RAM. Revista de Administração Mackenzie
ISSN: 1518-6776
ISSN: 1678-6971
Editora Mackenzie; Universidade Presbiteriana Mackenzie

Castanha, Eduardo Tramontin; Gasparetto, Valdirene
Influence of switching costs and resource dependence in interorganizational cooperation
RAM. Revista de Administração Mackenzie, vol. 25, no. 2, eRAMR240184, 2024
Editora Mackenzie; Universidade Presbiteriana Mackenzie

DOI: https://doi.org/10.1590/1678-6971/eRAMR240184

Available in: https://www.redalyc.org/articulo.oa?id=195477840003

ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
Resources and Entrepreneurial Development, https://doi.org/10.1590/1678-6971/eRAMR240184
Submitted: June 23, 2021 | Approved: Dec. 12, 2022

# Influence of switching costs and resource dependence in interorganizational cooperation

## Influência dos custos de troca e da dependência de recursos na cooperação interorganizacional

Eduardo Tramontin Castanha and Valdirene Gasparetto

Federal University of Santa Catarina, Florianópolis, SC, Brazil

**Authors' notes**

Eduardo Tramontin Castanha is now a professor at the Accounting Department of University of the Far South of Santa Catarina (Universidade do Extremo Sul Catarinense – Unesc); Valdirene Gasparetto is now a professor at the Accounting Department of Federal University of Santa Catarina (Universidade Federal de Santa Catarina – UFSC).

Correspondence concerning this article should be addressed to Eduardo Tramontin Castanha, Avenida Universitária, Universidade do Extremo Sul Catarinense, Criciúma, Santa Catarina, Brazil, ZIP code 88806-000. Email: etc@unesc.net

To cite this paper: Castanha, E. T., & Gasparetto, V. Influence of switching costs and resource dependence in interorganizational cooperation. *Revista de Administração Mackenzie*, *25*(2), 1–27. https://doi.org/10.1590/1678-6971/eRAMR240184

*RAM does not have information about the existence of open data regarding this manuscript.*
*RAM does not have authorization from the authors and/or evaluators to publish this article's review.*

## Abstract

Purpose: This article analyzes the influence of switching costs and resource dependence on interorganizational cooperation between contractors (buyers) and transport companies (sellers).

Originality/value: The management accounting literature has traditionally focused on intraorganizational controls. However, researchers have a growing interest in applying management accounting elements in the interorganizational scope. This study contributes to the literature on interorganizational relationships by presenting possible evidence of the relationship between resource dependence, switching costs, and interorganizational cooperation between contractors and transport companies.

Design/methodology/approach: This quantitative study surveyed the perception of professionals from food and beverage sector companies about the transport companies they contract. A total of 120 professionals participated in the study, and the Structural Equations Modeling (SEM) technique was used to analyze the structural model.

Findings: The relational and procedural dimensions of switching costs and resource dependence influence interorganizational cooperation positively. A total mediation of resource dependence was found in the relationship between procedural switching costs and interorganizational cooperation. The results showed that switching costs and resource dependence are antecedents of interorganizational cooperation between the firms surveyed and the transport companies they contract. As for social and managerial implications, this study offers managers a deeper understanding of the importance of switching costs and resource dependence and the impacts of these factors on interorganizational cooperation.


*Keywords*: switching costs, resource dependence, interorganizational cooperation, interorganizational relationships, buyer-supplier relationships



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

## Resumo

Objetivo: Analisar a influência dos custos de troca e da dependência de recursos na cooperação interorganizacional entre compradores e seus fornecedores de serviços de transporte.

Originalidade/valor: A literatura de contabilidade gerencial tradicionalmente tem focado no uso de controles intraorganizacionais, porém é crescente o interesse de pesquisadores em aplicar elementos da contabilidade gerencial no âmbito interorganizacional. Nesse contexto, este estudo acrescenta à literatura de relações interorganizacionais possíveis evidências da relação entre dependência de recursos, custos de troca e cooperação interorganizacional entre compradores e seus fornecedores de serviços de transporte.

*Design*/metodologia/abordagem: A investigação, com abordagem quantitativa e por *survey*, avaliou a percepção de profissionais de empresas do setor de alimentos e bebidas acerca de seus fornecedores de serviços de transporte. Participaram do estudo 120 profissionais, e, para a análise do modelo estrutural, utilizou-se a técnica de Modelagem de Equações Estruturais (MEE).

Resultados: Os resultados demonstram que as dimensões relacional e processual dos custos de troca e a dependência de recursos influenciam positivamente a cooperação interorganizacional. Encontrou-se, ainda, mediação total da dependência de recursos na relação entre custos de troca processual e cooperação interorganizacional. Os resultados evidenciam que custos de troca e dependência de recursos são antecedentes da cooperação interorganizacional entre as empresas pesquisadas e seus fornecedores de serviços de transporte. Como implicações sociais e gerenciais, os resultados desta investigação proporcionam a gestores de logística e transportes, tanto das empresas compradoras quanto das fornecedoras, melhor entendimento da importância dos custos de troca e da dependência de recursos e seus impactos na cooperação interorganizacional.


*Palavras-chave*: custos de troca, dependência de recursos, cooperação interorganizacional, relações interorganizacionais, relações comprador-fornecedor



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

## INTRODUCTION

Buyer-seller interorganizational relationships (IORs) have gained relevance since research show that some firms outsource 50%-70% of their product's value (Knoppen & Sáenz, 2017). The literature has used many theories and approaches – such as Williamson's (1975) transaction cost theory – to understand the organizations' costs regarding the provision of goods or services, whether costs in a classic relation between the firm and the market or hybrid costs involving IORs. One of the aspects the firm analyzes to decide about outsourcing services is the issue of governance in transactions between organizations. A central element regarding this issue is the specificity of assets and the consequent analysis of the investments required when establishing each relationship (Williamson, 1975).

Companies often outsource transport services, which represent the most significant portion of the firms' logistical costs (Abrahão & Soares, 2006). The decision between setting up the internal capability to carry out transportation autonomously or outsourcing these services is crucial and strategic for the organizations (Tacla & Botter, 2017) since this issue involves acquiring specific and expensive assets. In companies in the food and beverage sector – the object of this study – specificities in transport services are greater, especially when food and beverages are perishable and have a short shelf life. The transport of food products requires specific care with: 1. travel time to provide more frequent deliveries; 2. temperature control for the preservation of food products; and 3. vehicle hygiene to ensure food safety during transportation (Samel et al., 2019).

Organizations in hybrid relationships typically present some level of cooperation (Powell, 1990; Williamson, 1991). These cooperative IORs raise questions about why organizations decide to work together and what factors determine the development of specific types of cooperation (Ding et al., 2010). Interorganizational cooperation allows for greater flexibility, information exchange, shared problem-solving, and restraint in the use of power (Heide & Miner, 1992). However, the end of such a relationship may incur high switching costs.

The literature on buyer-seller IORs has intensively incorporated switching costs into its theoretical models (Nielson, 1996), more frequently analyzing these costs from the buyer's perspective (Kim et al., 2010), as performed in this study. Switching costs encompass the costs of relinquishing specific assets from a relationship, which one party terminates and replaces with an alternative relationship. If switching costs for the buyer are low, the buyer



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

can switch sellers more quickly and may be less likely to cooperate in the relationship. However, high switching costs preserve the existing relationship, generate mutual dependence, and promote buyer-seller cooperation (Kim et al., 2010).

Also, resource dependence can generate high levels of commitment and cooperation between partners, which means that increasing the importance and exclusivity of an organization's resources positively affects commitment and cooperation. Thus, dependency can be strategically used to increase interorganizational cooperation, reduce conflicts (Razzaque & Boon, 2003), and maintain the parties in the relationship (Burnham et al., 2003). Ferrer et al. (2010) explored the influence of different relationship factors on IORs in the Australian road haulage industry and found that resource dependence strongly influenced relationships.

This research analyzes the influence of switching costs and resource dependence on interorganizational cooperation between contractors (buyers) and transport companies (sellers) based on the perception of contractors operating in the food and beverage sector that outsource the transport of their products.

This research is important considering the representativeness of the sector. In 2019, the food and beverage industry reached a 61.7% share of Brazil's trade balance. The domestic market mobilized BRL 557 billion, counting over 36,000 companies responsible for processing about 58% of Brazilian agricultural production (Abia, 2019). The analysis of the relationship between these companies and firms providing transport services is relevant since transportation is among the most outsourced activities in Brazil. This country adopts road freight transport as the main modal. Outsourcing transport services is advantageous, reducing the capital invested in specific and expensive assets (Abrahão & Soares, 2006; Tacla & Botter, 2017).

The study contributes to the literature by analyzing the influence of switching costs and resource dependence on interorganizational cooperation, constructs that have been analyzed in a dissociated way and generally in IORs other than the ones investigated here. From a managerial and social point of view, this study offers managers a deeper understanding of the importance of switching costs and resource dependence and the impacts of these factors on interorganizational cooperation. The findings corroborate recent studies that emphasize the relevance of cooperation in promoting positive results for the organizations involved in buyer-seller relationships (Pereira et al., 2020; O'Connor et al., 2020).



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

# THEORETICAL FRAMEWORK AND HYPOTHESES

## Interorganizational cooperation and switching costs

Outsourcing activities that require specific investments may make the contractor dependent on the seller, *i.e.*, the contractor would have to abandon investments made in the relationship and face high switching costs (Kim et al., 2010). This situation is called lock-in, as organizations contracting the service can become victims of opportunistic behavior, as the seller can exploit its dominant position to determine the terms of the contract or impose different terms in a future negotiation (Lonsdale, 2001).

One of the parties in the relationship can gradually increase its commitment to the relationship through exclusive investments in products, processes, or people dedicated to the relationship (Dwyer et al., 1987). By delegating assets to sellers, such as know-how and key information, buyers – organizations contracting transport services providers, for example – become dependent and must manage risk dependence (Abrahão & Soares, 2006). Thus, both from an academic and professional point of view, the assumption is that the higher the switching costs, the greater the difficulty in changing the partner in the relationship (Burnham et al., 2003; Woisetschläger et al., 2011), and the lower the likelihood of opportunistic behavior between partners, which can contribute to a more cooperative relationship (Kim et al., 2010).

According to Burnham et al. (2003), switching costs are associated with ending a relationship with one provider to start a new one with another. For the authors, there are three switching cost types: 1. procedural switching costs, which involve loss of time and effort involved in the search for new providers; 2. financial switching costs, which involve loss of financial resources during the search for new partners; and 3. relational switching costs, which involve psychological and emotional discomfort during the search for an alternative provider.

Previous studies have associated switching costs with several elements related to IORs (Blut et al., 2015; Kim et al., 2010; Shi et al., 2015; Vasudevan et al., 2006). Kim et al. (2010) investigated the influence of switching costs on the cooperation between buyers and suppliers of telecommunication services. They found that switching costs and trust are significant antecedents of cooperation between partners. Shi et al. (2015) investigated how social ties between suppliers and their customers can be conceived as switching costs influencing customer loyalty. They found a positive association between switching costs and loyalty through the construction of social ties.



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

Blut et al. (2015) performed a meta-analysis on switching costs involving 153 empirical studies. They found a positive relationship between the switching cost types – procedural, financial, and relational, as proposed by Burnham et al. (2003) – and customers' repurchase intention. Based on these assumptions about the influence of switching costs in building cooperative relationships, the first hypothesis of this study is:

- H1: Switching costs positively influence interorganizational cooperation between contractors and transport companies.

## Switching costs and resource dependency

Relationships with suppliers may imply access to competencies and resources to improve the buyers' performance (Das & Teng, 2000; Kim & Choi, 2018; Zhang et al., 2021). However, managing these relationships can be challenging for the parties (Nyaga et al., 2013) since many partnerships demand specific investments from all those involved (Lin et al., 2017). Therefore, organizations increase commitment to the relationship through investments in people, processes, and products (Anderson & Narus, 1991).

Faced with such investments, organizations increase switching costs and consequently the resource dependence in the relationship (Anderson & Narus, 1991). Whitten et al. (2010) corroborate this perspective, stating that managers may be subjected to substantial costs when switching suppliers. Costs are usually high due to losing revenues and investments associated with past operations and the need to make new investments.

The partners' specific investments in a relationship may lead to high switching costs and resource dependence (Heide & John 1988), which means that switching costs can make the customer dependent on the relationship with the current supplier (Biong & Selnes, 1997). According to Lee and Scott (2015), suppliers can seek ways to increase partner dependence to obtain benefits even when buyers are more powerful (Lee & Scott, 2015).

Martins et al. (2011) examined behavioral aspects of the demands of transport service users, finding that the safety obtained from a comfort service leads to customer dependence. Abrahão and Soares (2006) state that contractors face risks when delegating their know-how, key information, and assets to transport companies, increasing high switching costs and establishing a dependence framework. The transport company knows which operational dynamics and skills are needed to carry out the activities. It starts to understand that it has advantages over its competitors and can adopt a less committed posture within the relationship. Based on the reported arguments, the second research hypothesis was formulated:



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

- H2: Switching costs positively influence resource dependence between contractors and transport companies.

## Resource dependence and interorganizational cooperation

The growing competitive pressure and the complexity of customer demands contribute to outsourcing logistical services such as transport (Fugate et al., 2010; Zacharia et al., 2011). This outsourcing has made contractors dependent on the resources offered by suppliers, such as qualified employees, physical assets (especially vehicles), efficient processes, and other resources that can help avoid unnecessary investments and provide better quality services (Mentzer et al., 1999).

Proper management of buyer-seller type IORs is essential to avoid the negative effects of resource dependence in a collaborative relationship (Pfeffer & Salancik, 1978). Such management may lead to a dynamic where more dependence increases interorganizational cooperation and provides positive results from sharing access to resources, market opportunities, and financial gains (Kale, 1989; Morgan & Hunt, 1994). Establishing cooperative IORs can facilitate partner organizations' access to the necessary resources to achieve a greater competitive advantage, which cannot be generated individually (Ireland et al., 2002).

Cooperation in relationships with transport companies is a way of overcoming the inefficiencies related to transport processes required by different industries so that these companies can offer superior performance to customers (Mason et al., 2007). This perspective is corroborated by Martins et al. (2011), who observed that buyers of transport services need to form solid partnerships to consolidate their position in the supply chain, as cooperative relationships lead to transport services that are adequate, planned, and integrated with the contractors' strategies.

Yeh (2005) investigated antecedents of the continuity of cooperative IORs in the electronics supply chain in Taiwan's car industry and found a positive relationship between resource dependence and cooperation. Drees and Heugens (2013) reviewed 157 articles that addressed resource dependence and found that organizations respond to resource dependence through insertion in cooperative arrangements. Therefore, based on the assumptions in the literature and empirical findings that found an association between resource dependence and cooperation, the third hypothesis of this study is:

- H3: Resource dependence positively influences interorganizational cooperation between contractors and transport companies.



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

## Switching costs and interorganizational cooperation mediated by resource dependence

The strategy of outsourcing logistic activities has become a trend and has frequently occurred in recent decades (Leuschner et al., 2014; Shi et al., 2015). Many organizations outsource such activities to specialized service providers to improve customer service, reduce costs, and focus efforts on their core activities (Maloni & Carter, 2006). Therefore, partners are motivated to invest in specific assets, such as a specific location, dedicated staff and equipment, and customized procedures for effective cooperation (Large, 2011).

Specific investments made by relational partners can increase switching costs (Bendapudi & Berry, 1997; Gounaris, 2005) since such investments lose value in different interorganizational contexts (Mentzer et al., 2001; Geiger et al., 2012). The loss of value of specific assets, resulting when terminating contracts and replacing partners, and the risk of unavailability of substitutes for future transactions can lead to dependence (Mentzer et al., 2001). In this perspective, previous studies emphasize dependency as a central construct to explain why cooperative relationships can be intense and long-lasting (Morgan & Hunt, 1994; Schmitz et al., 2016). When considering the transportation industry specifically, Martins et al. (2011) found that companies contracting transport services have high levels of dependence on their suppliers due to the responsibility demanded in delivering goods to customers. According to Lai et al. (2013), high levels of dependence on logistic service users force them to invest in the current relationship, synchronizing operations with suppliers and making the relationship more cooperative. From the theoretical assumptions and empirical findings presented, the fourth research hypothesis is:

- H4: Resource dependence positively mediates the relationship between switching costs and interorganizational cooperation of contractors and transport companies.

Figure 1 shows the conceptual model guiding this research, built based on the identified theoretical gaps and the empirical support of previous studies.

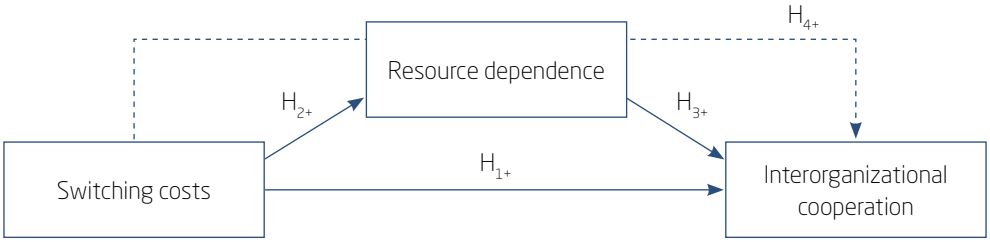
The conceptual model proposes a positive relationship between switching costs and interorganizational cooperation (H1), between switching costs and resource dependence (H2), and between resource dependence and interorganizational cooperation (H3). Subsequently, the model indicates the mediating effect of resource dependence on the relationship between switching costs and interorganizational cooperation (H4).



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

**Figure 1**

***Research theoretical design***




*Note.* The dotted line (H4) indicates the mediating effect of the resource dependence variable on the relationship between switching costs and interorganizational cooperation.

## METHODOLOGICAL PROCEDURES

This study was carried out with logistics and transport professionals from companies in the food and beverage industry that outsource transport services to distribute their products. The companies were retrieved from lists obtained with the following organizations: Brazilian Association of Food Industry (Associação Brasileira da Indústria de Alimentos [Abia]), Online Food Guide (Guia de Alimentos Online), Econodata Catalogue (Catálogo Econodata), Brazilian Association of Beverages (Associação Brasileira de Bebidas [Abrabe]), Brazilian Association of Soft Drinks and Non-Alcoholic Beverages (Associação Brasileira das Indústrias de Refrigerantes e de Bebidas não Alcoólicas [Abir]), Brazilian Association of Refrigerators (Associação Brasileira de Frigoríficos [Abrafrigo]).

Of the 985 companies in the lists gathered, 454 were excluded (repeated, did not provide contact information, or presented other inconsistencies), leaving 531 companies. These companies were located on the professional social media platform LinkedIn, and an invitation was sent to their logistics and transport managers in November and December 2020, and January 2021. We sent a link to 481 employees who accepted the invitation so they could access the questionnaire developed in Google Forms. In addition, they received two more contacts with reminders to encourage the response.

Before sending the questionnaire, a pre-test was carried out to identify failures, inconsistencies, and intervening factors in the proper understanding of the statements, according to the assumptions of Martins and Theóphilo (2009). In addition, the questionnaire was submitted to a PhD professor, a PhD student, and a master's student for reliability analysis.



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

The number of responses was sufficient to carry out the planned statistical tests. The sample totaled 120 valid responses, which meets the minimum number required for hypothesis analysis, as estimated by the G*Power 3.1.9.2 software (Ringle et al., 2014). The criteria used to estimate the appropriate number were: 1. number of arrows from the independent variables to the dependent variable; 2. effect size (mean effect of 0.15); 3. significance of $\alpha = 5\%$; and 4. sample power of $1- \beta = 0.8$ (Cohen, 1988).

The three constructs that comprised the research instrument (switching costs, resource dependence, and interorganizational cooperation) were measured using multiple 7-point Likert scales. Food and beverage industry professionals were asked to express their perception of the leading transport company their organization works with. The statements of the research instrument were adapted from the authors indicated in the column of constructs (Table 1).

**Table 1**

*Constructs and variables*

| Constructs | Variables | Number of statements | Scale |
|---|---|---|---|
| Switching costs<br>Variables and statements adapted from Burnham et al. (2003). | Procedural | 18 | From 1 = totally disagree to 7 = totally agree |
| | Financial | 5 | |
| | Relational | 7 | |
| Resource dependence<br>Variables and statements adapted from Lee and Scott (2015). | Resource dependence | 5 | From 1 = never to 7 = always |
| Interorganizational cooperation<br>Variables and statements adapted from Heide and Miner (1992). | Information exchange | 4 | From 1 = totally disagree to 7 = totally agree |
| | Flexibility | 4 | |
| | Shared problem solving | 4 | |
| | Restraint in the use of power | 3 | |

Data analysis was performed using exploratory factor analysis (EFA) and structural equation modeling (SEM), estimated by partial least squares (PLS). SPSS Statistics software was used to execute the EFA and SmartPLS 3 to operationalize SEM.

EFA procedures were performed using Varimax rotation and Kaiser normalization, as Fávero et al. (2009) recommended. The EFA demanded the exclusion of four statements of the switching costs construct (CRE1, CRE6,



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

CAP3, and CSU2), three statements of the resource dependence construct (DRE1, DRE2, and DRE3), and three statements of the interorganizational cooperation construct (FL1, CI4, and RC3). After the exclusions, the indicators showed satisfactory adequacy indices.

Harman's single factor test (Podsakoff et al., 2003) was applied to all statements of the constructs, which showed that the first component was responsible for 18.39% of the total variance, below 50%, indicating that the sample had no bias.

The non-response bias test was performed to verify possible distortions in the sample (Wåhlberg & Poom, 2015), adopting the first-last comparison methodology. Thus, the t-test allowed us to compare the responses of the first 20% of respondents with the last 20%. With a significance level of 5%, there are no significant differences between the first 24 and the last 24 respondents, indicating that there is no non-response bias in the data of this study. PLS-SEM was applied subsequently.

## ANALYSIS AND DISCUSSION OF RESULTS

### Exploratory factor analysis (EFA)

The EFA confirmed the three switching cost types: 1. procedural (four variables – costs of economic risk, evaluation costs, learning costs, setup costs); 2. financial (two variables – costs of loss of benefits, costs of monetary loss); and 3. relational (two variables – costs of loss of benefits, costs of monetary loss). Resource dependence proved to be a unique construct. Interorganizational cooperation had the four domains confirmed (information exchange, flexibility, shared problem solving, restraint in the use of power). Table 2 shows the other results obtained from the EFA.

**Table 2**

***EFA of the constructs***

| Construct | Statement | Factor | %VAR | KMO | Bartlett's sphericity test |
|---|---|---|---|---|---|
| Switching costs (procedural) | CRE2 | 0.497 | 60.02 | 0.7 | $X^2$ = 510.543<br>Sig = 0.000 |
| | CRE3 | 0.701 | | | |
| | CRE4 | 0.840 | | | |
| | CRE5 | 0.741 | | | |

*(continues)*



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

**Table 2** (continuation)

***EFA of the constructs***

| Construct | Statement | Factor | %VAR | KMO | Bartlett's sphericity test |
|---|---|---|---|---|---|
| Switching costs (procedural) | CAV1 | 0.690 | 60.02 | 0.7 | $X^2$ = 510.543<br>Sig = 0.000 |
| | CAV2 | 0.777 | | | |
| | CAV3 | 0.801 | | | |
| | CAV4 | 0.746 | | | |
| | CAP1 | 0.470 | | | |
| | CAP2 | 0.560 | | | |
| | CAP4 | 0.824 | | | |
| | CSU1 | 0.499 | | | |
| | CSU3 | 0.673 | | | |
| | CSU4 | 0.712 | | | |
| Switching costs (financial) | CPB1 | 0.875 | 79.51 | 0.7 | $X^2$ = 256.98<br>Sig = 0.000 |
| | CPB2 | 0.890 | | | |
| | CPB3 | 0.780 | | | |
| | CPM1 | 0.922 | | | |
| | CPM2 | 0.848 | | | |
| Switching costs (relational) | CPRP1 | 0.856 | 70.13 | 0.7 | $X^2$ = 275.527<br>Sig = 0.000 |
| | CPRP2 | 0.914 | | | |
| | CPRP3 | 0.709 | | | |
| | CPRM1 | 0.775 | | | |
| | CPRM2 | 0.713 | | | |
| | CPRM3 | 0.659 | | | |
| Resource dependence | DRE4 | 0.831 | 69.06 | 0.5 | $X^2$ = 18.447<br>Sig = 0.000 |
| | DRE5 | 0.831 | | | |
| Interorganizational cooperation | FL2 | 0.774 | 64.72 | 0.8 | $X^2$ = 387.49<br>Sig = 0.000 |
| | FL3 | 0.810 | | | |
| | FL4 | 0.534 | | | |
| | CI1 | 0.586 | | | |

*(continues)*



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

**Table 2** (conclusion)

*EFA of the constructs*

| Construct | Statement | Factor | %VAR | KMO | Bartlett's sphericity test |
|---|---|---|---|---|---|
| Interorganizational cooperation | CI2 | 0.661 | 64.72 | 0.8 | $X^2$ = 387.49<br>Sig = 0.000 |
| | CI3 | 0.811 | | | |
| | RC1 | 0.744 | | | |
| | RC2 | 0.831 | | | |
| | RC4 | 0.648 | | | |
| | RP1 | 0.772 | | | |
| | RP2 | 0.702 | | | |
| | RP3 | 0.720 | | | |

*Note.* Factor = factor loading (> 0.4); %Var. = % of explained variance of the component (> 50%); KMO = Kaiser-Meyer-Olkin test (> 0.5); Bartlett's sphericity test (p-value < 0.05).

The results show the global adequacy of factor extraction through the KMO test, which provides the common variance proportion of the analyzed variables, in which values close to 1 demonstrate that the indicators share a high percentage of variance (Fávero, 2017). They also demonstrate the adequacy of factor extraction for the three variables of switching costs and interorganizational cooperation, with values greater than 0.6. Resource dependence (KMO = 0.5) showed low overall adequacy. However, only values lower than 0.5 are unacceptable (Fávero, 2017). Bartlett's sphericity test attested to the overall adequacy of the extraction of factors by presenting adequate significance levels (p-value = 0.000), according to the assumptions of Fávero and Belfiore (2015). Furthermore, the percentage of variability explained by the factors forming the constructs indicates that, together, the statements of each factor explain more than 60% of the variation observed.

## Measurement model and descriptive statistics

Before carrying out the PLS-SEM tests, some tests of the measurement model were performed to ensure the model's adequacy: convergent validity, reliability of internal consistency, and discriminant validity (Hair et al., 2014). Three statements of the procedural type of switching cost (CSU1, CSU3, and CSU4), one of the relational type (CPRM3), and one statement



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

of interorganizational cooperation (CI1) were removed from the constructs because they presented factor loadings below the threshold stipulated by the literature (> 0.50) (Hair et al., 2016).

**Table 3**

***Testing the measurement model***

| Panel A: Discriminant validity by the Fornell and Larcker (1981) criterion | | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 1. Switching costs (procedural) | **0.761** | | | | |
| 2. Switching costs (financial) | 0.529 | **0.850** | | | |
| 3. Switching costs (relational) | 0.277 | 0.365 | **0.874** | | |
| 4. Resource dependence | 0.322 | 0.101 | 0.204 | **0.828** | |
| 5. Interorganizational cooperation | 0.185 | 0.152 | 0.330 | 0.302 | **0.690** |
| Panel B: Validity and reliability indicators | | | | | |
| AVE | 0.579 | 0.723 | 0.763 | 0.686 | 0.477 |
| CR | 0.800 | 0.839 | 0.865 | 0.813 | 0.784 |
| Panel C: Descriptive statistics | | | | | |
| Average | 3.61 | 3.45 | 4.16 | 4.47 | 5.40 |
| Standard deviation | 1.69 | 1.96 | 1.70 | 1.80 | 1.53 |

*Note.* Values expressed diagonally (in bold) represent the square roots of the AVE. Off-diagonal values refer to correlations between variables. AVE = average variance extracted (> 0.50); CR = composite reliability (> 0.70).

The composite reliability (CR) demonstrated the internal consistency of the measures by presenting values greater than 0.7 (Hair et al., 2017). The AVE confirmed the convergent validity by verifying how much the statements were positively correlated with the variables. The results for AVE of the switching costs and resource dependence constructs showed values greater than 0.5, indicating that the variables explain more than half of the variance of their indicators, as oriented by Hair et al. (2017).

The interorganizational cooperation construct obtained a slightly lower result than that recommended for AVE (> 0.5) (Hair et al., 2017), which constitutes a limitation of the measurement model. However, AVE values slightly below 0.5 are also acceptable if the CR results are greater than 0.7 (Bido & Silva, 2019; Little et al., 1999). Furthermore, it is suggested to keep the construct indicators to consider nomological validity (Little et al., 1999).



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

Discriminant validity was determined using the criteria of Fornell and Larcker (1981). Table 3 shows that the values of the square roots of the AVE of each variable are higher than the correlations between one variable and another, which denotes discriminant validity.

The descriptive statistics showed that the average between variables ranged from 3.45 to 5.40 on a 7-point scale, with a standard deviation ranging from 1.53 to 1.96 from the average. The average responses obtained in the latent variables suggest a low influence of the variables in the procedural and financial types of switching costs in the investigated IORs. However, the variables of the relational type of switching cost, resource dependence, and interorganizational cooperation were observed in these relationships, as the averages were above the scale's midpoint (> 4).

## Structural model analysis

The structural model analysis was conducted by estimating the structural equations through bootstrapping and blindfolding, with 5,000 subsamples and 300 iterations, with a bias-corrected and accelerated confidence interval and a significance level of 5% (Hair et al., 2016). Table 4 presents the results.

**Table 4**

***Structural model results***

| Hypothesis | Relationship | *Path* | *T-value* | *P-value* | Result |
|---|---|---|---|---|---|
| H1 | Procedural switching costs → Interorganizational cooperation | 0.025 | 0.224 | 0.822 | Rejected |
| | Financial switching costs → Interorganizational cooperation | 0.016 | 0.131 | 0.896 | Rejected |
| | Relational switching costs → Interorganizational cooperation | 0.268 | 2.395 | 0.017 | Confirmed |
| H2 | Procedural switching costs → Resource dependence | 0.158 | 3.226 | 0.001 | Confirmed |
| | Financial switching costs → Resource dependence | -0.145 | 1.046 | 0.296 | Rejected |
| | Relational switching costs → Resource dependence | 0.355 | 1.614 | 0.107 | Rejected |

*(continues)*



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

**Table 4** (conclusion)

***Structural model results***

| Hypothesis | Relationship | *Path* | *T-value* | *P-value* | Result |
|---|---|---|---|---|---|
| H3 | Resource dependence → Interorganizational cooperation | 0.238 | 2.610 | 0.009 | Confirmed |
| H4 | Procedural switching costs → Resource dependence → Interorganizational cooperation | 0.084 | 1.880 | 0.060 | Confirmed |
| | Financial switching costs → Resource dependence → Interorganizational cooperation | -0.034 | 0.899 | 0.369 | Rejected |
| | Relational switching costs → Resource dependence → Interorganizational cooperation | 0.038 | 1.328 | 0.184 | Rejected |

*Note*. Variance inflation factor (VIF): max. = 1.578; predictive relevance ($Q^2$) or Stone-Geisser indicator: interorganizational cooperation = 0.049; resource dependence = 0.029.

The variance inflation factor (VIF) was analyzed to verify the presence of highly correlated constructs, showing the absence of multicollinearity when presenting coefficients below 3 (VIF < 3) (Hair et al., 2019). The predictive relevance of the constructs was confirmed, with coefficients greater than zero, which guarantees the model's accuracy (Hair et al., 2017; Ringle et al., 2014).

The structural model partially confirmed H1 through the relationship between relational switching costs and interorganizational cooperation. H2 was partially confirmed through the relationship between procedural switching costs and resource dependence. H3 was confirmed by the association between resource dependence and interorganizational cooperation, and H4 was partially confirmed by the relationship between procedural switching costs and interorganizational cooperation, mediated by resource dependence.

## Discussion of results

H1 assumed a positive influence of switching costs on interorganizational cooperation, a relationship confirmed only for the relational type of switching cost ($\beta = 0.268$; $p = 0.017$). Thus, H1 is partially confirmed. This relationship suggests that organizations avoid switching transport companies due to difficulties in breaking personal, interorganizational, and brand



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

ties. According to Burnham et al. (2003), the challenges inherent to a relational type of switching cost involve psychological and emotional discomfort due to breaking ties and losing identity.

The results suggest that food and beverage industry organizations prioritize personal and IORs with the current supplier. This allows for the development of more cooperative relationships, to the detriment of the rupture, corroborating the findings of Blut et al. (2015), who observed that high levels of the relational type switching cost positively impact the intention to remain with the current supplier. A similar perspective was observed by Vasudevan et al. (2006), who found the influence of the relational type of switching cost on the commitment to the relationship with suppliers.

The results of H1 did not support the relationship between the procedural and financial types of switching costs and interorganizational cooperation. Therefore, aspects related to economic risks, adequacy of the service of a new supplier, search for new suppliers, learning new procedures to adapt to new suppliers, and monetary (and benefits) losses, which reflect the procedural and financial type of cost, are not antecedents of interorganizational cooperation.

H2 suggested that switching costs positively influences resource dependence. This relationship was partially confirmed for the procedural type of switching cost ($\beta = 0.158$; $p = 0.001$), demonstrating that this type of cost makes organizations in the food and beverage industry dependent on transport companies. They avoid changing suppliers due to the barriers to adapting to the new ones, a condition that increases dependency. According to Burnham et al. (2003), barriers related to the procedural type of switching cost involve especially the loss of time and effort spent when looking for a new supplier.

These results corroborate Abrahão and Soares (2006), who, when addressing dependence in the transport sector, observed that contractors were exposed to risks by delegating know-how and key information to suppliers, increasing switching costs related to transporting companies and increasing dependency. A similar perspective was shared by Biong and Selnes (1997), who showed that switching costs lead customers to develop a dependence on suppliers.

H3 predicted a positive influence of resource dependence on interorganizational cooperation. The data confirmed the hypothesis ($\beta = 0.238$; $p = 0.009$), suggesting that the responding companies choose to remain with the supplier and establish a cooperative relationship when they depend on the services provided. For Mentzer et al. (1999), outsourcing transport services involves many resources, such as qualified employees, physical



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

assets, and effective processes, among other aspects that positively impact customer satisfaction.

The results corroborate the findings of Yeh (2005), who found a positive relationship between resource dependence and the interorganizational cooperation of car companies in Taiwan and their suppliers. A similar perspective was presented by Pfeffer and Salancik (1978) when they stated that the inclusion of organizations in IORs can mitigate the negative effects of resource dependence.

H4 assumed a positive mediating effect of resource dependence on the relationship between switching costs and interorganizational cooperation. This relationship was confirmed only for the procedural type of switching cost ($\beta = 0.108$; $p = 0.036$). Thus, H4 was confirmed for the procedural type of switching cost but not for the financial and relational types, which were not accepted in the direct relationship with the mediating variable.

The positive relationship between the procedural type of switching cost and interorganizational cooperation, mediated by resource dependence, indicates that the researched firms choose to remain with the current supplier when facing procedural barriers and dependence on supplier services. They decide to establish cooperation links instead of losing time and effort searching alternative suppliers that would imply economic risks, evaluating new sellers, and learning new processes.

These results are consistent with the understanding of Mentzer et al. (2001), who state that specific investments may have their value reduced or lost in a possible change of supplier, which may increase switching costs and characterize situations of resource dependence. Notwithstanding, dependence leads to IORs, which can result in interorganizational cooperation (Pfeffer & Salancik, 1978).

In general terms, the research results indicate that the variables of switching costs are not in line with resource dependence as antecedents of interorganizational cooperation in the investigated relationships. Therefore, underlying aspects of these relationships can impair managers' interpretation regarding switching costs, as external factors can neutralize switching costs according to the assumptions of Burnham et al. (2003). These findings may influence specificities not yet examined in the relationship between food and beverage companies and their transport providers.



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

## CONCLUSIONS

This study analyzed the influence of switching costs and resource dependence on interorganizational cooperation between contractors and transport companies from the perception of professionals working in companies in the food and beverage industry. The research field that approaches IORs is still little explored by accounting researchers, which is evident when considering cost approaches.

The food and beverage industry has specificities in transporting some types of products, especially when perishable and with a short shelf life. Transport services have their own characteristics, and they are a critical component in the performance and competitive advantage of food and beverage firms regarding the satisfaction of their end customers in terms of safety, hygiene, deadlines, and other aspects. Given the characteristics of the relationship, there are difficulties in switching suppliers for this type of operation, which encourages greater levels of cooperation between the parties.

The results of this investigation demonstrate that the relational type of switching cost and resource dependence are antecedents of interorganizational cooperation. Therefore, managers of firms that contract transport services in the logistics and transport areas can use these approaches to manage the IORs with transport companies. On the other hand, Burnham et al. (2003) suggest that supplier organizations should not only seek ways to increase supplier switching costs but also show the value of their services to customers, which can lead to more cooperative relationships.

The results must be interpreted with parsimony since the answers obtained are based on the respondents' perceptions and may be influenced by subjective elements. Furthermore, the study used the taxonomy proposed by Burnham et al. (2003) to measure supplier switching costs. However, future studies adopting different taxonomies may lead to different insights.

The EFA used during data analysis required the exclusion of four statements of the switching costs construct, three of the resource dependence construct, and three of the interorganizational cooperation construct. This suggests a limitation of the investigation since the exclusion of statements may compromise the proposed constructs' nomological validity.

Future studies can apply the constructs investigated here in other interorganizational contexts, with different levels of proximity between organizations, to test the proposed relationships. It is recommended to use alternative research methods, such as longitudinal case studies, and to consider other constructs that may explain the effects of switching costs and resource



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

dependence on interorganizational cooperation. Research carried out through case studies may lead to an understanding of the effects of switching costs and resource dependence on a bilateral basis, considering the point of view of both the contractor and the supplier.

## REFERENCES

Associação Brasileira da Indústria de Alimentos [Abia]. *Sobre Abia*. 2019. https://www.abia.org.br/sobre-abia

Abrahão, F., & Soares, N. (2006). Estratégia de terceirização de serviços de transporte. *Revista Tecnologística*.

Anderson, J. C., & Narus, J. A. (1991). Partnering as a focused market strategy. *California Management Review*, *33*(3), 95–113. https://doi.org/10.2307/41166663

Bendapudi, N., & Berry, L. L. (1997). Customers' motivations for maintaining relationships with service providers. *Journal of Retailing*, *73*(1), 15–37. https://doi.org/10.1016/S0022-4359(97)90013-0

Bido, D., S., & Silva, D. (2019). SmartPLS 3: specification, estimation, evaluation and reporting. *Administração*: *Ensino e Pesquisa*, *20*(2), 465–513. https://doi.org/10.13058/raep.2019.v20n2.1545

Biong, H., & Selnes, F. (1997). The strategic role of the salesperson in established buyer-seller relationships. *Journal of Business-to-Business Marketing*, *3*(3), 39–78. https://doi.org/10.1300/J033v03n03_03

Blut, M., Frennea, C. M., Mittal, V., & Mothersbaugh, D. L. (2015). How procedural, financial and relational switching costs affect customer satisfaction, repurchase intentions, and repurchase behavior: A meta-analysis. *International Journal of Research in Marketing*, *32*(2), 226–229. https://doi.org/10.1016/j.ijresmar.2015.01.001

Burnham, T. A., Frels, J. K., & Mahajan, V. (2003). Consumer switching costs: A typology, antecedents, and consequences. *Journal of the Academy of Marketing Science*, *31*(2), 109–126. https://doi.org/10.1177/0092070302250897

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Psychology Press.

Das, T. K., & Teng, B. S. (2000). A resource-based theory of strategic alliances. *Journal of Management, 26*(1), 31–61. https://doi.org/10.1177/014920630002600105

Ding, R., Dekker, H. C., & Groot, T. L. (2010). An exploration of the use of interfirm cooperation and the financial manager's governance roles: Evidence from Dutch firms. *Journal of Accounting and Organizational Change*, *6*(1), 9–26. https://doi.org/10.1108/18325911011025678

Drees, J. M., & Heugens, P. P. (2013). Synthesizing and extending resource dependence theory: A meta-analysis. *Journal of Management*, *39*(6), 1666–1698. https://doi.org/10.1177/0149206312471391

Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing buyer-seller relationships. *Journal of Marketing*, *51*(2), 11–27. https://doi.org/10.2307/1251126

Fávero, L. P. (2017). *Análise de dados*: *Técnicas multivariadas exploratórias com SPSS e Stata*. Elsevier Brasil.

Fávero, L. P., & Belfiore, P. (2015). *Análise de dados*: *Técnicas multivariadas exploratórias com SPSS e STATA*. Elsevier.

Fávero, L. P., Belfiore, P., Silva, F. D., & Chan, B. L. (2009). *Análise de dados*: *Modelagem multivariada para tomada de decisões*. Elsevier.

Ferrer, M., Santa, R., Hyland, P. W., & Bretherton, P. (2010). Relational factors that explain supply chain relationships. *Asia Pacific Journal of Marketing and Logistics*, *22*(3), 419–440. https://doi.org/10.1108/13555851011062304

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 382–388. https://doi.org/10.1177/002224378101800313

Fugate, B. S., Mentzer, J. T., & Stank, T. P. (2010). Logistics performance: Efficiency, effectiveness, and differentiation. *Journal of Business Logistics*, *31*(1), 43–62. https://doi.org/10.1002/j.2158-1592.2010.tb00127.x

Geiger, I., Durand, A., Saab, S., Kleinaltenkamp, M., Baxter, R., & Lee, Y. (2012). The bonding effects of relationship value and switching costs in industrial buyer–seller relationships: An investigation into role differences. *Industrial Marketing Management*, *41*(1), 82–93. https://doi.org/10.1016/j.indmarman.2011.11.013

Gounaris, S. P. (2005). Trust and commitment influences on customer retention: Insights from business-to-business services. *Journal of Business Research*, *58*(2), 126–140. https://doi.org/10.1016/s0148-2963(03)00122-x



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

Hair, J. F., Junior, Gabriel, M. L. D. D. S., & Patel, V. K. (2014). Modelagem de Equações Estruturais Baseada em Covariância (CB-SEM) com o Amos: Orientações sobre a sua aplicação como uma ferramenta de pesquisa de marketing. *Revista Brasileira de Marketing*, *13*(2), 44–55. https://doi.org/10.5585/remark.v13i2.2718

Hair, J. F., Junior, Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling*. Sage Publications.

Hair, J. F., Junior, Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling* (2nd ed.). Sage Publications.

Hair, J. F., Junior, Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Heide, J. B., & John, G. (1988). The role of dependence balancing in safeguarding transaction-specific assets in conventional channels. *Journal of Marketing*, *52*(1), 20–35. https://doi.org/10.1177/002224298805200103

Heide, J. B., & Miner, A. S. (1992). The shadow of the future: Effects of anticipated interaction and frequency of contact on buyer-seller cooperation. *Academy of Management Journal*, *35*(2), 265–291. https://doi.org/10.5465/256374

Ireland, R. D., Hitt, M. A., & Vaidyanath, D. (2002). Alliance management as a source of competitive advantage. *Journal of Management*, *28*(3), 413–446. https://doi.org/10.1177/014920630202800308

Kale, S. H. (1989). Dealer dependence and influence strategies in a manufacturer-dealer dyad. *Journal of Applied Psychology*, *74*(3). https://doi.org/10.1037/0021-9010.74.3.379

Kim, K. K., Park, S. H., Ryoo, S. Y., & Park, S. K. (2010). Inter-organizational cooperation in buyer–supplier relationships: Both perspectives. *Journal of Business Research*, *63*(8), 863–869. https://doi.org/10.1016/j.jbusres.2009.04.028

Kim, Y., & Choi, T. Y. (2018). Tie strength and value creation in the buyer-supplier context: A U-shaped relation moderated by dependence asymmetry. *Journal of Management*, *44*(3), 1029–1064. https://doi.org/10.1177/0149206315599214

Knoppen, D., & Sáenz, M. J. (2017). Interorganizational teams in low-versus highdependence contexts. *International Journal of Production Economics*, *19*(1), 15–25. https://doi.org/10.1016/j.ijpe.2017.05.011

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. https://doi.org/10.1080/00207543.2012.752591

Large, R. O. (2011). Partner-specific adaptations, performance, satisfaction, and loyalty in third-party logistics relationships. *Logistics Research*, *3*, 37–47. https://doi.org/10.1007/s12159-011-0047-8

Lee, M. T., & Scott, K. (2015). Leveraging IT resources, embeddedness, and dependence: A supplier's perspective on appropriating benefits with powerful buyers. *Information & Management*, *52*(8), 909–924. https://doi.org/10.1016/j.im.2015.06.008

Leuschner, R., Carter, C. R., Goldsby, T. J., & Rogers, Z. S. (2014). Third-party logistics: A meta-analytic review and investigation of its impact on performance. *Journal of Supply Chain Management*, *50*(1), 21–43. https://doi.org/10.1111/jscm.12046

Lin, C. W., Wu, L. Y., & Chiou, J. S. (2017). The use of asset specific investments to increase customer dependence: A study of OEM suppliers. *Industrial Marketing Management*, *67*, 174–184. https://doi.org/10.1016/j.indmarman.2017.09.002

Little, T. D., Lindenberger, U., & Nesselroade, J. R. (1999). On selecting indicators for multivariate measurement and modeling with latent variables: When "good" indicators are bad and "bad" indicators are good. *Psychological Methods*, *4*(2), 192–211. https://doi.org/10.1037/1082-989X.4.2.192

Lonsdale, C. (2001). Locked-in to supplier dominance: On the dangers of asset specificity for the outsourcing decision. *Journal of Supply Chain Management*, *37*(2). https://doi.org/10.1111/j.1745-493x.2001.tb00096.x

Maloni, M. J., & Carter, C. R. (2006). Opportunities for research in third-party logistics. *Transportation Journal*, *45*(2), 23–38. https://doi.org/10.2307/20713632

Martins, G. D. A., & Theóphilo, C. R. (2009). *Metodologia da investigação cientifica*. Atlas.

Martins, R. S., Xavier, W. S., Souza Filho, O. V., & Martins, G. S. (2011). Gestão do transporte orientada para os clientes: Nível de serviço desejado e percebido. *Revista de Administração Contemporânea*, *15*(6), 1100–1119. https://doi.org/10.1590/S1415-65552011000600008

Mason, R., Lalwani, C., & Boughton, R. (2007). Combining vertical and horizontal collaboration for transport optimisation. *Supply Chain Management: An International Journal*, *12*(3), 187–199. https://doi.org/10.1108/13598540710742509



ISSN 1678-6971 • RAM. Rev. Adm. Mackenzie, São Paulo, *25*(2), eRAMR240184, 2024
https://doi.org/10.1590/1678-6971/eRAMR240184

Mentzer, J. T., Flint, D. J., & Kent, J. L. (1999). Developing a logistics service quality scale. *Journal of Business Logistics*, *20*(1), 9–32.

Mentzer, J. T., Flint, D. J., & Hult, G. T. M. (2001). Logistics service quality as a segmentcustomized process. *Journal of Marketing*, *65*(4), 82–104. https://doi.org/10.1509/jmkg.65.4.82.18390

Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, *58*(3), 20–38. https://doi.org/10.2307/1252308

Nielson, C. (1996). An empirical examination of switching cost investments in business-to-business marketing relationships. *Journal of Business & Industrial Marketing*, *11*(6), 38–60. https://doi.org/10.1108/08858629610151299

Nyaga, G. N., Lynch, D. F., Marshall, D., & Ambrose, E. (2013). Power asymmetry, adaptation and collaboration in dyadic relationships involving a powerful partner. *Journal of Supply Chain Management*, *49*(3), 42–65. https://doi.org/10.1111/jscm.12011

O'Connor, N., Lowry, P. B., & Treiblmaier, H. (2020). Interorganizational cooperation and supplier performance in high-technology supply chains. *Heliyon*, *6*(3), e03434. https://doi.org/10.1016/j.heliyon.2020.e03434

Pereira, R. M., Borini, F. M., & Miranda Oliveira, M., Junior. (2020). Interorganizational cooperation and process innovation: The dynamics of national vs foreign location of partners. *Journal of Manufacturing Technology Management*, *31*(2), 260–283. https://doi.org/10.1108/JMTM-12-2018-0430

Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations*: *A resource dependence perspective*. Stanford University Press.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Powell, W. W. (1990). Neither market nor hierarchy: Network forms of organization. *Research in Organizational Behavior*, *12*, 295–336.

Razzaque, M. A., & Boon, T. G. (2003). Effects of dependence and trust on channel satisfaction, commitment and cooperation. *Journal of Business to Business Marketing*, *10*(4), 23–48. https://doi.org/10.1300/J033v10n04_02

Ringle, C. M., Silva, D., & Bido, D. D. S. (2014). Modelagem de equações estruturais com utilização do SmartPLS. *Revista Brasileira de Marketing*, *13*(2), 56–73. https://doi.org/10.5585/remark.v13i2.2717

Samel, A. N., Bandeira, R. A. D. M. B., Campos, V. B. G., & Mello, L. C. B. (2019). Análise da logística urbana para distribuição de alimentos perecíveis. *Revista Gestão & Sustentabilidade Ambiental*, *8*(2), 79–103. https://doi.org/10.19177/rgsa.v8e2201979-103

Schmitz, T., Schweiger, B., & Daft, J. (2016). The emergence of dependence and lock-in effects in buyer-supplier relationships: A buyer perspective. *Industrial Marketing Management*, *55*, 22–34. https://doi.org/10.1016/j.indmarman.2016.02.010.

Shi, W., Ma, J., & Ji, C. (2015). Study of social ties as one kind of switching costs: A new typology. *Journal of Business & Industrial Marketing*, *30*(5), 648–661. https://doi.org/10.1108/JBIM-04-2013-0104

Tacla, D., & Botter, R. C. (2017). Land transportation assets' potential future trends and the third party logistics providers in emerging markets, with a case study applied in Brazil. *International Journal of Logistics Systems and Management*, *27*(2), 208–224. https://doi.org/10.1504/IJLSM.2017.083817

Vasudevan, H., Gaur, S., Shinde, R. (2006). Relational switching costs, satisfaction and commitment. *Asia Pacific Journal of Marketing and Logistics*, *18*(4), 342–353. https://doi.org/10.1108/13555850610703281

Wåhlberg, A. E., & Poom, L. (2015). An empirical test of non-response bias in internet surveys. *Basic and Applied Social Psychology*, *37*(6), 336–347. https://doi.org/10.1080/01973533.2015.1111212

Williamson, O. E. (1975). Markets and hierarchies: Analysis and antitrust implications: A study in the economics of internal organization. *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship*. https://ssrn.com/abstract=1496220

Whitten, D., Chakrabarty, S., & Wakefield, R. (2010). The strategic choice to continue outsourcing, switch vendors, or backsource: Do switching costs matter? *Information & Management*, *47*(3), 167–175. https://doi.org/10.1016/j.im.2010.01.006

Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural alternatives. *Administrative Science Quarterly*, *36*, 269–296. https://doi.org/10.2307/2393356

Woisetschläger, D. M., Lentz, P., & Evanschitzky, H. (2011). How habits, social ties, and economic switching barriers affect customer loyalty in contractual service settings. *Journal of Business Research*, *64*(8), 800–808. https://doi.org/10.1016/j.jbusres.2010.10.007

Yeh, Y. P. (2005). Identification of factors affecting continuity of cooperative electronic supply chain relationships: Empirical case of the Taiwanese motor industry. *Supply Chain Management*: *An International Journal*, *10*(4), 327–335. https://doi.org/10.1108/13598540510612802

Zacharia, Z. G., Sanders, N. R., & Nix, N. W. (2011). The emerging role of the third-party logistics provider (3PL) as an orchestrator. *Journal of Business Logistics*, *32*(1), 40–54. https://doi.org/10.1111/j.2158-1592.2011.01004.x

Zhang, M., Hartley, J. L., Al-Husan, F. B., & ALHussan, F. B. (2021). Informal interorganizational business relationships and customer loyalty: Comparing Guanxi, Yongo, and Wasta. *International Business Review*, *30*(3), 101805. https://doi.org/10.1016/j.ibusrev.2021.101805