a LSP influence the construction of a service offer.

H4: The resources and competence that the LSP has or can have impact the innovation of logistics services.

H5: By jointly owning resources and competence, this has the direct consequence of extending the duration of joint projects and thus the duration of the relationship.

- **The managerial approach of innovation**

Innovation is at the heart of the economic dynamics, but there is no unified framework for managing innovation or creativity; nevertheless, all research authors in the managerial approach to innovation share the same objective explaining how resources and skills are deployed, and how value is created by introducing new ideas into the organization and the market.

Considered as "the father" of the economy and management of innovation, Schumpeter clarified this notion of innovation and, above all, put forward the differences between innovation and invention. An invention is a new solution to a problem that can be technical or not. Innovation, on the other hand, consists of introducing the invention into the economic circuit, giving it economic value. In other words, innovation is an economic and social process, whereas invention is above all a technical process.

Schumpeter's work is not limited to the distinction between innovation and invention. He also develops a theory linking innovation, imitation and the cyclical evolution of the economy. Indeed, Schumpeter begins by noting that innovations do not usually appear in isolation and independently, but in clusters or troops. While during certain periods a large number of innovations accumulate, in other periods there are very few. He concludes that innovations are not independent of one another. He justifies such dependence by the introduction of the distinction between radical innovations (of rupture or exploration) and incremental innovations (induced or exploitative). Radical innovations create many technological opportunities and open the door to other incremental innovations (improvements). This helps to explain the presence of groups of innovations concentrated on certain periods.

The economic cycles would thus have their origin in the arrival of radical innovations, themselves followed by a large number of incremental innovations, which requires a long period of growth. The evolution of the business cycle affects the technological opportunities and thus the innovation strategy of a company (Tushman & Anderson, 1986).

Indeed, put forward in macroeconomic debates, the exploitation / exploration dilemma will gradually move into the field of strategy (Miles & Snow, 1978) in a pure perspective of renewal of products and markets. March (1991) defines exploitation as the set of short-term improvements, refinements, routinizing and development of existing knowledge at a given moment (ideas, paradigms, technologies, strategies). Exploration refers to replacing this knowledge with new ones in order to improve the functioning of the company. The adaptation, according to March, requires the presence of these two dimensions to remain energized.

It is true that exploration or exploitation are opposite and irreconcilable characteristics for the same organizational entities for many authors such as Schumpeter (1935), Burn and Stalker (1961), or Porter (1980); yet Duncan (1976) proposes reconciliation of these two objectives within the same structure. The dual model developed by the latter requires a necessary mutation of the organization over time, moving it from an organic structure to a mechanistic structure in order to better exploit the innovations created commercially.

March explains a natural tendency of the company which will gradually favor the speed, the clarity and the proximity of the profits of the exploitation with the effects more diffused and distant from the exploration. However, he points out that this addiction can be destructive in the long run (Denrell & March, 2001). The author does not reject the fact that this tension between these two characteristics can find a balance within the organizations, (Levinthal & March, 1993). Besides, he will come back on this idea and propose to leave this myopia of the companies combining operations with a sufficient number of exploration activities that alone will ensure longer-term survival.

For his part, Duncan (1976) does not speak directly of exploration and exploitation, but through the notion of ambidexterity, considered as a particular skill that the organization must acquire, he refers to this dilemma. Structural ambidexterity (Tushman and O'Reilly, 2004), contextual ambidexterity (Gibson-Birkinshaw, 2004) and a form of networked ambidexterity are later developed (Mc Namara & Baden-Fuller, 2004). (Ferrary, 2008) Structural ambidexterity is based on the principles of differentiation of organs and specialization of employees in a particular function of exploitation or exploration. Contextual ambidexterity addresses the idea of an organizational culture that promotes autonomy, risk-taking and the versatility of employees. This allows everyone in the organization to explore or exploit at any time. Finally, a form of ambidexterity of network (called inter-organizational) tries to demonstrate that one can specialize internally in order to exploit best, and explore externally by outsourcing.

Applied to our research framework, the use of LSP can be considered as an exploitation/exploration strategy, and the innovation of these service providers is considered as a lever of performance and significant profits. Indeed, it appears in the literature that LSPs innovate by exploration as well as by exploitation. In pursuit of exploration strategies, they develop new services and processes. When pursuing exploitation strategies, they implement incremental innovations (standardized service and extension of services) and assemble existing services ("bundling").

Table 3: Summary of Exploitation/Exploration Innovations

Innovation dimension	Type of ambidexterity	Characteristics	Exploitation/Exploration
Intra-organizational	Structural ambidexterity	<ul style="list-style-type: none"> • Differentiation of organs • Employee specialization 	Strict separation between the exploitation function and the exploration function
	Contextual ambidexterity	<ul style="list-style-type: none"> • Autonomy • Risk taking • Versatility of employees 	Separation in time between exploitation function and exploration function: time sharing between exploitation and exploration
Inter-organizational	Network ambidexterity	<ul style="list-style-type: none"> • In-house specialization • Outsourcing 	Separation in the space between the exploitation function and the exploration function: Internal Exploitation and External Exploration

Source: personal elaboration

We will retain the following hypotheses:

H6: LSPs innovate by exploration as well as by exploitation.

H7: Characteristics related to the context in which LSPs evolve indirectly influence the use of such or such forms of organizational ambidexterity.

Conclusion and perspectives of the research:

In conclusion to this paper, appears a reflection on the typology of the LSP, their mechanisms of construction and execution of offers of innovative logistic services, at the intra and inter-organizational level.

Indeed, our theoretical contribution has been able to highlight the increasing use of companies to outsourcing strategies by entrusting all or part of their logistics to LSP. The modern trend of LSP, to meet the increasingly demanding requirements of the customers, is to offer complex, standardized and personalized services.

We were then able to describe the innovation of service at LSP and the link between exploration and exploitation innovation in logistics services. Thus, on the one hand, LSPs pursue exploration strategies when they develop new services and processes that are long-term, and, on the other hand, they develop exploitation strategies by implementing incremental innovations and assembling existing services in the short term. Our research also puts into perspective the impacts that the ambidextrous organization can have on the service innovation of LSPs.

In addition, a sketching of theories on the relationship LSP/Principal was presented and analyzed in the light of innovation as PSL strategy to sustain the relationship with shippers. At the end of these theories, hypotheses have been formulated that will be tested later through empirical research.

However, it should be noted that the nature of the relationship between the LSP and their client, the variety of situations encountered by the LSP, the requirements of the shipper in the face of a competitive market, and their different profiles are all specificities that can influence the innovations pursued by these third parties.

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