Gest. Prod., São Carlos, v. 25, n. 3, p. 458-484, 2018
http://dx.doi.org/10.1590/0104-530X2016-17

ISSN 0104-530X (Print)
ISSN 1806-9649 (Online)

Framework built on resource based view for outsourcing strategy on hiring logistics service provider

Framework fundamentado na visão baseada em recursos para estratégia em terceirização na contratação de prestador de serviço logístico

Geraldo Cardoso de Oliveira Neto[1,2]
Moacir Godinho Filho[3]
Marilson Alves Gonçalves (*in memorian*)[4]
Benny Kramer Costa[5,6]
Dirceu da Silva[7]
Marlene Paula Castro Amorim[2]

Abstract: The process of Outsourcing Logistics Service (OLS) is deemed incipient in the management of organizations, not only because of the operational problems it presents, but also of its difficulties fitting into the company's overall strategy. The present theoretical study, building on the resource-based view of the firm, aims to propose a framework that guides managers in developing strategies to OLS starting from the operational structure to establish the necessary resources, capabilities, and routines. In addition, taken into account is the importance of analyzing risks and resilience in the environment, concomitantly with the analysis of the operational structure. Thus, four questions were developed, aimed at leading operations managers to reflect on the development of the strategy. The framework proposed for OLS considers the supply chain management department as the main interlocutor of the strategy. This framework can be adapted according with the necessity of the contracting company, and its main intention is to enable the establishment of a project that contemplates the necessary resources, the capabilities (criteria), and the operational routines (subcriteria) for the selection of a logistics service provider in the market, one which truly addresses the needs of the organization. This framework is already intrinsic in the practical actions of the authors, because of their extensive advisory activity over the last five years in OLS to logistics service provider. In addition, it is worth mentioning that so far in the tacit applications of this framework there has been no application similar to another.

Keywords: Outsourcing Logistic Services; Resource-based view; Performance indicators; Logistics service provider.

Resumo: *O processo de terceirização de serviços logísticos (TSL) é considerado incipiente na gestão das organizações, não só pelas suas questões operacionais como também pelas dificuldades de se criar elos com a estratégia da empresa. O presente estudo teórico, fundamentado na Teoria Baseada em Recursos, visa propor um*

[1] Programa de Pós-graduação em Engenharia de Produção – PPGEP, Universidade Nove de Julho – UNINOVE, Rua Francisco Matarazzo, 612, CEP 05001-100, São Paulo, SP, Brasil, e-mail: geraldo.prod@gmail.com

[2] Departamento de Economia Gestão e Engenharia Industrial, Universidade de Aveiro, Campus Universitário de Santiago, Zip Code: 3810-193, Aveiro, Portugal, e-mail: mamorim@ua.pt

[3] Programa de Pós-graduação em Engenharia de Produção, Universidade Federal de São Carlos – UFSCar, Rod. Washington Luis, Km 235, Monjolinho, CEP 13565-905, São Paulo, SP, Brasil, e-mail: moacir@dep.ufscar.br

[4] Programa de Pós-graduação em Administração, Faculdade de Economia e Administração e Contabilidade – FEA, Universidade de São Paulo – USP, Rua Luciano Gualberto, 908, CEP 05508-900, São Paulo, SP, Brasil, e-mail: marilson@usp.br

[5] Programa de Pós-graduação em Administração – PPGA, Universidade Nove de Julho – UNINOVE, Rua Deputado Salvador Julianelli, s/n, Barra Funda, CEP 01156-080, São Paulo, Brasil, e-mail: bennycosta@yahoo.com.br

[6] Departamento de Relações Públicas, Propaganda e Turismo – CRP, Escolas de Comunicações e Artes – ECA, Universidade de São Paulo – USP, Av. Prof. Lúcio Martins Rodrigues, 443, Cidade Universitária, CEP 05508-020, São Paulo, SP, Brasil, e-mail: bennycosta@yahoo.com.br

[7] Departamento de Práticas Culturais, Universidade Estadual de Campinas – UNICAMP, Av. Bertrand Russell, 801, Cidade Universitária, CEP 13083-865, Campinas, São Paulo, SP, Brasil, e-mail: dirceuds@gmail.com

Received Apr. 10, 2016 - Accepted Dec. 5, 2016

Financial support: None.

framework que oriente o gestor a desenvolver estratégia em processos de TSL partindo da estrutura operacional, estabelecendo os recursos necessários, as capacidades centrais e as rotinas operacionais. Considera-se também a importância de analisar os riscos e a resiliência no ambiente, concomitantemente com a análise da estrutura operacional. Para isso foram desenvolvidos quatro questionamentos com o intuito de levar o gestor de operações a reflexões acerca do desenvolvimento da estratégia. O framework proposto para a TSL considera o departamento de gestão da cadeia de suprimentos como o principal interlocutor da estratégia. Esse framework pode ser adaptado conforme as necessidades da contratante e a sua principal intenção é possibilitar o estabelecimento de um projeto que contemple os recursos necessários, as capacidades centrais (critérios) e as rotinas operacionais (subcritérios) para a seleção, no mercado, de um operador logístico que atenda realmente as necessidades da organização. Vale ressaltar que, até o momento, nas aplicações tácitas desse framework, intrínseco às ações práticas propostas pelos autores desse artigo na extensa atividade consultiva desenvolvida nos últimos cinco anos em relação à TSL para operadores logísticos, nenhuma aplicação semelhante à outra ocorreu.

Palavras-chave: *Terceirização de Serviços Logísticos; Visão baseada em recursos; Indicadores de desempenho; Prestador de serviço logístico.*

1 Introduction

The evolution of production processes, the intensification of communication and control systems, the liberalization of trade, and the competition to gain markets have led to remarkable changes in the way we produce and manage our businesses. In this scenario, logistical operations fit in not only as an operational part of an organization, but with a new function, now contextualized in the strategy dimension. This new aspect, in turn, has led to a more complex organizational relationship among the various stakeholders, especially fostered by the appearance of a Logistics Service Provider (LSP).

The decision to hire a LSP is usually complex (Holcomb & Hitt, 2007; Oliveira Neto, 2008). Such a decision in practice usually lacks a sound conceptual basis, often being made by consultants or through unstructured internal assessments (Boer et al., 2006). Rarely is this decision made based on strategic perspectives (McIvor, 2000).

This situation is corroborated by the study by Oliveira Neto (2008), which points out reasons for unsuccessful LSP contracting, namely: (i) companies do not plan the strategy correctly; (ii) do not study the criteria; (iii) do not use performance indicators; or (iv) use performance indicators only internally to the company without integration with the LSP. Such problems can occur during the implementation phase, when processes and work routines are transferred to the LSP, due to resistance to change, cultural differences, difficulty in divulging the company business, and lack of clear criteria for performance measurement (Foster, 1998). There are also shortcomings in the processes of negotiating with, hiring, or selecting LSPs. Iañez & Cunha (2006) and Isiklar et al. (2007) point out that these failures occur in the decision-making process because of the lack of criteria that should really be negotiated.

These difficulties motivated the authors of this paper to propose a theoretical framework for the formulation of an OLS strategy for hiring LSPs, drawing on the resource-based view (RBV) theory, the objective of this study.

The rationale for using the RBV is justified by the opportunity to design the strategy through internal analysis (operational routine) of the contracting company and the LSP, to identify logistics resources and core capabilities to complement the contractor's logistical capacity, boosting competitive advantage, especially if the LSP can share/develop innovative skills and knowledge and demonstrate strategic operational asymmetry in terms of routines, resources, and capabilities.

Importantly, similar results have not occurred based on the tacit applications of the proposed framework, indicating that the strategy cannot be formulated only as an "outside-in" positioning, with a market narrowed focus only "from the inside out". In other words, the operation must identify the real needs (resources, capabilities, and routines) in order to search on the market for an LSP that meets those needs and/or can share and develop new logistics techniques.

It is worth noting that the external analysis was not excluded from the strategy design process; on the contrary, it is complementary in relation to the analysis of local tax policies, environmental legislation, and location aspects for merchandise disposal. According to Wernefelt (1984), Barney (1991), and Rumelt (1991), strategists need to focus on internal organization analysis to identify valuable, rare, hard-to-imitate, and irreplaceable resources for applications in the constructs of their strategies for competitive advantage.

The present work is characterized as a descriptive theoretical study, conducted by means of bibliographical research aiming to suggest qualitative questions and the proposition of a framework for the OLS. Shields & Rangarjan (2013) explains that the descriptive theoretical study aims to go beyond the simple identification of the existence of relations

between variables, to also determine the nature of this relationship and proposition.

After developing a theoretical descriptive construct, qualitative propositions are proposed. Alasuutari (1995) argues that a coherent logic is needed for the argumentation presented through the literature review to generate adequate qualitative propositions. Shields & Rangarjan (2013) add that the qualitative research can help to: understand the observed facts, expand the knowledge about the subject in question, clarify the real situation, generate hypotheses, and gather information for future research.

It should be noted, however, that the technique of systematic literature review analysis was also used, going through four important stages in addition to the research question formulation stage: the choice of the literature analyzed, the evaluation of the data collected, the analysis and interpretation of the information, and the presentation of results (Bardin, 1986).

In order to reach the objectives, the present work is organized as follows: section 2 presents a theoretical framework about the existing models/frameworks in the literature for hiring LSPs, and also about the key concepts for the development of the framework proposed in this study; section 3 contains the proposed model; section 4 provides some analyses; and section 5 shows the conclusions of the present study.

2 Literature review

This section first presents a systematic literature review of the existing models/frameworks for OLS, and then presents concepts about the key aspects for understanding the proposal to be established in the present work.

2.1 Models/Frameworks in the literature for contracting LSPs

Published studies about the process of contracting LSPs have been developed and viewed both nationally and internationally, because they sought to optimize this task by comparing their information with that generated by related works. In light of the above, some publications and their respective aspects regarding the models/frameworks in the national and international scientific literature until the year 2013 are described below, providing the present work with a better understanding of what has already been done in the field.

The collection of scientific articles on the subject was carried out using three databases: Compendex, Ebsco, and Proquest. Table 1 shows that the keywords used to filter the analyzed data used terms in Portuguese and English, aimed at capturing national and international articles.

In the systematic literature review one can find 59 models/frameworks for outsourcing/contracting or selecting LSPs until the year 2013. The content analysis of each study yielded the following more important topics being addressed: 1) decision making; 2) knowledge of capabilities; 3) cost analysis; 4) transportation-shipping logistics; 5) OLS performance; 6) resource identification; and 7) risk and resilience management.

Under the first theme, the decision-making process for outsourcing LSPs, there are 32 models/frameworks aimed at turning decisions into orders of action through *tactics for selecting and contracting* LSPs. However, this classification is not explicit in many models, requiring a more systematic content analysis, mainly to identify the strategic aspects used.

One model, for instance, considers the OLS as a strategic action for selecting LSPs with a focus on the value chain (development of core capabilities), for resource identification and essential competence (McIvor, 2000), in order to define: (i) which activity will be outsourced with a focus on cost reduction; (ii) which activities are linked to the essential competence; (iii) what the support activities are; and (iv) what activities are to be dispensed with (Arnold, 2000).

There are other models/frameworks about the logistics outsourcing decision-making process, such

Table 1. *Search terms used in the study*.

Search terms in English	Search terms in Portuguese
1. *Model outsourcing logistic service*	Modelos para terceirização de serviços logísticos
2. *Model outsourcing logistic*	Modelos de terceirização logística
3. *Framework outsourcing logistis service*	Arquétipo para terceirização de serviços logísticos
4. *Framework outsourcing logistic*	Arquétipo para terceirização logística
5. *Model selection 3PL*	Modelos para seleção de operadores logísticos
6. *Model contracting 3PL*	Modelo para contratação de operadores logísticos
7. *Model outsourcing third-party logistics providers*	Modelo para terceirização à operadores logísticos
8. *Model outsourcing resource-based view*	Modelo para terceirização baseado em recursos
9. *Framework outsourcing resource-based view*	Arquétipo para terceirização baseado em recursos
10. Model outsourcing resource-based view RBV	Modelo para terceirização visão baseada em recursos VBR
11. Framework outsourcing RBV	Arquétipo para terceirização VBR

as the framework developed by Bolumole (2001) and Espino-Rodrígues & Padrón-Robaina (2006) to analyze the resources and operational performance of internal logistics as the value of logistics for supply chain management and competitive business strategy. Wu et al. (2005) presented a model to evaluate the effect of long-term outsourcing through the analysis of resources, skills, and competences aimed at organizational learning. Iañez & Cunha (2006) presented the activities to carry out the risk analysis on the real logistics needs of the contracting company. Handley & Benton (2009) developed a framework to select an LSP that offers the lowest risk and accepts the implementation of performance indicators. Serrato et al. (2007) and Kumar et al. (2013) presented a way of analyzing operational costs by identifying core capabilities and competences. Another model was presented by Al-Kaabi et al., (2007) with the objective of obtaining greater profitability in the operation through collaboration on specialized activities. Holcomb & Hitt (2007) and Ferreira & Serra (2010) have developed a framework for transaction cost reduction, resource identification, capability complementarity, and strategic similarity, while McIvor (2010) and Souza et al. (2011) have developed a way to analyze capabilities and resources to promote better performance.

Hence, what is suggested is to develop feasibility, map processes to decide which to outsource, establish contractual clauses, integrate the activities, and make contract revisions (Kumar et al., 2007; Kumar et al.2010); employ reasoning and fuzzy and AHP methods to deal with real-time selection decisions (Chen et al., 2011; De Oliveira Neto et al., 2014, 2017); and hierarchize resources, capabilities, and risks to include the least-cost scenario (Govindan et al., 2013).

There is also a model that emphasizes the integration of human resource capacity, promoting learning, cost reduction, better performance (Mello et al., 2008, Chen et al., 2010, Juntunen et al., 2012), and transparency in the selection process (Ordoobadi, 2009); for example, contractual formalization with priority given to specialized resources and lower cost (Barthélemy & Quélin, 2006), focusing on the selection of LSPs with a strategic location, thereby resulting in lower costs (Soh, 2010).

Another model assesses options for outsourcing material handling in terms of costs, reliability and speed of delivery, flexibility, quality, and criteria mapping to assess the LSP's service and performance capabilities (Klingenberg & Boksma, 2010). It concludes that in order to analyze resources, capabilities, competencies, and costs in the operational routine, three theories should be used: transaction costs, supply chain management, and resource-based view (Hsiao et al., 2010), adding institutional theory with a focus on legitimacy of actions (Karhunen & Kosonen, 2013).

But one limitation of these is that it is not enough to focus only on the selection process; the decision to OLS is not only an operational action, but one pertaining to the strategy of the organization specifically in the area of supply chain management. It is important to emphasize that the 32 decision models have different strategic aspects, such as cost analysis (55%), capacity (48%), resources and selection (42%), routine (32%), and the least used one, resilience (0%), and learning (10%). These results point to the need for a strategy model that contemplates a set of strategic aspects for the decision, mainly analyzing the outsourcing performance of logistics services, which was also little used, only 19%. More critical still is the Roses model (2007), which points out the need for analysis of internal resources to the organization, without providing direction for the decision making. This result is corroborated by Boer et al. (2006) in emphasizing the possibility of designing more realistic prescriptive models, which even consider risk management as an important aspect.

After mapping the decision-making models, content analysis was carried out on the other models that use strategic aspects for analyzing outsourcing processes, which originated the next thematic groups.

The *second* thematic group mentions the *need to know the core capabilities* (15 models), which requires analyzing whether the LSP is able to meet the company's needs (Kotabe et al., 2008; Gretzinger, 2008; Simmonds & Gibson, 2008; Kang et al., 2009). One such area is information technology capacity to reduce costs and improve service quality (Lai et al., 2008; Perunovic et al., 2012), since a lack of relational capacity can affect supply (Tsai et al., 2008; Lai et al., 2013). The relationships between integration capabilities, organizational learning ability, service performance, and financial performance are suggested using a model of structural equation (Shang, 2009), to hire an LSP with service capacity (Vasiliauskiene et al., 2011). The LSP's operational capabilities are thereby linked to the firm's performance (Yeung et al., 2012), emphasizing that those are dynamic capabilities, in constant evolution, thereby requiring constant analysis (Chiang et al., 2012).

The relationship between resources and capabilities, RBV's intrinsic subject, and the link between capabilities and the transaction cost theory to analyze costs (47%) were noted in 67% of the models. A relevant aspect is that although the models have their essence in the identification of capabilities, only 13% focus on the opportunity to develop capabilities in partnership. These findings lead to a more detailed analysis of the core capabilities in OLS, considering more strategic aspects for the analyses.

The *third* theme, with five models, is *cost analysis* in logistics outsourcing processes, which has led organizations to concentrate on their core competencies

to reduce financial investment in activities and assets (Chan et al., 2009). In order to improve the efficiency of the resources, it is suggested to develop estimates for resource efficiency maximization (Chiang & Tzeng, 2009), based on the theory of transaction costs (Bandeira et al., 2010), before and after outsourcing (Lee et al., 2012), insofar as price is usually a preponderant factor for selection, at the expense of quality improvement (Anderson et al., 2011). These models start from the conception of strategy and aim at the reduction of costs, through selection processes in 60% of the cases. This result corroborates the importance of developing the logistics outsourcing strategy, which considers the need to know the core competences (20%), and develop capabilities and resilience (0%).

In the *fourth* theme, four models are conceptualized with a focus on the outsourcing *strategy*. It was found that the positioning strategy does not present an appropriate approach to the OLS (Juga et al., 2008), because analyses must be made of the internal conditions of the firm (including scope and criticality of outsourced tasks) and type of relationship (Sanders et al., 2007). The aim is the development of a partnership in relation to experience in the service provided, information system, operational control, planning, benefits, and improvements (Hofer et al., 2009), based on the planning and execution model with innovative solutions and mutual benefits (Bajec, 2013).

The papers deal with the outsourcing strategy of logistics services in an isolated way, placing greater emphasis on decision-making strategy models, endogenous to the first theme established. This finding indicates that in general, the studies find it important to establish an outsourcing strategy for logistics services, but they do not show the responsible area and the consequences for practical replications. It is important to note that the existing strategy models for OLS are not related to operational analysis levels, such as those of resources or capacity (0%) in the operational routine (25%), which distances their use in the logistics practice.

The *fifth* theme (2 models) emphasizes the analysis of the impact of outsourcing on organizational learning about productivity and operational performance. To that end, 110 employees were surveyed in an Iranian company involved before and after an outsourcing process, the balanced scorecard being used to measure productivity. The results indicated that productivity in some sectors dropped because employees lacked growth and learning opportunities (Yaghoubi et al., 2011). Therefore, activities of the LSP-contracting company partnership must be evaluated in terms of timely information, planning, sharing of benefits and burdens, and overcoming expectations about the goals (Hartmann & Grahl, 2012).

These findings point to the need to consider performance analysis as inherent to the conception of strategy, and to employ performance measurement with a focus on risk, capacity building, and organizational learning (50%).

Finally, a model supporting risk management and resilience decision-making was identified through the performance-based logistics portfolio, aiming at the necessary effectiveness (robustness and resilience), and the ability of suppliers to influence efficiency (supply forecasting and risk) (Glas et al., 2013).

Thus, in designing the strategy it is suggested to consider risk analysis to mitigate existing risks and find ways to survive in periods of turmoil without affecting market service, a system called supply chain resilience.

Table 2 presents the main themes; the authors; the approach of the model (theoretical, empirical, or theoretical/empirical); indication whether the models include analyses of the structure, selection processes, and performance; year of publication; and the relationship between each model and the themes found in the literature. By and large, content analysis in the existing models allowed us to identify the constructs addressed by the authors and conclude that, although there are various theoretical models replicated in practice (72%), the proposition of a strategy model that contemplates all constructs—and above all that is applicable to the practice of outsourcing logistic services in a detailed manner through eleven steps endogenous to the strategy formulation, implementation, and control process—remains incipient. In general, replicated models in practice have little or no synchronization to be effectively used in outsourcing logistics processes—they do address the themes, but do not explain the sequential order of this analysis in practice, denoting the distance between theory and practice.

These findings are corroborated by Westphal & Sohal (2013), who reported that the existing models are generic, making it impossible to empirically replicate the outsourcing routine. Another critical aspect is that quantitative decision models are either too complex, which hinders the understanding of the profile of the decision agent; or simplistic, lacking all the necessary aspects for decision making.

There is a "[…] gap between theory and practice, and this is due to the lack of methodologies and decision support tools that consider the issue strategically […]" (van de Water & van Peet, 2006, p. 259), and decisions are often incipient because they are taken by consultants or based on unstructured internal assessments. Ying & Dayong (2005) mentioned that with the OLS, the LSP plays a fundamental role in the financial part and in the quality of the services provided. Therefore, addressing these issues requires a detailed study.

Table 2. Models/framework in the literature for outsourcing logistics services until the year 2013.

Thematics	Authors/Year	Model Approach: Theoretical (T); Empirical (E) ou T/E	Decision Making	know the core capabilities	Aim for cost reduction	Identify the internal resources	Develop strategy for outsourcing logistics services	Select Logistics Service Provider	Analyse the rotine	Analyse the performance of outsourcing logistics services	Know the core competencies	Perform risk management	Establish partnership for developing of capabilities	Analyze the organizational learning	Analyze the resilience
31 papers (53%) Decision Making	McIvor (2000)	T	X	X		X			X		X		X		
	Arnold (2000)	T	X		X				X		X				
	Bolumole (2001)	T	X		X	X	X						X		
	Wu et al. (2005)	T/E	X			X					X		X	X	
	Iañez & Cunha (2006)	T	X					X	X			X			
	Barthélemy & Quélin (2006)	T/E	X		X	X									
	Espino-Rodrígues & Padrón-Robaina (2006)	T	X			X									
	Boer et al. (2006)	T	X		X							X			
	Al-Kaabi et al. (2007)	T/E	X	X					X						
	Holcomb & Hitt (2007)	T	X	X	X	X	X						X		
	Isiklar et al. (2007)	T/E	X					X							
	Serrato et al. (2007)	T	X	X	X						X				
	Kumar et al. (2007)	T/E	X		X	X	X	X	X	X					
	Sucky (2007)	T	X		X			X							
	Mello et al. (2008)	T/E	X	X				X						X	
	Ordoobadi (2009)	T	X	X		X	X	X		X		X	X		
	Handley & Benton (2009)	T/E	X	X		X	X	X		X		X	X		
	Kumar et al. (2010)	T/E	X	X				X	X		X				
	Soh (2010)	T	X		X			X	X						
	Klingenberg & Boksma (2010)	T/E	X	X	X			X	X	X					
	Chen et al. (2010)	T/E	X	X		X				X				X	
	Ferreira & Serra (2010)	T/E	X		X						X				
	McIvor (2010)	T	X	X		X				X			X		
	Hsiao et al. (2010)	T/E	X	X	X	X	X		X		X				
	Souza et al. (2011)	T/E	X	X							X	X			

Table 2. Continued...

Thematics	Authors/Year	Model Approach: Theoretical (T); Empirical (E) ou T/E	Decision Making	know the core capabilities	Aim for cost reduction	Identify the internal resources	Develop strategy for outsourcing logistics services	Select Logistics Service Provider	Analyse the rotine	Analyse the performance of outsourcing logistics services	Know the core competencies	Perform risk management	Establish partnership for developing of capabilities	Analyze the organizational learning	Analyze the resilience
31 papers (53%) Decision Making	Chen et al. (2011)	T	X					X							
	Li et al. (2012)	T/E	X					X							
	Juntunen et al. (2012)	T/E	X		X		X			X			X		
	Karhunen & Kosonen (2013)	T/E	X	X	X	X		X			X				
	Kumar et al. (2013)	T	X		X										
	Govindan et al. (2013)	T/E	X	X	X	X		X	X			X			
Amount			**31**	**15**	**17**	**13**	**7**	**13**	**10**	**6**	**9**	**5**	**7**	**3**	**0**
Percentage				**48%**	**55%**	**42%**	**23%**	**42%**	**32%**	**19%**	**29%**	**16%**	**23%**	**10%**	**0%**
15 papers (25%) know the core capabilities	Lai et al. (2008)	T/E		X	X	X				X					
	Gretzinger (2008)	T/E		X		X	X								
	Kotabe et al. (2008)	T		X							X	X			
	Tsai et al. (2008)	T/E		X	X	X						X	X		
	Simmonds & Gibson (2008)	T/E		X			X		X						
	Shang (2009)	T/E		X	X					X				X	
	Kang et al. (2009)	T/E		X		X	X		X						
	McIvor (2009)	T/E		X	X	X		X							
	Vasiliauskiene et al. (2011)	T/E		X	X	X		X	X						
	Chiang et al. (2012)	T/E		X			X				X				
	Perunovic et al. (2012)	T/E		X		X		X			X				
	Yeung et al. (2012)	T/E		X		X	X			X					
	Jafarnejad et al. (2013)	T/E		X					X	X	X				
	Tseng & Chen (2013)	T/E		X	X	X									
	Lai et al. (2013)	T/E		X	X	X				X			X		
Amount			**15**		**7**	**10**	**5**	**3**	**4**	**5**	**4**	**2**	**2**	**1**	**0**
Percentage					**47%**	**67%**	**33%**	**20%**	**27%**	**33%**	**27%**	**13%**	**13%**	**7%**	**0%**

Table 2. Continued...

Thematics	Authors/Year	Model Approach: Theoretical (T); Empirical (E) ou T/E	Decision Making	know the core capabilities	Aim for cost reduction	Identify the internal resources	Develop strategy for outsourcing logistics services	Select Logistics Service Provider	Analyse the rotine	Analyse the performance of outsourcing logistics services	Know the core competencies	Perform risk management	Establish partnership for developing of capabilities	Analyze the organizational learning	Analyze the resilience
4 papers (0.007%) Develop strategy for OLS	Sanders et al. (2007)	T/E					X		X			X	X		
	Juga et al. (2008)	T/E					X								
	Hofer et al. (2009)	T/E					X						X		
	Bajec (2013)	T/E					X								
Amount							**4**	**0**	**1**	**0**	**0**	**1**	**2**	**0**	**0**
Percentage								**0%**	**25%**	**0%**	**0%**	**25%**	**50%**	**0%**	**0%**
2 papers (0.02%) Performance of OLS	Yaghoubi et al. (2011)	T/E								X				X	
	Hartmann & Grahl (2012)	T/E								X		X	X		
Amount										**2**	**0**	**1**	**1**	**1**	**0**
Percentage											**0%**	**33%**	**33%**	**33%**	**0%**
1 paper (0.02%) Identify the resources	Roses (2007)	T				X									
Amount						**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Percentage							**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
1 paper (0.02%) Risks and resilience management	Glas et al. (2013)	T/E										X			X
Amount												**1**	**0**	**0**	**1**
Percentage													**0%**	**0%**	
Total Amount			**31**	**30**	**29**	**26**	**19**	**19**	**17**	**15**	**14**	**12**	**12**	**5**	**1**
Percentage			**53%**	**51%**	**49%**	**44%**	**32%**	**32%**	**29%**	**25%**	**24%**	**20%**	**20%**	**8%**	**2%**

The detailing of the tactical actions in the formulation process contributes to the RBV, since it looks to the internal analysis of the organization to search the market for an LSP that meets the contracting company practical needs and makes it possible to boost competitive advantage by formulating a contract with a specialized agent. This agent is subject to criteria and subcriteria, mainly the development and implementation of integrated performance indicators with fines, which consequently reduces the LSP's opportunistic behavior.

According to van de Water & van Peet (2006), the outsourcing decision involves quantitative and qualitative considerations, the lack of which, according to Araz et al. (2007), hinders a comprehensive and effective decision-making methodology. According to Jharkharia & Shankar (2007), a methodology that systematically covers the necessary resources, core capabilities, and organizational routines relevant to outsourced logistics has yet to be developed.

The themes dealt with by the papers and the content of these works show the lack of a model/framework that considers the OLS as intrinsic to the supply chain strategy, which highlights the opportunity to generate competitive advantage when considering logistics as a valuable resource for strategy formulation. This is the gap to be bridged by the present work, since it attempts to propose a theoretical and practical framework that considers OLS as an organizational strategy approach.

Hence, the proposed framework contributes to the advancement of the literature in theoretical and practical terms, since a number of models and frameworks refer generically, but do not elucidate, the steps implicitly used in practice in several outsourcing processes. In addition, still in the formulation phase, it emphasizes risk analysis and resilience, subjects rarely explored in the OLS.

2.2 Key concepts for understanding of the proposal to be made in the present work

This section will present the fundamental concepts that will guide the proposition of the framework for the OLS based on the RBV, making it possible to develop some questioning for future research. Critically discussing the propositions arising from the theory enables the development of hypotheses for conducting empirical tests. To this end, the following topics will be dealt with in this section: (i) the importance of formulating, implementing, and controlling the strategy for OLS to LSP as an intrinsic activity of supply chain management; (ii) resource-based theory; (iii) core competencies and key capabilities; and (iv) operational routines.

2.2.1 Outsourcing strategy to hire logistics service provider as an intrinsic activity of supply chain management

The term Supply Chain entails a system composed of decision makers involved in an interdependent process, which encompasses all activities associated with handling products and services, from raw material suppliers, through production itself, to distribution to consumers (Hutt & Speh, 2001). According to Lambert (1998), managing multiple relationships across the supply chain, including those of the decision makers, is called Supply Chain Management. According to Whipple & Russell (2007), there is a need to create a network of closer relationships among companies to improve information, which may result in improvements in the quality of decision processes, reduction of uncertainty of demand, and better performance of the entire supply chain.

Germain & Iyer (2006) mention that the lack of integration and coordination in the processes of a company can negatively influence the expected result of an integration effort between companies, especially that concerning outsourcing contracting. Rodrigues & Sellito (2008) point out that through collaboration, competition between companies can take another approach, with the choice of partners and the capacity for coordination being activities that can reduce uncertainties and risks.

According to Mazlan & Ali (2006), outsourcing should be part of the activities and decisions of the supply chain manager, since that enables the possibility of conducting a cautious study regarding the contractual engagement and the determination of the agreement at the service level. Thus, the process of sharing experiences allows the contracting company to improve its competitive advantage; the supply chain management area has the internal and external view of the organization, the environment, and the operational structure, thereby facilitating the coordination of the project's formulation, implementation, and control processes. According to Hwang (2010), the development of strategy in supply chain management has the same scope of action as that of other departments of the organization, which consider the analysis of the environment for the formulation of strategy objectives, implementation, performance measurement, and feedback.

Holter et al. (2008) mention that considering the outsourcing activity at the top of the SCM is critical: leaving the relevant decisions to operational logistics managers is a flaw. Gunasekaran & Ngai (2003) add that the lack of top-level involvement is the main barrier to the development of a suitable strategy for the OLS.

Chen et al. (2010) corroborate the need to consider outsourcing as a function of the supply chain management department, in order to contract logistic competencies in the market with experience providing customer service, while also taking into account the organizational culture and the individuals involved in order to enhance member collaboration to leverage competitive advantage. Narasimhan et al. (2010) build on the opportunity to implement integrative supply management, in the sense of allowing better performance in an outsourcing relationship by considering the supply chain manager as a mediator in order to avoid flaws in the process. To that end, it is necessary to develop benchmarking, contract management, communication through information technology, performance control, and risk assessment. Another relevant aspect is to seek preventative performance improvement practices, focused on supply chain manager relations, process integration, knowledge management, and technological support.

In addition, according to Fontenay & Gans (2008), the OLS should precede strategy planning, due to the possibility of sharing knowledge and resources in the discussions aimed at the integration and closing of the contract, mainly for competitive advantage in relation to competition in supply networks. Mazlan and Ali (2006) point out that supply chain competition tends to occur, and therefore supply chain management practices need to be considered for the formulation, implementation, and control of the outsourced agent.

2.2.2 The Resource-Based View theory (RBV)

The general premise of the Resource-Based View theory is that in order to gain competitive advantage, a firm must initially focus on its resources and skills, and then on its positioning in the industry (Wernerfelt & Montgomery, 1986; Rumelt, 1991). Thus, a business is a set of skills and capabilities (Prahalad & Hamel, 1990, 1994).

While not all resources and capabilities leverage competitive advantage, with control of scarce or inimitable resources these advantages can be managed; this resource will only be strategic and provide a competitive advantage when it presents four fundamental properties: value, rarity, imitation difficulty, and substitution difficulty (Barney, 1991). Resources can be divided into three categories: physical, such as facilities and equipment; human resources, including the company's technical and managerial teams; and organizational, formed by routines that coordinate human and physical resources. Resources can be tangible (machines and equipment) and intangible (information, knowledge and skills). The concept of resource in the RBV does not only include the physical and financial resources, but considers intangible (Hall, 1992) or invisible resources (Itami, 1987) as greatly important.

An important aspect under the RBV's perspective is the development of inimitable resources. To prevent imitation by other companies, there must be a set of factors related to the development and internal accumulation of resources, which can be natural (material rarity), legal mechanisms (patents), or economic and organizational factors (Dierickx & Cool, 1989). Some authors reinforce the need to develop complex resources and skills that are difficult to imitate (Dierickx & Cool, 1989; Reed & Defillippi, 1990; Barney, 1996).

A company cannot simply allocate resources to goals; it has to also strategically manage the resource accumulation, coordination, and allocation process to attain a sustainable competitive advantage (Prahalad & Hamel, 1990). In this conception, the company's needs must be met by resources to be developed (Grant, 1991). Thus, the focus for resource development must be transformative (Amit & Schoemaker, 1993), a condition that falls under the dynamic capabilities framework (Teece et al., 1997). Black & Boal (1994) emphasize the need to go beyond the question of sustaining competitive advantage, to examine the dynamics behind the way resources are created and used.

Research by Barney (2001) and Barney et al. (2001) about resource creation and use posits that firms with strategic resources obtain higher economic returns than the industry average, and those with non-replaceable, scarce, and hard-to-imitate resources attain competitive advantage over other companies; hence, the internal resources of firms account for their performance, capabilities, knowledge, and applications in functional areas, such as human resources, marketing, information technology, etc.

It should be pointed out that although the RBV has an eminently internal view of the generation and the domination of resources, it does fulfill the objectives of the present study, since outsourcing of logistics to the LSP means outsourcing the company's support activities—these activities belong to the internal control of the organization, which is outsourced because of the LSP's specialization requirements.

Madhok & Tallman (1998) and Loasby (1998) posit that a company may develop resources internally, which entails time spent to plan the required resources before outsourcing. However, the qualified LSP can present new resources usually obtained through relationships (Burt, 1992; Granovetter, 1973). The contract will only be robust when the essential competencies are established, their administrative routines focused on the reality of the contracting company, and a joint plan developed.

The essential focus is on specialized resources, where access to the valuable resource is a critical

factor of strategic outsourcing, because these changes radically shape the capabilities of the firm (Holcomb & Hitt, 2007). It is possible to develop a resource in an inter-organizational cooperative way, in order that the knowledge, assets, and time allocated to the development of the new resource be shared (Hall, 1992).

Therefore, resources specific to the logistics outsourcing strategy must be identified and developed. Identifying these prior to signing the contract is the contracting company's responsibility. It is also possible to identify these resources together with the LSP in a cooperative way, and they can be physical (materials, facilities, machinery and equipment), human, financial, technological, or (mainly) organizational, dealing with routines. It is important to note that resources can be tangible (machines and equipment) and intangible (information, knowledge, and skills).

In order to define and measure the necessary resources, the contracting company must know the volume of cargo to be moved in a given period of time, the time spent for each activity, and how communication between the parties will occur. Barney (1991) points out that the resources of the company include all assets, organizational capabilities and processes, its attributes, information, knowledge, etc.

From the positions and aspects emphasized here, the first question emerges: What are the resources needed by the logistic product? A logistic product is understood as a set of characteristics and specific features (criteria) for handling a given type of cargo. Cargoes are classified as dry, bulk dry, liquid, bulk liquid, cooled, frozen (De Oliveira Neto et al., 2014), refrigerated goods (De Oliveira Neto et al., 2017) and dangerous, among other types. Because these criteria may have both common and varying characteristics, each firm needs to conduct a study focused on its resources and capabilities.

After the required resources have been defined and measured, the contracting company must identify its core capabilities, i.e., the essential criteria for the development of a robust contract.

2.2.3 Capabilities and core competences

It is worth clarifying the conceptual difference between capability and competence, since the terms are used for the same purpose. Capabilities are the more basic features encompassing the entire supply chain (Stalk et al., 1992). For example, when deciding to hire an LSP for dry cargo storage and distribution, is necessary to verify if the warehouse can store the products without damage and if the distribution sector can deliver it as required. Penrose (1959) posits that an organization can be understood as a combination of its resources and capabilities to render services to generate greater profitability.

According to Grant (1991), the RBV relies on two premises: first, internal resources and capabilities drive the firm's strategic direction, and second, resources and capabilities are the firm's primary source of profit. Long & Koch (1995) add that resources and capabilities are the source of direction at both the individual and organizational levels. The key integration mechanism concerns sharing the strategic vision for emerging opportunities, and identifying and fostering new core capabilities. Therefore, the core capabilities are related to collective learning and the integration technical skills and routines, which enable the creation of new competences to obtain competitive advantage (Prahalad & Hamel, 1990).

This aspect corroborates the objectives of this study, since the core capabilities are criteria that must be specified in the contract by the contracting company, in view of its essential competence. Competence results from the coordination of a set of resources in order to determine a particular level of performance of an activity (Mills et al., 2002). For example, the LSP may say that it has capabilities to service the storage and distribution of dry cargo in order to close the contract, but only the operational routine can assess whether it has competence for execution, generating specialization.

Hence, companies in general must clearly identify their core competence for their business goals, especially for outsourcing. The core competence must be managed by the contracting company, but it is necessary to hire an LSP that has competence for outsourced activities. Prahalad & Hamel (1994) emphasize that one of the main concerns should be whether the activities to be outsourced represent core competencies, and highlight the three characteristics necessary to determine their essentiality: 1) they deliver value to final customer; 2) they provide differentiation from the competition, being unique; and 3) they make it possible to extend the business. Quinn (1999) mentions that companies must execute *core-competence- with outsourcing strategies*, which means focusing on the capabilities that are important to customers, constantly innovating to stay ahead of competitors, and developing flexibility to deal with changing pressures from competitors as well as opportunities. Subsequently, Quinn (2000) adds the possibility of using the capabilities and investments of other companies by outsourcing support activities, even if this involves part of the chain of innovation.

Core resources and capabilities vary among firms, and the differences obtained through these variations can be stable. Thus, it is of utmost importance to understand the relationship between resources, core competencies, and core capabilities in order to gain competitive advantage. Grant (1991) reports the need for understanding the mechanisms through which competitive advantage can be sustained over

time. This requires the construction of strategies that exploit to the maximum the advantages of the unique characteristics of the company. It thus becomes possible to explain the heterogeneity of performance within the same branch, with social well-being increasing as firms work to upgrade their competitiveness. According to Galunic & Rodan (1998), Grant (1996), and Kogut & Zander (1992), this allows recombining and creating value for resources and capabilities in the inter-organizational relationship. In this sense, Fiol & Lyles (1985) point out that the results of these actions tend to improve a company's capabilities to accumulate, integrate, and leverage specialized capabilities and resources.

Given that each company has a specific set of core capabilities, in order to meet the objectives of the present study it is necessary to question the assumption that there are specificities and generalities by type of cargo when handling different types of cargoes, which leads to the inference that it is the same set of core capabilities per logistic product. Therefore, the second question is raised: What are the core capabilities (criteria) per product logistics for selection, negotiation, contracting, and control of the logistics operator?

After identifying the core capabilities (criteria), it is possible to detail the organizational routines (subcriteria). The study per logistical product about core capabilities and organizational routines helps in the selection, contracting, and implementation of performance indicators for controlling the operation, including for the collection of fines.

2.2.4 Organizational routines

Complementarily to both capabilities and resources, it is essential to list the operational routines (subcriteria) that must precede an efficient application of processes and knowledge necessary for an organization to achieve efficiency in the combination of the resources available (Collis & Montgomery, 1995; Dosi et al., 2000). Organizational routines are based on the individual and tacit knowledge of employees, from the most basic on the shop floor to that used by managers to control other activities. Thus, organizational routines are sets of standard activities, which in turn represent a sequence of coordinated actions by people (Nelson & Winter, 1982), offering an important insight to the relationship between resources, competencies, and competitive advantage (Grant, 1991). It is suggested that the central resources and capabilities be identified, intrinsic to which are a set of specific strategic routines (Helfat & Peteraf, 2003), and through the organizational routines it is possible to raise the specificities of the activities (Fiol & Lyles, 1985). It also worth emphasizing that research about strategies requires a more careful analysis of the internal characteristics, processes and operational routines in companies (Rouse & Daellenbach, 1999).

It is thus understood that in the contract for OLS—after identifying the necessary resources—the core capabilities (criteria) and the core competencies, the organizational routines are to be identified (subcriteria). The routines of each criterion are specified through these subcriteria, which also specify the necessary indicators and penalties for missing service targets.

The logistic indicators relevant to service delivery are key tools of the control system, enabling coherent and strategy-oriented actions and decisions (Dornier et al., 2000). They also allow evaluations to be made on the basis of facts, data, and quantitative information, leading to more reliable conclusions (Caixeta-Filho & Martins, 2001), and also assessing product availability; operational performance in terms of speed, consistency, delivery on time, and flexibility to address extraordinary requests and malfunctions; and service reliability (Bowersox & Closs, 2009).

The third question generated from the theory aims to identify what the organizational routines (subcriteria) are by central capability (criteria) present in the logistics product for selecting, negotiating with, contracting, and controlling the logistics operator.

Therefore, in this section three questions of the theory emerged, which enables establishing hypotheses for conducting empirical tests in future research studies.

3 Proposal for the development of the Outsourcing Strategy for hiring logistic service provider

The selection, negotiation, and contracting process for logistics operators is generally incipient in practice. This is mainly due to: (i) the lack of solid and significant criteria for evaluating candidates; (ii) informality of the selection and negotiation process; (iii) the unclear participation of the areas involved; and (iv) the main executive's conception at the time of outsourcing, which in general still considers the OLS as an operational decision rather than a strategic one (Oliveira Neto, 2008).

After the bibliographic review, it was defined that the most suitable strategy for the OLS to an LSP is the one drawing on the RBV. What justifies the development of strategy based on the theory of resources is the possibility of identifying the necessary resources internal to the organization. This premise encourages managers to study approaches focused on logistics outsourcing to identify the necessary internal resources, such as materials, facilities, machinery and equipment, employee qualification, information technologies, the LSP's operational costs and financial stability, and the management aspects essential to the success of the operation.

This section will present the proposal for the formulation, implementation, and control of strategy by the supply chain management area of the firm, with the objective of elucidating the practical path for effective decision making. Thus, to present ideas better, it was decided to establish concatenated steps in order to facilitate practical application, as well as present where things should be done and how people should be involved.

It is important to emphasize that the strategy will not be conceived focused on the positioning of the strategic plan; on the contrary, each organization must study its internal logistics needs for formulation, implementation, and control.

Thus, the strategy development departing from the study of the logistic needs of the operational structure to the environment based on the RBV is justified. It is also important to emphasize that the environment is not eliminated in the design of the strategy, but is an aspect to be analyzed as emphasized by authors on strategic positioning such as Porter (1980). Besides the risks and resilience inherent in the logistic structure, it is also necessary to raise those inherent in the macro environment, known as controllable variables by non-decision makers, mainly regarding location and taxation, such as the natural and cultural environment, economy, and government.

The formulation, implementation, and control stages of the outsourcing strategy for logistics services have been divided into 11 stages.

The formulation process entails three practical steps to reach the objectives for analysis and planning for effectiveness.

Step 1: Assign decision to outsource logistics services to the supply chain manager

The strategy of OLS is intrinsic to the supply chain management department, in order to formulate the strategy through risk analysis and the resilience of the environment and structure that direct the OLS. The objectives of the project to OLS to the supply network are then established, aiming at assigning responsibility for the decision to the area of supply chain management, since it attends meetings to align the strategy with the other areas, taking a holistic view of the whole process. What justifies this requirement is that many organizations assign responsibility for the decision to OLS to intermediary operational logistics managers, who are important in assisting the process for knowledge of the operation, but should not be the ones in charge

It is of the utmost importance that the supply chain manager of the contracting company formulate the strategy for the OLS based on the two following steps: the first aims to establish the risk and resilience analysis of the operational structure and environment, and the second aims to raise the necessary resources, core capabilities, operational routines, and performance indicators (with penalties) for the development of the project to OLS.

Next, with the project established, the concern is with the implementation strategy that aims to select an LSP that meets the specific needs. The implementation stage is subdivided into four steps. The first is to establish ranking among the surveyed LSPs based on operational technical analysis, classifying them as winners and qualifiers. The second step evaluates the strategic and cultural similarity of the LSP, with the objective of selecting an LSP that has similar ideas, principles, and management tools in such a way as to require little time for integration between companies. The third stage aims to establish coordination and collaboration, mainly in the implementation of performance indicators with fines among network actors. The last stage of implementation aims at contractual formalization. It is important to emphasize that in all stages of the implementation strategy, feedback should be provided to compare what was formulated and what was accomplished in order to establish, if necessary, redirection plans, or even—after verifying the new effectiveness of a new path—to modify the project.

After developing the contract formulation, the control of operational performance is highlighted, requiring a control strategy approach. However, much attention is needed in establishing control. In Brazil, control is understood as a negative aspect that inhibits the action itself. As a result it is necessary, if it has not yet been done, to strengthen the control culture; otherwise there will be "boycotts" of the operational routine by the actors of the network. The control strategy involves three important steps. The first aims to allocate a supervisor of the contracting company in the outsourced sectors. In the second stage, information is shared through an integrated technological resource aimed mainly at feedback among internal and external customers of the network. In the third step, periodic performance reports are required, as well as daily meetings for continuous improvement. The control strategy also aims to provide feedback to verify whether what has been determined in the contractual formalization is being met, to achieve continuous improvement.

Step 2: Risk and resilience analysis on environment and structure that drive outsourcing logistics services

Risk and resilience analysis should be conducted, together with internal analysis, aiming at synergy among the environment, strategy, and structure. Galbraith (1973) mentioned that organizations are complex systems that need technical and operational solutions to adjust to the environment, and regulate the structure as a result of this adjustment, requiring constant configuration changes.

Concerning possible external operational and environmental risks, Luna (2007) proposes a careful

analysis of the transaction costs, which consist of the costs arising from the contractual exchanges of goods and services between firms, including the identification of possible candidates in the market, contracting, and performance monitoring.

The analysis of risks from the point of view of transaction costs is essential, but only as a complement to the resource-based strategy. If the analysis is to be comprehensive, observing only costs in the selection process can generate failures in outsourcing.

Holcomb & Hitt (2007) reported in their seminal paper on strategic outsourcing that the essential focus is on specialized resources, where access to the valuable resource is a critical factor, and a firm cannot just rely on cost reduction.

In addition to the risks it is important to analyze the firm's resilience, which regards the flexibility of both the LSP and the firm to avoid contract termination, thus seeking the capability to return to normal positions even in turbulence. The study of resilience favors member cooperation, information and risk sharing, as well as service delivery reliability.

Therefore, synergy is required between the analysis of the structure—necessary resources, core capabilities and operational routines—and the environment through risk and resilience assessments, with the objective of establishing valuable, rare, and inimitable criteria and subcriteria for the development of the contract.

Step 3: Map the operational routine to establish the necessary resources, core capabilities, performance indicators with penalties and awards for project development for outsourcing logistics services

The analysis of the necessary resources intrinsic to the organizational structure allows establishing the core capabilities and operational routines to be agreed between the parties. At this stage, it is necessary to formulate the logistic structural and infrastructural needs of the organization in order to seek an LSP specialized to meet the real needs of the company, leading to the understanding of the necessary capabilities.

An analysis of the logistic structure entails conducting a detailed study about the aspects of industrial facilities such as: transport, handling, inventory, storage, production, assembly, dispatch, quality, information technology, human resources, as well as environmental impact of product, process, and production network. The main purpose of this analysis is to know the actual needs and to find an LSP that exactly matches these. Many organizations do not elaborate this analysis and accept the packages that LSPs offer, which in many cases do not meet the specific needs of the contractor's logistics structure, resulting in failure and breach of contract.

It is important to point out that the production and assembly sector cannot be outsourced because it is an end activity, but it is necessary to know the work system in order to better integrate the outsourced sector. For instance, if the company decides to outsource the shipment, it is necessary to know the typology of production in relation to repetition levels.

Infrastructural aspects are the elements that help a given structure reach its objectives. This analysis involves knowledge about: (i) the degree of training of operators throughout the supply chain; (ii) equipment for handling cargo; (iii) the qualitative and quantitative management of the department, including costs and calculations of inventory and stock demands; (iv) production cycle time and assembly time; (v) the organization of department layouts; (vi) technological equipment to aid decision making in the sectors, such as routing, MRP, ERP, WMS, and TMS; (vii) conformance and non-conformance to quality management; and (viii) socio-environmental responsibility. It is important to emphasize that in many cases the search for customization has resulted in effectiveness among companies. However, a number of managers neglect this point because of its higher cost, according to De Paoli et al. (2013), De Oliveira Neto & Lucato (2016), Oliveira Neto et al. (2017a) and Lucato et al. (2017).

The detailed study of the logistics structure and infrastructure allows identifying the resources to be requested from the LSP in the contract (Table 3). These resources can be organizational, human, technological, financial, and material. The aim is to elect and demand resources that have value, rarity, difficulty of imitation, and difficulty of substitution. The main constraint of the contracting company was observed to be in relation to the integration of information with the LSP, considering that some information is confidential and specific to the contracting company. However, resource information should be shared by signing a strategic alliance for the sake of effectiveness.

At the same time, the core capabilities (criteria)—the most basic forces across the whole supply chain—are highlighted, so the contracting company should keep in mind that the objective of this decision-making process is to select, according to its characteristics and needs, the best outsourcing partner.

Thus, it is extremely important to identify the relevant criteria and subcriteria for the selection of an LSP. The definition of the criteria is specific to the decision-making process of each company, and may vary according to the objectives that guide the decision.

Table 4 shows 14 analyses for proposing core capabilities (criteria) for contract formalization.

Developing core capabilities (criteria) is essential for the implementation of a robust contract. At the same time, the core capabilities (criteria) constitute the operational routines (subcriteria) to be required of the LSP (Table 5). At the heart of these routines are

Table 3. Proposals for identifying required resources.

Resources	Proposals			
	Rarity	**Value**	**Inimitability**	**Difficult replacement**
Organizational -Management and coordination	Own management with a focus on actual logistics needs.	Coordination that generates competitive advantage for the contracting company and LSP.	Develop management and coordination resources that are hard to imitate by competitors.	The management and coordination established are difficult to replace.
Human -Technical and managerial team of the company. -Hiring process	Own operational knowledge and skills.	Collaborative team to achieve operational goals.	Tacit knowledge of technical and managerial team that is difficult to imitate by competitors.	Trained personnel difficult to replace, with salaries and better premiums than those practiced in the market.
Technological - Information, handling and production systems	Development of own integrated system. State-of-the-art machines and equipment	Improvements in real time information and productivity gains.	Development of own integrated system that is hard to imitate by competitors.	Information systems and handling equipment important for business results.
Financial - Logistic costs. - LSP's investment capacity Materials or physical -Installations and equipment	Costing system appropriate for each operational routine. LSP with good investment capacity.	Possibility of transaction cost information.	Operational costs system of the company.	Cost effective and appropriate costing system.
Material or physical -Facilities and equipment	Structure and infrastructure according to the logistics needs.	Improvements in process time along the chain.	Own structure and infrastructure.	Facilities and equipment essential for the effectiveness of the service level management.

the performance indicators and contractual penalties classified as order winners (OW) and qualifiers (Q). The OW criterion aims to verify whether the LSP accepts a given criterion, and if it is not accepted, the LSP is disqualified. The Q criterion aims to determine a rank of candidates, classified into five grades, from 1 to 5.

It is critical for successful outsourcing to develop routines to control the operation. Organizational routines are sets of standard activities, which in turn represent a sequence of coordinated actions of people.

It is important to emphasize that both the core capabilities (criteria) and the operational routines (subcriteria) may be different for each logistic product typology. The logistic product can be classified as dry cargo, dry bulk cargo, liquid bulk cargo, breakbulk cargo, heavy lift cargo, express, and others.

The analysis enables the identification not only of homogeneous criteria and subcriteria about the typology of the logistic product, but also specific ones. It is based on the resource theory, aiming to know the process internally for contractual formalization, focusing on the core capabilities, which are related to collective knowledge and the integration of the technical skills of the routines, making it possible to develop new competences to obtain a competitive advantage (Prahalad & Hamel, 1990). Competence results from a set of coordinated resources in order to determine a particular level of performance of an activity (Mills et al., 2002).

In addition, it is possible to understand complementary resources and capabilities that will boost the greatest competitive advantage at the time of the meeting with the LSP executive. Therefore, from the moment the strategy is established internally there are arguments for a clear negotiation with the LSP.

The strategy formulated for OLS under the responsibility of the supply chain management area—leading to the risk and resilience analysis of the structure and environment, and identification of required resources, core capabilities, and operational routines—resulted in a project for the selection of an LSP in the market, which will implement the

Table 4. Suggested core capabilities (criteria) to be required of the LSP in the contract.

Analysis for the suggested criteria	Contract criteria
1 – An integrated view of the costs of logistics operations, including transportation, handling, and storage.	Total costs of the operation.
2 –The LSP's financial viability with regard to investment capacity and indebtedness.	LSP's financial stability.
3 –The LSP's adaptability, important in simultaneous planning.	The LSP's adaptability.
4 –The LSP's operating infrastructure, to see if it meets the needs, including integrated logistics, location, facilities, equipment, handling characteristics, job security, and fleet conditions.	LSP's infrastructure and equipment for ideal service.
5 –How the LSP manages the logistics services with regard to the management of the warehouse, distribution, stocks, etc.	Administration of logistics services.
6 –Flexibility and responsiveness in the provision of services, aiming at contractual renegotiation and on-time service.	Flexibility and responsiveness.
7 –The LSP's credibility in the provision of services with regard to market reputation and the number of contracts signed.	The LSP's credibility in the provision of services.
8 – Whether the LSP has experience in the services. To that end, core competence, time of operation, and client portfolio are identified.	Experience in logistics product.
9 –Whether LSP has quality management.	Quality management attributes required.
10 –Information technology resources such as Electronic Data Interchange (EDI), Enterprise Resource Planning (ERP), Warehouse Management System (WMS), Transport Management System (TMS) and Global Positioning System (GPS).	Required information technology resources.
11 – LSP's Human Resources department, in order to know the contracting process, the required qualification, and the training systems.	Human Resources.
12 –The reliability of the services rendered with respect to confidential information, cargo safety, and fulfillment of agreements	Reliability of the services provided.
13 –LSP's empathy at the forefront of customer service.	The LSP's empathy in dealing with clients.
14 –LSP's environmental practices, including environmental practices (Paoli et al., 2013) and social management, cleaner production, (Oliveira Neto et al., 2017b) and reverse logistics (Oliveira Neto et al. 2017a).	Care for the environment.

Source: Oliveira Neto et al. (2011).

strategy in order to put into practice the planned actions presented in the next four steps.

Step 4: Establish the ranking of the LSP by means of analysis of resources, core capabilities, and operational routines to identify order-winners and qualifier

This stage initiates the process of implementing the outsourcing strategy for logistics services. Based on the project, the central objective is to find which LSP most effectively meets the needs of the contracting company.

To that end, it is necessary to classify the necessary capabilities (criteria) and the routines (subcriteria) into order winners and qualifiers. Order winners are those who directly and significantly contribute to the business, winning orders or services against competitors (Hill, 1993). Specifically, the authors consider as order winners the LSP's criteria for immediate response, visibly used for competitive advantage—a superiority position recognized and valued by the client, which leads a company to be more competitive than a competitor or than it previously (Contador, 2008). This classification was established through the identifiers of simultaneous negotiation and process control.

Qualifiers are the aspects of competitiveness requiring that performance be at a level determined by the customer (Hill, 1993), specifically those that show a need for follow-up and adaptability at the time of negotiation. The LSP's classification is as follows: 1 - the LSP does not accept; 2 - the LSP accepts, but visibly does not have the capacity for the service; 3 - the LSP presents an integration plan; 4- the LSP accepts, with restrictions; and 5- the LSP accepts. The determinant level is always 5, where the LSP accepts the contractual criterion without restrictions.

Step 5: Analysis of the strategic similarity and cultural compatibility of the LSP

After selecting the best LSP, with a focus on operational structure and business environment—including risk and resilience analysis, and a survey of the necessary resources, core capabilities, and operational routines—it is possible to evaluate the

Table 5. Suggested operational routines and performance indicators with fines toward contract formalization.

Core capabilities	Operational Routines	Performance Indicators
Total operational costs	Transport costs, storage costs, etc.	**Q** (1) Total transportation cost x 100 / sales revenue **Q** (2) Total handling and storage cost x 100 / sales revenue.
LSP's Financial stability	LSP's investment capacity, financial health, and indebtedness.	**Q** (iii) Current liquidity = Current assets Current Liabilities General liquidity = Cur. asset. + real to long term Cur. Liability . + long term payables Dry liquid = Active circ. - Stocks Current liabilities Immediate liquidity = Available (cash and banks) Current liabilities
LSP's adaptability	Permanence of supervisor of the contracting company in the LSP, joint planning.	**OW** (3) If the LSP candidate does not accept them, he / she is disqualified
LSP's infrastructure and equipment for a perfect service	location (L), facilities (I), equipment (E).	**Q** (4) L - Contractor's travel time to the LSP CD: (max = 01h15min h).
	Storage, stacking, and fleet characteristics.	**Q** (5)F - Areas for preparation of the various types of requests and for carrying out controls. **Q** (6) E - (LSP's equipment quantity / quant required) x 100
Administration of logistics services	Management of transport (T), warehouse (W), and inventory (I)	**Q** Perfect order = number of perfect orders delivered x 100 / total orders shipped. **Q** (8) T - Total transportation cost x 100 / sales revenue **Q** (9) W - Total handling and storage cost x 100 / sales revenue. **Q** (10) W - Storage capacity utilization = occupied area x 100 / total available area. Q (11) I - Quantity of missing parts in the physical stock in relation to the system x 100 / total of parts in the system.
Flexibility and Responsiveness.	Flexibility in meeting demand (F); Renegotiation of contractual clauses;	**Q** (12) R - Quantity produced / Production capacity
	Responsiveness (R) - Distribution and dispatch in JIT; Deliveries and short term	**Q** (13) R - Billing / quantity produced **GP** (14) If the candidate to LSP does not accept this condition, s/he is disqualified.
LSP's credibility in the provision of services.	LSP's reputation, partnership between LSP and contracting company, number of new contracts signed.	**Q** (15) Number of contracts entered into with companies in the same segment **Q** (16) Obtain information from various companies and evaluate reputation. **Q** (17) Number of contracts closed per year.
Experience in the logistics product	LSP's time of experience; core competence; Time in the market; portfolio of key customers.	**GP** (18) If the LSP candidate does not accept this condition, s/he is disqualified

Obs.: OW - Order Winners and Q – Qualifiers. Source**:** Oliveira Neto et al. (2011).

Table 5. Continued...

Core capabilities	Operational Routines	Performance Indicators
Quality Management Attributes Required..	Quality control system; product integrity upon receipt; product integrity in storage; product integrity in transportation; conformance in services provided; label identification verification.	**Q** (19) Timeliness of delivery = Quantity of orders delivered x 100 / quantity of orders negotiated with customers **Q** (20) Product rejection rate = quantity of products rejected, discarded or returned without conditions of use x 100 / quantity of products in the logistic process.. **Q** (21) Evaluate LSP's quality control system with regard to ISO NBR 9000 certification.
Required information technology resources.	Electronic Data Interchange (EDI); Enterprise Resource Planning (ERP), Warehouse Management System (WMS), Transport Management System (TMS), and Global Positioning System (GPS).	**OW** (22) If the LSP candidate does not accept this condition, /she is disqualified
Human resources	Hiring process, required qualification and training sessions.	**Q** (23) Number of dismissals per month x 100 / total number of employees. **Q** (24) Number of LSP employees who attended training courses in the previous year x 100 / total number of LSP employees.
Reliability of the services provided.	Full order submission; prohibition of disclosure of confidential information; cargo insurance against theft.	**OW** (25) If the LSP candidate does not accept this condition, he is disqualified.
LSP's empathy in dealing with clients.	CSA to solve problems quickly, after-sales system, LSP's commitment.	**Q** (26) If the LSP candidate does not have a satisfactory customer service system, /she is disqualified. **Q** (27) Time (hours) to solve the problem Quantity of complaints x 100 / quantity of deliveries. **Q** (28) Obtain information from several LSP clients
Environmental care.	Environmental management; social responsibility management; cleaner production.	**OW** (29) If the LSP candidate does not accept this condition, s/he is disqualified.
Fine for delayed receipt; fine for the lack of LSP's availability of people and equipment; fine for quality nonconformity, fine due to defects in materials, products and equipment; fine due to storage failure; fine for non-conformity in transportation; fine regarding personnel. Therefore, each indicator of this can generate a fine. **GP** (30) If the LSP candidate does not accept this condition, s/he is disqualified		

Obs.: OW - Order Winners and Q – Qualifiers. Source**:** Oliveira Neto et al. (2011).

strategic similarity and culture compatibility between the contracting company and the LSP.

Organizational culture entails a set of values and beliefs that should work in shared ways, thereby preventing operational islands. It is one of the most relevant aspects in the analysis of the compatibility between the LSP and the contracting company in order to guide the implementation of the strategy.

Holcomb & Hitt (2007) report three factors of analysis in order to verify the degree to which firms are strategically similar: (i) capability complementarity, occurring when specialized capabilities provided by a third party can add value if used in conjunction with existing capabilities of the company; (ii) strategic relatedness, to improve the understanding of objectives, thereby reducing conflict, and also facilitating the establishment of routines and the absorption of knowledge; and (iii) cooperative experience, which refers to repeated ties formed with specialized companies, which forges bonds and increases understanding of skills and routines.

Step 6: Establish coordination and collaboration with use of performance indicators with penalties and awards

This implementation phase aims to clarify the coordination aspects between the companies, considering the LSP's importance in the integration of the actors of the supply network, so as to increase

the contracting company's competitive advantage. Therefore, coordination requires negotiating the performance targets, by central capability and operational routine, with the insertion of penalties in case of ineffectiveness of the agreed targets, and annual awards to the LSP employees when targets are exceeded.

These actions tend to foster closer bonds between companies, increasing the exchange of information and team spirit, and resulting in service performance improvement and reduced uncertainty of any kind (Whipple & Russell, 2007). A lack of integration among members of the same supply chain, such as the case of the contracting company and the LSP, can negatively influence performance metrics, which can lead to penalties, and in many cases, contract breaches (Germain & Iyer, 2006). Therefore, the contracting companies aim to select LSP partners with service capability, which reduces uncertainties regarding bullwhip effects and risks (Rodrigues & Sellito, 2008).

Step 7: Contract formalization

After aligning the strategic and cultural similarity and the coordination between the parties, it becomes possible to formalize the contract with specific criteria and subcriteria, penalties and performance targets. Novaes (2007) mentions that contract formalization should create bonds of trust and partnerships in such a way that the companies permanently manage the relationship and maintain a policy of surveillance in order to prevent the partners from moving away from previously set objectives. Dornier et al. (2000) reinforce an important prerequisite for a successful partnership, namely that prior to the agreement the contracting company present the measures that it considers relevant to its performance, based on four dimensions: the company's need for outsourcing, the tangible values of performance measurement, management commitment, and the operator's capability.

Finally, a strategy should be devised to control and measure logistic performance in order to share information and feedback among the members of the network through the four steps shown next.

Step 8: Require the presence of a contracting company's supervisor in the outsourced sectors

An important aspect in relation to the control of the outsourced process is to maintain an employee of the contracting company for in-site supervision of the operational routines. Through this action, improvements have been observed in the effectiveness of the level of service, with daily minute and emergency correction measures. Problems are thus usually eliminated before they become complicated.

Step 9: Integrate the information system for data sharing between contracting company and LSP

Currently, many organizations are integrating the LSP system into their information system in order to closely follow the outsourced process. For example, a large chemical company that outsourced warehousing and transportation to an LSP monitors the status of the handling, stock, and inventory management, routing, etc. in real time, using the Warehouse Management System (WMS) and Transportation Management System (TMS) software integrated with the LSP's operational routine. That leads to a better control of operations and improves the alignment of information between companies. In many cases failures are resolved quickly, resulting in improvements in the complementarity of resources between companies.

Step 10: Require the performance reports from the LSP

For effective control, a daily operational performance report must be provided by the LSP. These reports are based on performance indicators established concurrently with core capabilities and operational routines. In this way, it is possible to control on a daily basis the service levels of the logistics operations and establish contingency action plans, as well as apply the penalties formalized in the contract in order to add resilience to the logistics operations.

Step 11: Hold meetings for continuous improvement

Finally, the last control elements in the outsourcing strategy are daily morning meetings about the performance goals. It has been found that most organizations that need to design logistics outsourcing strategies establish control through morning meetings to monitor the effectiveness of the goals on a daily basis. Hence, a detailed daily monitoring of the performance indicators is extremely important. This action is justified because focusing solely on monthly performance data may be too late to make corrections, and may result in lost customers. With daily measures, it is possible to establish emergency action plans in a timely manner so as not to affect the customer service level, in addition to allowing for contractual adjustments over time, mainly because organizations are inserted in a dynamic environment, subject not only to incremental changes, but also radical or transformative ones, in laws, for example.

Considering the aspects and arguments presented here, this paper proposes a framework (Figure 1) aimed at developing the outsourcing strategy for the contracting of a LSP at the heart of the supply chain management, through the cognitive presentation of the stages the present paper's authors devised in the last five years in more than one hundred companies.

4 Analysis and expected benefits

This section will present the benefits of the proposed theory and practice in relation to the formulation of the strategy for OLS to an LSP, based on the RBV.

Based on the systematic literature review conducted, it is possible to state that the present research study is original and unique. As the review results show, 53% of published articles present modeling based on

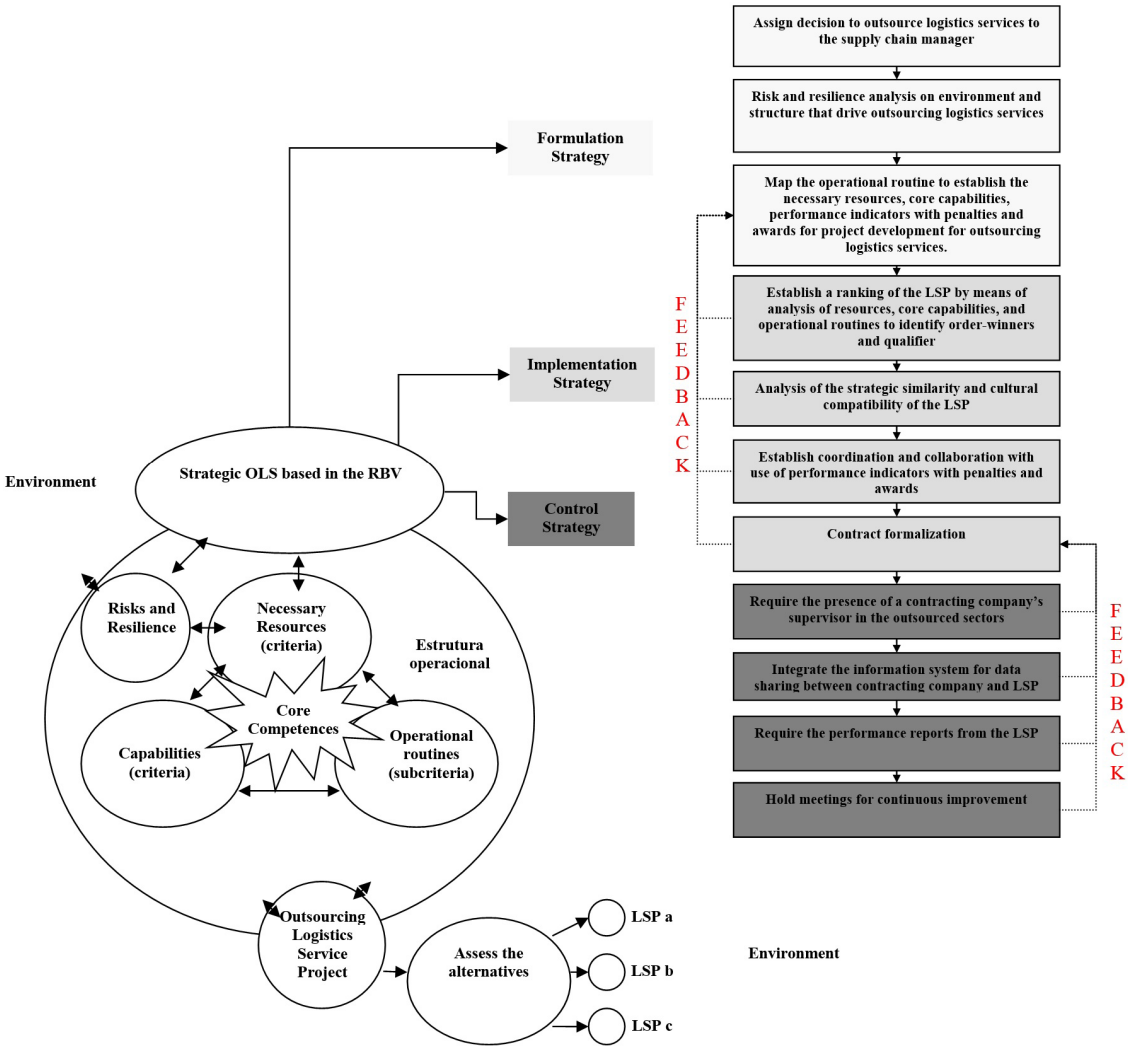

Figure 1. Framework based on Resource Based View for Outsourcing Strategy for Hiring Logistics Service Provider.

decision making (McIvor, 2000; Wu et al., 2005; Iañez & Cunha, 2006; Al-Kaabi et al., 2007; Isiklar et al., 2007; Ordoobadi, 2009; Soh, 2010; Li et al., 2012; Kumar et al., 2013), without explaining how to formulate, implement, and control the strategy of outsourcing by the supply chain area. These articles fail to address the relationship between the processes performed in practice, and the activities and routines. One article approaching decision making based on the TCT and RBV (Holcomb & Hitt, 2007) is essential to the proposed framework, mainly for the possibilities of verifying the compatibility of the strategy between the companies and analyzing the complementary resources aiming at competitive advantage.

The other papers analyzed focused on the models/frameworks, and in turn corroborate the framework proposed here, in their objective of improving customer relationship and satisfaction by OLS (Roses, 2007), and of developing an outsourcing project based on the environment and structure (Gretzinger, 2008; Jafarnejad et al., 2013). Because outsourcing processes are not static and can be adapted according to the needs of the contracting company (Simmonds & Gibson 2008), in this context basing the outsourcing strategy on the experiences of professionals working in the logistics segment, and with knowledge in the operational routine, can be an opportunity for success (Mello et al., 2008). A successful relationship will also consider the external analysis of the LSP, based on the strategic positioning (Juga et al., 2008), because of the development of integrated planning to improve competitiveness (Chan et al., 2009), focused on creating competitive advantage (Kang et al., 2009).

The proposed framework can contribute to:

i. Developing and identifying internal capabilities through interaction with the logistics operator (Kotabe et al., 2008; Lai et al., 2013), with the objective of expanding and sharing the

technical and managerial capabilities of the process (Souza et al., 2011);

ii. Identifying the logistical resources needed for the outsourced operation, with the objective of improving the communication and relationship between the supply chain participants (Lai et al., 2008; McIvor, 2009; Perunovic et al., 2012);

iii. Assessing risks to the organization due to possible failures of the outsourcing process (Tsai et al., 2008; Govindan et al., 2013), and resilience for the contracting company in coping with possible periods of turbulence and vulnerability (Glas et al., 2013);

iv. Achieving the objective of selecting an appropriate LSP by means of hierarchical processes (Chiang & Tzeng, 2009; Chen et al., 2011; Anderson et al., 2011), resources (Chen et al., 2010; Perunovic et al., 2012), and the lowest possible transaction cost (Ferreira & Serra, 2010; Vasiliauskiene et al., 2011; Lee et al., 2012); and

v. Building a partnership (Hofer et al., 2009; Lai et al., 2013).

Therefore, for the proposal of the framework, each article was analyzed in order to search for a gap in theory. After the bibliometric research of the models, an attempt was made to interweave the articles into the proposal of this study. It was then possible to establish a more focused model in the practice, mainly focused on answering "how" to carry out the outsourcing process.

The need is shown for the outsourcing strategy to be based on the supply chain manager—whose task is to observe the environment, considering the economic, political, natural and social aspects—as well as the risk and resilience framework in the analysis of the environment and the operational structure.

This framework also allows us to establish a more cautious study about the actual needs of the contracting company's operational structure before the decision process in relation to the analysis of routines, resources, and core capabilities. This will allow the manager to develop an outsourcing project based on the contracting company's actual operational needs.

5 Conclusion

This framework based on RBV for outsourcing strategy for hiring logistics service provider, it considers in its elements the possibility of identifying the necessary internal organizational resources, which complements Porter's strategic management framework with a view of outsourcing as based on market positioning.

For this premise, operational managers should first identify the actual needs for resources, capabilities, and routines of their operational structure, including materials, facilities, machinery and equipment, workers' qualification, information technologies, operational costs, and financial stability of the LSP, besides having in place the key management to ensure a successful operation.

Focusing exclusively on market conditions limits bargaining power, which precludes operations managers from ensuring in the contract that their real resources needs are met for the success of the operation. Another important point in the strategic dimension is the possibility of being able to choose a service provider in the market that integrates and builds upon the capabilities of the contracting company, especially one with some similarity in strategy, in order to boost its competitive advantage.

Furthermore, the framework based on RBV for outsourcing strategy for hiring logistics service provider contributes to the logistics literature, insofar as it introduces and enhances the design of the strategy, since managers generally consider the OLS as a merely operational decision.

The proposition also emphasizes the relevance of the possibility of establishing a strategy based on the analysis of organization's operational structure, and the environment it faces; thus, operations managers can develop studies with the purpose of identifying the internal needs that unfold in resources, core capabilities, and operational routines, thereby producing data that will serve as a basis for negotiating with, choosing, and contracting with the LSP.

The Outsourcing Logistics Services Project, emerged from the design and unfolding of the framework herein proposed, allows logistic needs and concerns to be raised and answered, namely:

1. What are the resources needed by logistic products?
2. What are the core capabilities (criteria) per logistics product for negotiating with, selecting, contracting, and controlling the LSP?
3. What are the organizational routines (subcriteria) by core capability (criteria) present in the logistics product for negotiating with, selecting, contracting, and controlling the LSP?

From this framework, we intend to develop a quantitative framework for hiring a LSP based on the necessary resources, core capabilities, and the operational routines, followed by empirical tests in organizational practice, seeking to answer the questions asked for each logistic product typology.

This will also inform us of the similar criteria and subcriteria, as well as the specific ones among the logistic product typology.

Hence, this framework will be applicable the moment an organization decides to focus on its core competencies and outsource its supporting activities. The limitation of the framework is that by itself it does not guarantee the success of the implementation, because it is not a static modeling system, and thereby requires careful study by the operations manager.

This framework is already intrinsic in the practical actions of the authors of this paper due to their extensive advisory activity of the last five years regarding the OLS to LSP. Thus, for future studies, after the publication of this framework, the development of several studies about different typologies of cargos is intended, and also the establishment of a research line for master's and doctoral programs.

References

Alasuutari, P. (1995). *Researching culture: qualitative method and cultural studies*. London: Sage.

Al-Kaabi, H., Potter, A., & Naim, M. (2007). An outsourcing decision model for airlines' MRO activities. *Journal of Quality in Maintenance Engineering*, 13(3), 217-227. http://dx.doi.org/10.1108/13552510710780258.

Amit, R. E., & Schoemaker, P. J. H. (1993). Strategic assets and organizational rent. *Strategic Management Journal*, 14(1), 33-46. http://dx.doi.org/10.1002/smj.4250140105.

Anderson, E., Coltman, T., Devinney, T., & Keating, B. (2011). What drives the choice of a third party logistics provider? *The Journal of Supply Chain Management*, 47(2), 97-115. http://dx.doi.org/10.1111/j.1745-493X.2011.03223.x.

Araz, C., Mizrak Ozfirat, P., & Ozkarahan, I. (2007). An integrated multicriteria decision-making methodology for outsourcing management. *Computers & Operations Research*, 34(12), 3738-3756. http://dx.doi.org/10.1016/j.cor.2006.01.014.

Arnold, U. (2000). New dimensions of outsourcing: a combination of transaction cost economics and the core competencies concept. *European Journal of Purchasing & Supply Management*, 6(1), 23-29.

Bajec, M. (2013). The possibility of developing intelligent logistics outsourcing in Slovenia. *Transport*, 28(3), 244-255. http://dx.doi.org/10.3846/16484142.2013.829520.

Bandeira, R.A M.; Maçada, A.C.G.; & Mello, L.C.B.B. (2010). Terceirização logística: fatores de decisão sob a perspectiva do contratante. In *Anais do XXXIV EnANPAD* (pp. 1-17). Rio de Janeiro: ANPAD.

Bardin, L. (1986). *El analisis de contenido*. Madrid, Spain: Ediciones Akal.

Barney, J. (1996). The resource-based theory of the firm. *Organization Science*, 7(5), 469. http://dx.doi.org/10.1287/orsc.7.5.469.

Barney, J. (2001). Resource-based theories of competitive advantage: a ten-year retrospective on the resource-based view. *Journal of Management*, 27(6), 643-650. http://dx.doi.org/10.1177/014920630102700602.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management Studies*, 17(1), 99-120.

Barney, J., Wright, M., & Ketchen, D. J., Jr. (2001). The resource-based view of the firm: ten years after 1991. *Journal of Management*, 27(6), 625-642. http://dx.doi.org/10.1177/014920630102700601.

Barthélemy, J., & Quélin, B. V. (2006). Complexity of outsourcing contracts and ex post transaction costs: an empirical investigation. *Journal of Management Studies*, 43(8), 1775-1797. http://dx.doi.org/10.1111/j.1467-6486.2006.00658.x.

Black, J. A., & Boal, K. B. (1994). Strategic resources: traits, configurations and paths to sustainable competitive advantage. *Strategic Management Journal*, 15(2), 131-148.

Boer, L., Gaytan, J., & Arroyo, P. (2006). A satisficing model of outsourcing. *Supply Chain Management*, 11(5), 444-455. http://dx.doi.org/10.1108/13598540610682462.

Bolumole, Y. A. (2001). The supply chain role of third-party logistics providers. *International Journal of Logistics Management*, 12(2), 87-101. http://dx.doi.org/10.1108/09574090110806316.

Bowersox, D. J., & Closs, D. J. (2009). *Logística empresarial: o processo de integração da cadeia de suprimento*. São Paulo: Atlas.

Burt, R. S. (1992). *Structural holes: the social structure of competition*. Cambridge: Harvard University Press.

Caixeta-Filho, J. V., & Martins, R. S. (2001). *Gestão logística do transporte de cargas*. São Paulo; Atlas.

Chan, F. T. S., Kumar, V., & Tiwari, M. K. (2009). The relevance of outsourcing and leagile strategies in performance optimization of an integrated process planning and scheduling model. *International Journal of Production Research*, 47(1), 119-142. http://dx.doi.org/10.1080/00207540600818195.

Chen, H., Tian, Yu., Ellinger, A. E., & Daugherty, P. J. (2010). Managing logistics logistics outsourcing relationships: an empirical investigation in China. *Journal of Business Logistics*, 31(2), 279-299. http://dx.doi.org/10.1002/j.2158-1592.2010.tb00152.x.

Chen, Y. M., Goan, M.-J., & Huang, P.-N. (2011). Selection process in logistics outsourcing – a view from third party logistics provider. *Production Planning and Control*, 22(3), 308-324. http://dx.doi.org/10.1080/09537287.2010.498611.

Chiang, C.-Y., Kocabasoglu-Hillmer, C., & Suresh, N. (2012). An empirical investigation of the impact of strategic sourcing and flexibility on firm's supply chain agility. *International Journal of Operations & Production Management*, 32(1), 49-78. http://dx.doi.org/10.1108/01443571211195736.

Chiang, Z., & Tzeng, G.-H. (2009). A third party logistics provider for the best selection in fuzzy dynamic decision environments. *International Journal of Fuzzy Systems*, 11(1), 1.

Collis, D. J. E., & Montgomery, C. A. (1995). Competing on resources: strategy in the 1990s. *Harvard Business Review*, 73(4), 118.

Contador, J. C. (2008). *Campos e armas da competição - novo modelo de estratégia*. São Paulo: Saint Paul.

De Oliveira Neto, G. C., & Lucato, W. C. (2016). Production planning and control as a tool for eco-efficiency improvement and environmental impact reduction. *Production Planning & Control*, 27(3), 148-156.

De Oliveira Neto, G. C., de Oliveira, J. C., Librantz, A. F. H. (2017). Selection of logistic service providers for the transportation of refrigerated goods. *Production Planning and Control*, 28(10), 813-828.

De Oliveira Neto, G. C., Librantz, A. H., de Sousa, W. C. (2014). Logistic operator selection with capacity of storage and transport frozen product using multicriteria decision. *IFIP Advances in Information and Communication Technology*. 438, 379-386.

De Paoli, F. M., Oliveira Neto, G. C., & Lucato, W. C. (2013). Economic and environmental gains resulting from the utilization of the design for the environment (DfE). *Espacios*, 34(12), 1-11.

Dierickx, I. E., & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35(12), 1504-1511. http://dx.doi.org/10.1287/mnsc.35.12.1504.

Dornier, P. P., Ernest, R., Fender, M., & Ouvelis, P. *Logística e operações globais: texto e casos*. São Paulo: Atlas, 2000.

Dosi, G., Nelson, R., & Winter, S. (2000). *The nature and dynamics of organizational capabilities*. New York: Oxford University Press.

Espino-Rodrígues, T. F., & Padrón-Robaina, V. (2006). A review of outsourcing from the resource-based view of the firm. *International Journal of Management Reviews*, 8(1), 49-70. http://dx.doi.org/10.1111/j.1468-2370.2006.00120.x.

Ferreira, M. P., & Serra, F. A. R. (2010). Make or buy in a mature industry? Models of client – supplier relationships under TCT and RBV perspectives. *Brazilian Administration Review*, 7(1), 22-39. http://dx.doi.org/10.1590/S1807-76922010000100003.

Fiol, C. M., & Lyles, M. A. (1985). Organizational learning. *Academy of Management Review*, 10(4), 803-813. http://dx.doi.org/10.5465/amr.1985.4279103.

Fontenay, C. C., & Gans, J. S. (2008). A bargaining perspective on strategic outsourcing and supply competition. *Strategic Management Journal*, 29(8), 819-839. http://dx.doi.org/10.1002/smj.697.

Foster, T. (1998). Contracys? We don't need no stinkin' contracts. *Logistics Management and Distribution Report*, 37(12), 24-38.

Galbraith, J. R. (1973). *Designing complex organizations*. New York: Addison-Wesley.

Galunic, D. C., & Rodan, S. (1998). Resource recombinations in the firm: knowledge structures and the potential for Schumpeterian innovation. *Strategic Management Journal*, 19(12), 1193-1201. http://dx.doi.org/10.1002/(SICI)1097-0266(1998120)19:12<1193::AID-SMJ5>3.0.CO;2-F.

Germain, R., & Iyer, K. N. S. (2006). The Interaction of Internal and Downstream Integration and its Association. *Journal of Business Logistics*, 27(2), 29-52. http://dx.doi.org/10.1002/j.2158-1592.2006.tb00216.x.

Glas, A., Hofmann, B., & Eßig, M. (2013). Performance-based logistics: a portfolio for contracting military supply. *International Journal of Physical Distribution & Logistics Management*, 43(2), 97-115. http://dx.doi.org/10.1108/IJPDLM-12-2011-0229.

Govindan, K., Sarkis, J., & Palaniappan, M. (2013). An analytic network process-based multicriteria decision making model for a reverse supply chain. *International Journal of Advanced Manufacturing Technology*, 68(1-4), 863-880. http://dx.doi.org/10.1007/s00170-013-4949-2.

Granovetter, M. S. (1973). Strength of weak ties. *American Journal of Sociology*, 78(6), 1360-1380. http://dx.doi.org/10.1086/225469.

Grant, R. M. (1991). The resource-based theory of competitive advantage: implications for strategy formulation. *California Management Review*, 33(3), 114-135. http://dx.doi.org/10.2307/41166664.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(S2), 109-122. http://dx.doi.org/10.1002/smj.4250171110.

Gretzinger, S. (2008). Strategic Outsourcing in the German Engine Building Industry. An Empirical Study Based on the Resource Dependence Approach. *Management Review*, 19(3), 200-228.

Gunasekaran, A., & Ngai, E. W. T. (2003). The successful management of a small logistics company. *International Journal of Physical Distribution & Logistics Management*, 33(9-10), 825-842. http://dx.doi.org/10.1108/09600030310503352.

Hall, R. (1992). The strategic analysis of intangible resources. *Strategic Management Journal*, 13(2), 135-144. http://dx.doi.org/10.1002/smj.4250130205.

Handley, S. M., & Benton, W. C., Jr. (2009). Unlocking the business outsourcing process model. *Journal of Operations Management*, 27(1), 344-361. http://dx.doi.org/10.1016/j.jom.2008.11.002.

Hartmann, E., & Grahl, A. (2012). Logistics outsourcing interfaces: the role of customer partnering behavior. *International Journal of Physical Distribution & Logistics Management*, 42(6), 526-543. http://dx.doi.org/10.1108/09600031211250578.

Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: capability lifecycles. *Strategic Management Journal*, 24(10), 997-1010. http://dx.doi.org/10.1002/smj.332.

Hill, T. (1993). *Manufacturing strategy*. London: Macmillan.

Hofer, A. R., Knemeyer, A. M., & Dresner, M. E. (2009). Antecedents and dimensions of Customer Partnering Behavior In Logistcs Outsourcing Relationships. *Journal of Business Logistics*, 30(2), 141-159. http://dx.doi.org/10.1002/j.2158-1592.2009.tb00116.x.

Holcomb, T. R., & Hitt, M. A. (2007). Toward a model of strategic outsourcing. *Journal of Operations Management*, 25(2), 464-481. http://dx.doi.org/10.1016/j.jom.2006.05.003.

Holter, A. R., Grant, D. B., Ritchie, J., & Shaw, N. (2008). A Framework for Purchasing Transport Services in Small and Medium Size Enterprises. *International Journal of Physical Distribution & Logistics Management*, 38(1), 21-38. http://dx.doi.org/10.1108/09600030810857193.

Hsiao, H. I., Van Der Vorst, J. G. A. J., Kemp, R. G. M., & Omta, S. W. F. (2010). Developing a decision-making framework for levels of logistics outsourcing in food supply chain networks. *International Journal of Physical Distribution & Logistics Management*, 40(5), 395-414. http://dx.doi.org/10.1108/09600031011052840.

Hutt, M. D., & Speh, J. W. (2001). Supply chain management. In T. W. Speh & M. D. Hutt. *Businnes marketing management: a strategic view of industrial and organizational markets* (7th ed.). USA: Hartcourt College Publishers.

Hwang, M.-H. (2010). Establishment of a comprehensive framework for strategic supply chain management. *Human Systems Management*, 29(3), 127-137.

Iañez, M. M., & Cunha, C. B. (2006). Uma metodologia para a seleção de um provedor de serviço logístico. *Revista Produção*, 16(3), 394-412. http://dx.doi.org/10.1590/S0103-65132006000300004.

Isiklar, G., Alptekin, E., & Büyüközkan, G. (2007). Application of hybrid intelligent decision support model in logistics outsourcing. *Computers & Operations Research*, 34(12), 3701-3714. http://dx.doi.org/10.1016/j.cor.2006.01.011.

Itami, H. (1987). *Mobilizing invisible assets* (186 p.). Cambridge, Mass.: Harvard University Press.

Jafarnejad, A., Sherafat, A., Taghavi, N., & Talab, Z. M. (2013). Designing a operational evaluation model for outsourcing decision making by effective outsourcing factors. *International Journal of Academic Research in Business and Social Sciences*, 3(7), 371-383. http://dx.doi.org/10.6007/IJARBSS/v3-i7/60.

Jharkharia, S., & Shankar, R. (2007). Select on of logistics service provider: an analytic network process (ANP) approach. *Omega: The international Journal of Management Science*, 35(3), 274-289.

Juga, J., Pekkarinen, S., & Kilpala, H. (2008). Strategic positioning of logistics service providers. *International Journal of Logistics: Research and Applications*, 11(6), 443-455. http://dx.doi.org/10.1080/13675560802373472.

Juntunen, J., Juntunen, M., & Autere, V. (2012). Outsourcing strategies of the security sector through acquisition procedures. *International Journal of Physical Distribution & Logistics Management*, 42(10), 931-946. http://dx.doi.org/10.1108/09600031211281439.

Kang, M., Wu, X., & Hong, P. (2009). Strategic outsourcing practices of multi-national corporations (MNCs) in China. *Strategic Outsourcing*, 2(3), 240-256. http://dx.doi.org/10.1108/17538290911005153.

Karhunen, P., & Kosonen, R. (2013). Institutional constraints for outsourcing services in Russia. *Journal of Business and Industrial Marketing*, 28(3), 201-209. http://dx.doi.org/10.1108/08858621311302859.

Klingenberg, W., & Boksma, J. D. (2010). A conceptual framework for outsourcing of materials handling activities in automotive: differentiation and implementation. *International Journal of Production Research*, 48(16), 4877-4899. http://dx.doi.org/10.1080/00207540903067177.

Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3), 383-397. http://dx.doi.org/10.1287/orsc.3.3.383.

Kotabe, M., Mol, M. J., & Ketkar, S. (2008). An evolutionary stage model of outsourcing and competence destruction: a triad comparison of the consumer electronics industry. *Management International Review*, 48(1), 65-93. http://dx.doi.org/10.1007/s11575-008-0004-1.

Kumar, S. K., Muddada, R. R. M. R., Pandey, M. K., Mahanty, B., & Tiwari, M. K. (2013). Logistics planning and inventory optimization using swarm intelligence: a third party perspective. *International Journal of Advanced Manufacturing Technology*, 65(9-12), 1535-1551. http://dx.doi.org/10.1007/s00170-012-4278-x.

Kumar, S., Aquino, E. C., & Anderson, E. (2007). Application of a process methodology and a strategic decision model for business process outsourcing. *Information, Knowledge, Systems Management*, 6(1), 323-342.

Kumar, S., Zampogna, P., & Nansen, J. (2010). A closed loop outsourcing decision model for developing effective manufacturing strategy. *International Journal of Production Research*, 48(7), 1873-1900. http://dx.doi.org/10.1080/00207540802680542.

Lai, F., Chu, Z., Wang, Q., & Fan, C. (2013). Managing dependence in logistics outsourcing relationships: evidence from China. *International Journal of Production Research*, 51(10), 3037-3054. http://dx.doi.org/10.1080/00207543.2012.752591.

Lai, F., Li, D., Wang, Q., & Zhao, X. (2008). The information technology capability of third-party logistics providers: a resource-based view and empirical evidence from China. *The Journal of Supply Chain Management*, 44(3), 22-38. http://dx.doi.org/10.1111/j.1745-493X.2008.00064.x.

Lambert, D. M. (1998). *Suplly chain management: what does it involve*. Ohio: The Ohio State University.

Lee, C. K. M., Ching Yeung, Y., & Hong, Z. (2012). An integrated framework for outsourcing risk management. *Industrial Management & Data Systems*, 112(4), 541-558. http://dx.doi.org/10.1108/02635571211225477.

Li, F., Li, L., Jin, C., Wang, R., Wang, H., & Yang, L. (2012). A 3PL supplier selection model based on fuzzy sets. *Computers & Operations Research*, 39(1), 1879-1884. http://dx.doi.org/10.1016/j.cor.2011.06.022.

Loasby, B. J. (1998). The organisation of capabilities. *Journal of Economic Behavior & Organization*, 35(2), 139-160. http://dx.doi.org/10.1016/S0167-2681(98)00056-0.

Long, C., & Koch, M. V. (1995). Using core capabilities to create competitive advantage. *Organizational Dynamics*, 24(1), 7-22.

Lucato, W. C., Costa, E. M., & Oliveira Neto, G. C., (2017). The environmental performance of SMEs in the Brazilian textile industry and the relationship with their financial performance. *Journal of Environmental Management*, 203(Pt 1), 550-556. http://dx.doi.org/10.1016/j.jenvman.2017.06.028. PMid:28647218.

Luna, M. M. M. (2007). Operadores logísticos. In A. G. Novaes. *Logística e gerenciamento da cadeia de distribuição*. Rio de Janeiro: Elsevier.

Madhok, A., & Tallman, S. B. (1998). Resources, transactions and rents: managing value through interfirm collaborative relationships. *Organization Science*, 9(3), 326-339. http://dx.doi.org/10.1287/orsc.9.3.326.

Mazlan, R.M.R.; & Ali, K.N. (2006). Relationship between supply chain management and outsourcing. In *International Conference on Construction Industry - ICCI.* Padang: Universiras Bung Hatta.

McIvor, R. (2000). A practical framework for understanding the outsourcing process. *Supply Chain Management*, 5(1), 22-36. http://dx.doi.org/10.1108/13598540010312945.

McIvor, R. (2009). How the transaction cost and resource-based theories of the firm inform outsourcing evaluation. *Journal of Operations Management*, 27(1), 45-63. http://dx.doi.org/10.1016/j.jom.2008.03.004.

McIvor, R. (2010). The influence of capability considerations on the outsourcing decision: the case of a manufacturing company. *International Journal of Production Research*, 48(17), 5031-5052. http://dx.doi.org/10.1080/00207540903049423.

Mello, J. E., Stank, T. P., & Esper, T. L. (2008). A model of logistics outsourcing strategy. *Transportation Journal*, 47(4), 5-25.

Mills, J., Platts, K., Bourne, M., & Richards, H. (2002). *Competing Through Competences*. Cambridge: University Press. http://dx.doi.org/10.1017/CBO9780511754692.

Narasimhan, R., Narayanan, S., & Srinivasan, R. (2010). Explicating the mediating role of integrative supply management practices in strategic outsourcing: a case study analysis. *International Journal of Production Research*, 48(2), 379-404. http://dx.doi.org/10.1080/00207540903174916.

Nelson, R. R. E., & Winter, S. G. (1982). *An evolutionary theory of economic change*. Cambridge: Harvard University Press.

Novaes, A. G. (2007). *Logística e gerenciamento da cadeia de distribuição: Estratégia, operação e avaliação*. Rio de Janeiro: Campus.

Oliveira Neto, G. C. (2008). *Integração complexa entre empresa contratante e operador logístico: critérios para a contratação* (Dissertação de mestrado). Instituto de Ciências Exatas e Tecnológicas, Universidade Paulista, São Paulo.

Oliveira Neto, G. C., Costa, B. K., & Melo Ribeiro, H. C. (2011). Aspectos estratégicos para auxiliar na decisão de terceirização de serviços logísticos. *Anais do XIV Semead*. São Paulo: FEAUSP.

Oliveira Neto, G. C., Correia, A. J. C., & Schroeder, A. M. (2017a). Economic and environmental assessment of recycling and reuse of electronic waste: multiple case studies in Brazil and Switzerland. *Resources, Conservation and Recycling*, 127, 42-55. http://dx.doi.org/10.1016/j.resconrec.2017.08.011.

Oliveira Neto, G. C., Leite, R. R., Shibao, F.Y., & Lucato, W. C. (2017b). Framework to overcome barriers in the implementation of cleaner production in small and medium-sized enterprises: multiple case studies in Brazil. *Journal of Cleaner Production*, 142, 50-62. http://dx.doi.org/10.1016/j.jclepro.2016.08.150.

Ordoobadi, S. M. (2009). Outsourcing reverse logistics and remanufacturing functions: a conceptual strategic model. *Management Research News*, 32(9), 831-845. http://dx.doi.org/10.1108/01409170910980344.

Paoli, F. M., Oliveira, G. C., No., & Lucato, W. C. (2013). Economic and environmental gains resulting from the utilization of the design for the environment (DfE). *Espacios*, 34(12), 1-11.

Penrose, E. (1959). *The theory of growth of the firm*. London: Basil Blackwell.

Perunovic, Z., Mefford, R., & Christoffersen, M. (2012). Impact of information technology on vendor objectives, capabilities, and competences in contract electronic manufacturing. *International Journal of Production Economics*, 139(1), 207-219. http://dx.doi.org/10.1016/j.ijpe.2012.04.009.

Porter, M. E. (1980). *Competitive strategy: techniques for analysing industries and competitors*. New York: Free Press.

Prahalad, C. K., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68(3), 79.

Prahalad, C. K., & Hamel, G. (1994). Strategy as field of study: why search for a new paradigm? *Strategic Management Journal*, 15(2), 5-16.

Quinn, J. B. (1999). Strategic outsourcing: leveraging knowledge capabilities. *Sloan Management Review*, 40(4), 9-22.

Quinn, J. B. (2000). Outsourcing innovation. The New Engine of Growth. *Sloan Management Review*, 41(4), 13-28.

Reed, R. E., & Defillippi, R. J. (1990). Causal ambiguity, barriers to imitation, and sustainable competitive advantage. *Academy of Management Review*, 15(1), 88-102. http://dx.doi.org/10.5465/amr.1990.4308277.

Rodrigues, D. M., & Sellito, M. A. (2008). Práticas logísticas colaborativas: o caso de uma cadeia de suprimentos da indústria automobilística. *Revista de Administração da Universidade de São Paulo*, 43(1), 97-111.

Roses, L. K. (2007). *Modelo de sucesso na terceirização da TI: perspectiva da satisfação no relacionamento cliente-fornecedor*. Rio de Janeiro: ANPAD.

Rouse, M., & Daellenbach, U. S. (1999). Rethinking research methods for the resource based perspective: isolating sources of sustainable competitive advantage. *Strategic Management Journal*, 20(5), 487-494. http://dx.doi.org/10.1002/(SICI)1097-0266(199905)20:5<487::AID-SMJ26>3.0.CO;2-K.

Rumelt, R. P. (1991). How much does industry matter? *Strategic Management Journal*, 12(3), 167-185. http://dx.doi.org/10.1002/smj.4250120302.

Sanders, N. R., Locke, A., Moore, C. B., & Autry, C. W. (2007). Multidimensional framework for understanding outsourcing arrangements. *The Journal of Supply Chain Management*, 43(4), 3-15. http://dx.doi.org/10.1111/j.1745-493X.2007.00037.x.

Serrato, M. A., Ryan, S. M., & Gaytan, J. A. (2007). Markov decision model to evaluate outsourcing in reverse logistics. *International Journal of Production Research*, 45(18/19), 4289-4315. http://dx.doi.org/10.1080/00207540701450161.

Shang, K.-C. (2009). Integration and organisational learning capabilities in third-party logistics providers. *Service Industries Journal*, 29(3), 331-343. http://dx.doi.org/10.1080/02642060701847794.

Shields, P., & Rangarjan, N. (2013). *A playbook for research methods: integrating conceptual frameworks and project management*. Stillwater: New Forums Press.

Simmonds, D., & Gibson, R. (2008). A model for outsourcing HRD. *Journal of European Industrial Training*, 32(1), 4-18. http://dx.doi.org/10.1108/03090590810846539.

Soh, S. (2010). A decision model for evaluating third-party logistics providers using fuzzy analytic hierarchy process. *African Journal of Business Management*, 4(3), 339-349.

Souza, L. L. C., Maldonado, M. U., & Rados, G. J. V. (2011). Gestão da terceirização no setor brasileiro de distribuição de energia elétrica. *Revista de Administração de Empresas*, 51(2), 188-201. http://dx.doi.org/10.1590/S0034-75902011000200006.

Stalk, G., Evans, P., & Shulman, L. E. (1992). Competing on capabilities: the new rules of corporate strategic. *Harvard Business Review*, 70(2), 57-69. PMid:10117369.

Sucky, E. (2007). A model for dynamic strategic vendor selection. *Computers & Operations Research*, 34(12), 3638-3651. http://dx.doi.org/10.1016/j.cor.2006.01.006.

Teece, D. J., Pisano, G. E., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533. http://dx.doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z.

Tsai, M. C., Liao, C. H., & Han, C. S. (2008). Risk perception on logistics outsourcing of retail chains: model deveLSPment and empirical verification in Taiwan. *Supply Chain Management*, 13(6), 415-424. http://dx.doi.org/10.1108/13598540810905679.

Tseng, C.-H., & Chen, L.-T. (2013). Firm capabilities as moderators of transaction cost factors and subsidiary domestic outsourcing. *Management Decision*, 51(1), 5-24. http://dx.doi.org/10.1108/00251741311291283.

van de Water, H., & van Peet, H. P. (2006). A decision support model based on the Analytic Hierarchy Process for make or Buy decision in manufacturing. *Journal of Purchasing and Supply Chain Management*, 12(5), 258-271. http://dx.doi.org/10.1016/j.pursup.2007.01.003.

Vasiliauskiene, L., Snieska, V., & Vasiliauskiene, D. (2011). Evaluation of outsourcing models determining the variation of transaction costs. *Economics and Management*, 16, 428-436.

Wernefelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180. http://dx.doi.org/10.1002/smj.4250050207.

Wernerfelt, B., & Montgomery, C. (1986). What is an attractive industry? *Management Science*, 32, 1223-1230.

Westphal, P., & Sohal, A. S. (2013). Taxonomy of outsourcing decision models. *Production Planning and Control*, 24(4-5), 347-358. http://dx.doi.org/10.1080/09537287.2011.648486.

Whipple, J. M., & Russell, D. (2007). Building supply chain collaboration: a typology of collaborative approaches. *International Journal of Logistics Management*, 18(2), 174-196. http://dx.doi.org/10.1108/09574090710816922.

Wu, F., Li, H. Z., Chu, L. K., & Sculli, D. (2005). An outsourcing decision model for sustaining long-term performance. *International Journal of Production Research*, 43(12), 2513-2535. http://dx.doi.org/10.1080/00207540500045717.

Yaghoubi, N. M., Moradi, M., & Banihashemi, S. A. (2011). Analyzing the effect of value chain outsourcing

on productivity based on the customer and learning perspective of BSC Model. *Interdisciplinary Journal of Contemporary Research in Business*, 2(10), 45-56.

Yeung, K., Zhou, H., Yeung, A. C. L., & Cheng, T. C. E. (2012). The impact of third-party logistics providers capabilities on exporters performance. *International Journal of Production Economics*, 135(2), 741-753. http://dx.doi.org/10.1016/j.ijpe.2011.10.007.

Ying, W., & Dayong, S. (2005). Multi-agent framework for third party logistics in e-comerce. *Expert Systems with Applications*, 29(2), 431-436. http://dx.doi.org/10.1016/j.eswa.2005.04.039.