

Anni Rajala

Exploring interorganizational interaction in customer–supplier relationships

Learning, persuasion, and cooperation



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Julkaisun nimike Tutkimus yritysten välisestä vuorovaikutuksesta asiakas-toimittajasuhteissa		
Tiivistelmä Teolliset asiakas-toimittajasuhteet ovat kriittisiä menestystekijöitä yrityksille globaaleilla markkinoilla. Yritysten keskinäinen riippuvuus kasvaa samalla kuin ne pyrkivät keskittymään ydinliiketoimintaansa kumppaniensa avulla. Näin ollen vuorovaikutus on keskeinen prosessi, jonka avulla yritykset luovat ja toteuttavat tehokkaita yhteistyöjärjestelyjä. Tämä väitöskirja tarkastelee yritysten välistä vuorovaikutusta kolmen näkökulman kautta. Yritysten välisen <i>oppimisen</i> tarkastelu nostaa esiin kahdensuuntaisen vuorovaikutuksen merkityksen yritysten pyrkiessä rakentamaan suhdettaan tehokkaammaksi, innovatiivisemmaksi ja kaikin puolin toimivammaksi. Verkosto- ja suhdejohtamisen kannalta <i>suostuttelu</i> on tärkeä vuorovaikutuksen muoto, koska yritykset eivät ole toisiinsa nähden sellaisessa asemassa, jossa voisivat sanella miten toisen yrityksen tulisi toimia. <i>Samanaikaiseen kilpailuun ja yhteistyöhön</i> perustuvissa suhteissa korostuu kahden vastakkaisen vuorovaikutuksen merkitys liike-toimintasuhteen toimivuuden ja kehittymisen kannalta. Väitöskirjan teoreettinen pohja rakentuu transaktiokustannusteorian ja sosiaalisen vaihdannan teorioiden päälle, minkä varaan rakennetaan teoreettinen viitekehys vuorovaikutuksesta. Tämä viitekehys sisältää elementtejä sekä yritystenvälisen vuorovaikutuksen tutkimuksesta, että käytäntöjen tutkimuksesta. Väitöskirjan empiirinen osio pohjautuu neljään eri aineistoon (määrällinen ja laadullinen aineisto), joiden avulla vuorovaikutusta tutkitaan kolmesta näkökulmasta monitasoisena ilmiönä. Tutkimustulokset osoittavat vuorovaikutuksen tapahtuvan useilla eri tasoilla asiakas-toimittajasuhteissa ja että vuorovaikutus on hyvin eri tyyppistä eri teoreettisesta näkökulmista tarkasteltuna. Tutkimustulokset tuovat esiin mielenkiintoisen näkökulman siitä, kuinka käytännöt ja todellinen toiminta muokkaavat asiakas-toimittajasuhteita. Kaiken kaikkiaan väitöskirjan löydökset korostavat vuorovaikutuksen merkitystä ja tärkeyttä asiakas-toimittajasuhteiden luomisessa ja ylläpitämisessä, mutta myös osoittavat kuinka eri teoreettisten näkökulmien kautta sama ilmiö näyttäytyy erilaisena.		
Asiasanat Yritystenvälinen vuorovaikutus, asiakas-toimittajasuhde, organisaatioiden välinen oppiminen, suostuttelu, coopetition, monimenetelmä		

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Abstract Industrial customer-supplier relationships are recognized as critical success factors for a company in today's global markets as the dependence between companies has increased along with companies' focus on their core business. Therefore, the interest in interorganizational interaction has increased, because interaction is seen as a central process through which companies create and implement effective arrangements. This thesis explores interorganizational interaction through three different lenses: interorganizational learning, persuasion, and cooptation. Drawing on social exchange theory and transaction cost economics, the theoretical framework of the thesis views interorganizational interaction as a combination of different theoretical perspectives, such as the interaction school and the practice-based approach. The empirical part of the thesis is based on four different datasets, both quantitative and qualitative, that aim to explore interorganizational interaction from different perspectives and as a multilevel phenomenon. The findings of the thesis suggest that interorganizational interaction occurs on multiple levels and that interaction in a customer-supplier relationship seems very different from different theoretical perspectives. Moreover, the findings provide interesting insights into how practices and activities shape a customer-supplier relationship. Overall, the thesis emphasizes the importance and significance of interaction in maintaining and developing customer-supplier relationships, but also demonstrates how adopting different theoretical perspectives produces different views of the phenomenon.		
Keywords Interorganizational interaction, customer-supplier relationship, interorganizational learning, persuasion, cooptation, mixed method		

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Contents

ACKNOWLEDGEMENTS	VII
1 INTRODUCTION	1
1.1 Research questions and study objectives	6
1.2 Structure of the dissertation	7
2 THEORETICAL BACKGROUND OF INTERORGANIZATIONAL INTERACTION	8
2.1 The IMP approach on interaction.....	10
2.2 The practice-based approach to interaction	12
2.3 Three perspectives of interorganizational interaction.....	13
2.3.1 Interorganizational learning as interaction	16
2.3.2 Persuasive interaction	17
2.3.3 Coopetitive interaction.....	18
2.4 Summary: Viewing IOI through three lenses	20
3 METHODOLOGY.....	22
3.1 Ontological and epistemological approaches	22
3.2 Research strategy and design	23
3.3 Data collection	25
3.4 Data analysis	28
3.4.1 Quantitative analysis	28
3.4.2 Qualitative analysis	29
3.5 Quality assessments	30
3.5.1 Reliability and validity of the quantitative studies	30
3.5.2 Trustworthiness of the qualitative studies	32
4 REVIEW OF THE RESULTS.....	33
4.1 IOL is based on interaction	33
4.2 Various interaction types have different effects on IOL.....	35
4.3 Various factors affect and shape buyers' persuasive interaction.....	36
4.4 Contradictory interactions shape coopetitive strategy	36
4.5 Contradictory interactions shape organizational buying behavior	37
4.6 Contradictory interactions cause conflicts.....	39
5 DISCUSSION AND CONCLUSIONS.....	40
5.1 Theoretical contribution	40
5.2 Practical implications	45
5.3 Limitations and suggestions for future research	47
REFERENCES.....	49

Figures

Figure 1.	Theoretical foundation of the thesis.....	8
Figure 2.	The overall research setting of the dissertation.....	15
Figure 3.	The overall research setting viewed through three different lenses.....	21
Figure 4.	Illustration of the perspectives of interaction in the appended research papers.....	33

Tables

Table 1.	Summary of the essays and articles.....	7
Table 2.	Research design.....	25
Table 3.	Summary of the data collection.....	27
Table 4.	Applied research methods in the papers.....	28

Abbreviations

IOI	Interorganizational interaction
IOL	Interorganizational learning
OBB	Organizational buying behavior
SAP	Strategy as practice
SET	Social exchange theory
TCE	Transaction cost economics

Publications

This dissertation is based on six appended papers that are:

- [1] Rajala, A. (forthcoming). Examining the effects of interorganizational learning on performance: A meta-analysis. Accepted in *Journal of Business & Industrial Marketing*.¹
- [2] Rajala, A., Holma, A.-M. & Vesalainen J. (under review). Boundary spanning behavior, interorganizational learning and purchasing performance. Paper under review with a journal. An earlier version of the paper was presented at the IMP Conference 2016, Poznan, Poland.
- [3] Vesalainen J., Rajala, A. & Wincent, J. (under review). Untangling what underpins the communicative arsenal of buyers in customer-supplier relationships: A multiple governance approach to boundary-spanning behavior. Paper under review with a journal.
- [4] Tidström, A. & Rajala, A. (2016). Coopetition strategy as interrelated praxis and practice in multiple levels. *Industrial Marketing Management*, 58, 35-44.
- [5] Rajala, A. & Tidström, A. (2017). A multilevel perspective on organizational buying behavior in coopetition – An exploratory case study. *Journal of Purchasing and Supply Management*, 23:3, 202-210.
- [6] Rajala, A. & Tidström, A. (under review). Unmasking conflict in vertical coopetition. Under review with a journal. An earlier version of the paper was presented at the IMP Conference 2016, Poznan, Poland.

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1 INTRODUCTION

Customer–supplier relationships in business-to-business markets are constantly changing as various actors attempt to alter the existing arrangements or create new arrangements (Guercini, La Rocca, Runfola, & Snehota, 2015). Interaction is seen as a central process through which new and effective solutions are identified and implemented (Guercini et al., 2015; La Rocca & Snehota, 2014; Möller, 2013). Thus, interorganizational interaction is at the core of exchange in business relationships (Möller & Wilson, 1995). Interaction consists of several interrelated processes, and outcomes of interaction in business relationships may influence both the interaction processes itself and the factors that form the context of interaction (Möller & Wilson, 1995). In this dissertation, interaction is defined as dynamic and comprised of actions associated with exchange and adaptation between companies (Schurr, 2007). An exchange relationship is a dynamic iterative process that is influenced by contextual factors and its character and outcomes, which makes it challenging to study business interaction (Holmlund, 2004; Möller & Wilson, 1995).

Business interaction is argued to be a continuing process of evolution not just a series of discrete transactions (Ford, Gadde, Håkansson, Snehota, & Waluszewski, 2010). Moreover, it has been acknowledged that business relationships evolve and develop as a sequence of interactions between relationship parties (Holmlund, 2004). In addition, the importance of individual actors in many aspects of exchange relationships has been highlighted in management and supply chain literature (Tangpong, Hung, & Ro, 2010). The interaction behaviors of individual actors are seen as important facets of business relationships (Guercini, La Rocca, Runfola, & Snehota, 2014) and individual actors play an important role in value creating activities and whether or not the performed business activity is deemed satisfactory (Chebat & Kollias, 2000).

An interaction approach (or the interaction and network approach) to studying industrial networks and relationships highlights the importance of interaction processes as a central interest of the Industrial Marketing and Purchasing (IMP) group. The aim of this approach is to understand and explain functioning business markets from the viewpoint of an interactive buyer–seller and other actor relationships, as well as the networks these relationships constitute (Pels, Möller, & Saren, 2009). The IMP group argues that business exchange cannot be understood as series of transactions, but should be viewed as complex relationships between buyers and sellers, where value is created through interaction. The IMP research views interaction as occurring between companies,

relationships, and networks through a firm's actors, resources, and activities (e.g., Håkansson & Snehota, 1995; Medlin, 2004). The human and social aspects of economic exchange have been a central interest of IMP research featuring examinations of relationship atmosphere as a part of the way companies interact (Håkansson, 1982; Medlin, 2004). Atmosphere was defined through mutual expectations held by relationship parties, and was characterized by the degree of conflict/cooperation, power/dependence, and closeness/distance (Medlin, 2004). Accordingly, relationship atmosphere was also considered to have an influence on the nature of interorganizational interaction (Medlin, 2004). Moreover, the IMP approach tends to focus on long-term, close relationships that involve complex patterns of reactions and responses between companies (Hultman, Johnsen, Johnsen, & Hertz, 2012). However, there is an acknowledged need to study more and to find ways to describe, characterize, and analyze single interactions, and patterns of interactions, and the consequences of interactions for companies (Håkansson & Waluszewski, 2013).

The IMP approach has been also criticized. Pels et al. (2009, p. 325) pointed out that prior interaction and network research has leaned too much on IMP research, which has "deterred the development of more normative network management theory." Moreover, it is argued that time and process perspectives are not comprehensively discussed or developed within the IMP approach (e.g., La Rocca, Hoholm, & Mørk, 2017; Medlin, 2004). The IMP approach has also been criticized for assuming that network actors can only cope within the network, rather than manage it (Harland & Knight, 2001; Hultman et al., 2012). Further, the IMP research has been recognized to be descriptive in nature, and the focus of its descriptions to fall on actors, resources, and activities (Tate, Ellram, & Gölgeci, 2013). In addition, the IMP approach has started to emphasize the historical, evolutionary and embedded character of business networks that views networks as self-organized and borderless systems (Möller & Rajala, 2007).

Despite the critique, the IMP approach has its merits in raising the issue of the appropriate level of analysis in network research, and it has suggested that multiple levels are preferred (Harland, 1996; Tate et al., 2013). Further, management and supply chain literature streams also highlight the importance and need to study individual level factors when investigating interorganizational dynamics (Tangpong et al., 2010). Tate et al. (2013) suggested that there are several different levels of analysis in network research: the individual actor, organizational level, and supply chain or network level. In their classification the relationship level was included with the organizational level, because organizational level referred to the interaction among and between organizations (Harland, 1996; Tate et al., 2013). Accordingly, the importance of accounting for

multiple levels in network and interaction research is emphasized in prior literature.

In addition, it is stated that “one of the most visible and intriguing recent developments in organization studies is the increased interest in the detailed understanding of how real-time practices are carried out in the workplace and the relation between workplace activities and the organizing processes” (Nicolini, 2009, p. 1391). Accordingly, management scholars have shown interest in strategy-as-practice (SAP) studies, in which SAP is described as “a concern with what people do in relation to strategy and how this is influenced by and influences their organizational and institutional context” (Johnson, Langley, Melin, & Whittington, 2007, p. 7). Moreover, SAP views strategy “as a social ‘practice’, on how practitioners of strategy really act and interact” (Whittington, 1996, p. 731). However, more studies are called for to investigate what individual practitioners do and how their doings shape praxis, such as specific decisions, meetings, and events (Jarzabkowski & Spee, 2009). In addition, business network scholars have recently shown a growing interest in the practice approach (e.g., Dahl, Kock, & Lundgren, 2016; Vesalainen, Hellström, & Valkokari, 2017).

Prior interaction research has classified interaction types (e.g., Cantillon & Håkansson, 2009; van der Valk, Wynstra, & Axelsson, 2009), however, these typologies remain rather descriptive of the particular exchange type, such as pure exchange and cooperation. Moreover, the prior interaction research has indicated that there is a need to examine interaction from different perspectives (e.g., Håkansson & Waluszewski, 2013), on multiple levels (e.g., Tate et al., 2013), and there is a call to study interaction processes as practices (e.g., La Rocca, Hoholm, & Mørk, 2017). Therefore, this dissertation views interaction through three theoretical lenses: interorganizational learning, persuasion, and coopetition. These perspectives provide new insights because the prior interaction research has stated that the nature of the interaction process differs according to the characteristics of the focal task (see e.g., Baptista, 2013). These different perspectives have been chosen in order to obtain a wider picture of interaction in customer–supplier relationships. Interaction is a phenomenon that could be studied from different viewpoints, the three perspectives chosen for this thesis represent different aspects of interaction: learning requires information sharing, persuasion is tactical interaction, and coopetition is contradictory interactions. The common factor in all of these aspects is that they all include some kind of tension; learning includes tension related the amount and quality of shared information, persuasion includes tension around trying to affect the actions taken by the other relationship party, and coopetition is a situation which itself is related to the tension of simultaneous cooperation and competition. In addition, the

researcher's own interest has guided the selection of these three perspectives of interaction instead of some other perspectives. Interorganizational learning has been widely studied and in this thesis, it represents the most established type of interaction in comparison to the other two chosen theoretical lenses. In contrast, persuasion is widely studied in marketing literature, where it is seen as sellers trying to persuade buyers to purchase a good or service. This thesis views persuasion as one way of governing relationships. Managing business relationships is challenging because buyers do not have the authority or hierarchical position that enables managing supplier relationships. Therefore, the persuasion lens is chosen in this thesis, as it provides new insights into network management as buyers aim to persuade suppliers so as to achieve their desired goals. Coopetition has attracted scholars recently and it is chosen as a theoretical lens in this thesis because it provides insights from relationships where two contradictory interactions are present simultaneously. As the prior research has emphasized, interaction should also be viewed as a multilevel phenomenon. Accordingly, this dissertation examines interaction on three different levels: the relational, organizational, and individual levels.

The interest in the first chosen theoretical lens, interorganizational learning (IOL), increased when organizations reported the aim of learning through their interactions with other organizations (Knight, 2002). Moreover, it is argued that exchange relationships enable companies to create value by means of IOL that occurs through the interaction between customers and suppliers (Hammervoll, 2012; Håkansson, Havila, & Pedersen, 1999). Even though some scholars are dubious about whether firms or individual actors can manage resources that are more or less controlled by another company (e.g., Baraldi, Brennan, Harrison, Tunisini, & Zolkiewski, 2007; Ford & Håkansson, 2006), other scholars believe that individual actors are able to influence interactions in exchange relationship (Möller & Halinen, 1999). In this thesis, individual actors are seen as active parts of the management of an exchange relationship, and thus it is assumed that they are also able to influence interactions in a relationship. Moreover, it is argued that researchers should pay attention to the type of interaction that occurs when studying value creation and learning in exchange relationships (Hammervoll, 2012). Accordingly, this study aims to examine the role of interaction and also different types of interactions in IOL.

The second chosen theoretical lens, persuasive interaction, is demonstrated in marketing and management literature, where both have been studied, for example, the effect of persuasion rhetoric in boosting marketing messages (Ruokolainen & Aarikka-Stenroos, 2015), and in strengthening buyer–supplier relationships (Andersen, 2001). Persuasion and interaction in business relationships are seen

here to be more comprehensive than in the traditional view expressed in marketing literature, which tends to focus primarily on persuading the buyer to buy or do something that helps the salesperson's firm (Andersen, 2001; Guenzi, Pardo, & Georges, 2007). Moreover, the interest has shifted from salespersons persuading buyers, toward buyers also persuading suppliers (Bachkirov, Rajasekar, & da Silva, 2016). This study is interested in buyers' persuasive interaction, which is conceptualized through multiple governance theory as relational, hierarchical, and competitive behavior. These dimensions of multiple governance theory have been also used in prior interaction research, however, the interaction types were named according to these relationship governance modes (Hammervoll, 2012). However, in this thesis these behavior types are not viewed as mutually exclusive and buyers can use all these types simultaneously in interaction with suppliers, and it is the strength of the types of governance used that varies across buyers and thereby also across organizations. Guercini et al. (2014, p. 930) raised a question related to business interaction, "what are the factors that guide and shape the behavior of the individual actors when they meet?" They conceptually studied this particular topic, however, this thesis empirically examines the factors that affect and shape buyer behavior at the supplier interface, and thus provides interesting insights to complement prior interaction research related to individual actors.

The third chosen lens is coopetition, which refers to the simultaneous existence of cooperative and competitive interactions in a relationship (see e.g., Bengtsson & Kock, 2014). Most of the coopetition research focuses on horizontal coopetition, which refers to coopetition between competitors (Dahl et al., 2016; Gnyawali & Park, 2011). Accordingly, there is a call for further research focusing on vertical coopetition, and more specifically, on the simultaneous cooperation and competition between a buyer and a supplier (Lacoste, 2012; Soppe, Lechner, & Dowling, 2014). The simultaneous existence of these contradictory interactions (cooperation and competition) could be assumed to have an influence on the development of a buyer-supplier relationship and individual actors performing their jobs. Prior studies have mainly focused on the meso level, meaning organizational and relational levels, and there is a lack of studies focusing on individual level activities related to coopetition strategy. This dissertation views coopetition as a multilevel phenomenon that occurs in dynamic business relationships evolving over time. Accordingly, this dissertation provides insights to complement the prior interaction research, which has featured calls for multilevel studies that account for both time and practice perspectives.

In light of the prior interaction research and the chosen theoretical lenses, this dissertation aims to increase understanding of interaction in customer-supplier relationships from different perspectives. Moreover, this dissertation views

interaction as a multilevel phenomenon and also focuses on activities performed by individual actors. The contribution of the dissertation is fourfold. First, the dissertation contributes to IOL literature by analyzing the effects of IOL on performance, and also the effects of different types of interactions on IOL. Second, it contributes to prior interaction research by conceptualizing interactions through multiple governance theory and by providing insights on those factors that affect and shape individual actors' behavior at the supplier interface. The third contribution is an investigation of coopetition in a buyer–supplier relationship from a multilevel perspective, and the usage of a practice-based approach in vertical coopetition research. Fourth, the dissertation contributes to prior interaction research by demonstrating interaction in a buyer–supplier relationship from a multilevel perspective and builds an overall picture of the differences and similarities between perspectives. In sum, this dissertation sheds light on the different types of contextual factors that have been viewed as hindering the understanding of interaction in exchange relationships (Möller & Wilson, 1995).

1.1 Research questions and study objectives

The aim of the dissertation is to investigate different types of interorganizational interaction in customer–supplier relationships. More specifically, the objective is to answer to the following research questions:

RQ1. How are interaction and interorganizational learning related?

RQ2. How does persuasive interaction occur in a customer–supplier relationship?

RQ3. How do contradictory interactions influence individuals and the development of a customer–supplier relationship?

In order to achieve the research objective and to answer research questions the phenomena of interorganizational interaction is viewed through three different theoretical lenses: interorganizational learning, persuasion, and coopetition. In order to increase understanding multiple data sets are also included in the dissertation. A summary of the six appended essays and articles that comprise this dissertation and the way these papers address the research questions and study objective is presented in Table 1.

Table 1. Summary of the essays and articles.

	Perspective	Method	Sample	Research question
Essay 1	IOL	Meta-analysis	21 studies	RQ 1
Essay 2	IOL & persuasion	Survey	349 respondents	RQ1 & RQ2
Essay 3	Persuasion	Mixed method	349 respondents & 12 interviews	RQ2
Article 4	Coopetition	Single case study	9 interviews	RQ3
Article 5	Coopetition	Single case study	10 interviews	RQ3
Essay 6	Coopetition	Single case study	12 interviews	RQ3

1.2 Structure of the dissertation

This dissertation comprises two parts. The first consists of five sections, and the second part consists of reprints of six individual essays and articles. The first introductory chapter presents the background of the dissertation and its objective. The second section presents the theoretical framework of the study, followed by the third section that focuses on the methodological choices of the dissertation. The fourth section summarizes the essays and articles, and the final section presents the contributions of individual essays and articles and their overall contribution to interorganizational interaction, finally, the limitations of the study and suggestions for future research are discussed.

The second part of the dissertation consists of six essays and articles. Essay 1 is single authored. Essay 2 is co-authored with Vesalainen and Holma, Essay 3 is co-authored with Vesalainen and Wincent. Articles 4 and 5, and essay 6 are co-authored with Tidström. In essay 2, article 5, and essay 6 Rajala is the first author, and she also had major role in essay 3, and article 4, in which she was the second author.

2 THEORETICAL BACKGROUND OF INTERORGANIZATIONAL INTERACTION

This chapter presents the theoretical background of the thesis. It starts with a review of social exchange theory and transaction cost economics theory and then considers approaches to interorganizational interaction that draw upon these main theories. Finally, the interaction approach of the thesis is presented. Figure 1 presents the theoretical perspectives and approaches used in building the theoretical framework of the thesis.

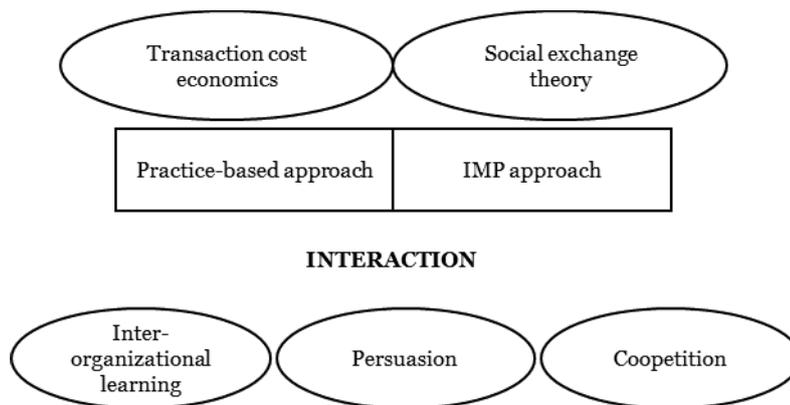


Figure 1. Theoretical foundation of the thesis.

Social exchange theory (SET) was originally developed to investigate interpersonal exchanges that were not purely economic (Das & Teng, 2002). Further, the theory has been extended from encompassing only the individual level to take in the organizational and interorganizational levels (Das & Teng, 2002). Blau (1964, p. 91) defined social exchanges as “voluntary actions of individuals that are motivated by the returns they are expected to bring and typically in fact bring from others.” Moreover, Blau (1964) viewed social exchange as an ongoing reciprocal process. Reciprocity has been viewed as a core principle of SET (Lioukas & Reuer, 2015). Social exchanges involve “a series of interactions that generate obligations” (Cropanzano & Mitchell, 2005, p. 874). Interdependent transactions that involve interaction have the potential to create high-quality relationships (Cropanzano & Mitchell, 2005). Social exchanges differ from economic exchanges, for example, in that the benefits of social exchanges are not written in contracts and are based on an exchange partner voluntarily providing such benefits (Das & Teng, 2002). Accordingly, SET claims that social relationships among actors shape exchanges of resources and benefits (Das & Teng, 2002). Moreover, because of reciprocity and voluntariness, the risk of free riding is significant, thus it has been stated that actors involved in social exchange relationships have a strong need for trust (Das & Teng, 2002).

Moreover, embeddedness is central to network and social capital theory (Tate et al., 2013). Embeddedness makes SET relevant in examinations of business-to-business relationships, because firms are seen as embedded in social networks with other actors (e.g., Andersson, Forsgren, & Holm, 2002; Dyer & Singh, 1998; Granovetter, 1985). Embeddedness is described as the ongoing contextualization of economic activity in social structures, and research highlights that social interactions are important in facilitating relationship success, because companies are embedded in broader systems of social relations (Granovetter, 1985). It is argued that the closer the ties between companies, the stronger the interorganizational embeddedness (Tate et al., 2013). There are two types of embeddedness: structural and relational embeddedness (Granovetter, 1985). Structural embeddedness refers to impersonal linkages between people or units (Nahapiet & Ghoshal, 1998), which includes the overall pattern of connections between individual actors and structural features such as centrality and hierarchy (Nahapiet & Ghoshal, 1998; Tate et al., 2013). Relational embeddedness refers to the personal relationships that individual actors establish with each other through a history of interactions (Nahapiet & Ghoshal, 1998). Relational embeddedness is argued to be a source of learning and social capital in organizations (Tate et al., 2013). Overall, Granovetter (1985) states that communication within an interaction episode targets both economic and social gains.

SET provides explanations for many outcomes that emerge from the interaction between individuals or organizations (Lioukas & Reuer, 2015). The emergence of trust has been acknowledged as an important outcome of social exchange (e.g., Bercovitz, Jap, & Nickerson, 2006; Lioukas & Reuer, 2015). Moreover, according to SET, mechanisms that govern social interactions are important facilitators of relationship success, because firms are seen as embedded in broader systems of social relations (Chen, Su, & Ro, 2016). For example, prior research has relied on both SET and transaction cost economics theories when studying the possible learning outcomes of a relationship for example (e.g., Lioukas & Reuer, 2015).

Transaction cost economics (TCE) focuses on “transactions and the costs that attend completing transactions by one institutional mode rather than another” (Williamson, 1975, pp. 1–2). Transaction is defined as a transfer of a good or service and the transaction is the unit of analysis in TCE. The basic assumption of TCE is that transactions are handled in a way that minimizes the costs involved in carrying them out (David & Han, 2004). Williamson identified three forms of governance: market, hybrid, and hierarchy. Market transactions are governed by formal terms, there is no dependency relation between parties, and are characterized by bargaining between parties (David & Han, 2004). The hybrid form of governance refers to a situation where neither relationship party could be replaced without the other incurring costs. Hierarchy refers to a situation where parties resolve disputes internally and unresolved disputes are referred to the hierarchy for a decision (David & Han, 2004).

TCE has evolved, and the traditional TCE (based on Williamson's work) has been criticized for having a competitive focus and neglecting the importance of trust and the social context of a transaction (Eriksson, 2008). Bradach and Eccles (1989) argued that transactions can be governed with three different governance mechanisms: market with price, hierarchy with authority, and hybrids with trust. Moreover, Adler (2001) argued that neither market nor hierarchy nor a combination of those suits well to the challenges posed by the knowledge economy. Accordingly, the literature on TCE and buyer–supplier relationships suggests that there are three common approaches for governance: market, hierarchy, and relational mechanism (Tangpong et al., 2010). Further, Adler (2001) argued that firms embody varying mixes of these three types of governance forms. Hierarchy relies on an authority mechanism, market form relies on price, and relational form (community form) relies on trust (Adler, 2001).

The main theoretical background of this dissertation is based on both SET and TCE theories. SET views interorganizational interaction as shaping relationships and focuses on which kind of benefits those relationships yield. Combining SET with TCE offers a more complete picture of IOI that can be based on multiple governance theory, meaning the market, hierarchy, and relational mechanisms. Leaning purely on SET would neglect the market and transaction-specific factors that TCE addresses, and leaning purely on TCE would neglect the social aspects of exchange. Accordingly, this kind of combination of SET and TCE approaches is needed in order to achieve a more comprehensive understanding of interaction (see e.g., Möller & Wilson, 1995). Next, prior research on interorganizational interaction is presented and then the framework of this dissertation is constructed on this theoretical foundation.

2.1 The IMP approach on interaction

Interaction in business relationships is at the heart of the relationship and network research of the industrial marketing and purchasing (IMP) group (see e.g., Håkansson, 1982; Håkansson & Waluszewski, 2013; Medlin, 2004). The interaction approach views marketing and purchasing of industrial goods and services as an “interaction process between two parties within a certain environment” (Håkansson, 1982, p. 23). The interaction approach suggests that analyzing industrial marketing and purchasing has four core elements: the interaction process, the participants in the interaction process, the environment, and the atmosphere affecting and affected by the interaction (Håkansson, 1982). In the IMP framework interaction occurs on three analytical levels: firms, relationships, and networks (Medlin, 2004). More specifically, the content and effects of interaction on business relationships can be analyzed from the perspective of three different layers: actors, resources, and activities (ARA model) (Håkansson & Waluszewski, 2013). Accordingly, the ARA model suggests that outcomes of an interaction process can be found in actor bonds, activity links, and

resource ties between companies (Ford et al., 2010). The interrelatedness of these layers is emphasized in the literature, and how relationships evolve and develop as a sequence of interactions between relationship parties (e.g., Holmlund, 2004). Moreover, interaction is seen as having both cost and revenue consequences, but also as affecting the activities and resources of companies involved in interaction (Håkansson & Waluszewski, 2013).

The interaction approach, and specifically the ARA model, has been criticized. It has been stated that the conceptualizations and descriptions of interactions should be reviewed and reconsidered (see e.g., Colville & Pye, 2010; La Rocca et al., 2017; Lowe, Purchase, & Ellis, 2012). The ARA model is argued to focus too much on tangible elements of the actors, resources, and activities, and thus it is argued that other approaches could offer alternative views on the development of elements in interaction (Lowe et al., 2012). Accordingly, Lowe et al. (2012) studied interaction using dramaturgical analysis, which views interaction through the roles played by actors, the tools and spaces used by these resources, and the role-playing of the actors by activities (Lowe et al., 2012).

Möller and Wilson (1995) proposed a taxonomic model of buyer–seller interactions. The taxonomic model is drawn on the IMP model of interaction, strategic decision research, intraorganizational interaction research, and marketing and consumer behavior research. In the taxonomic model, environmental context, supplier and buyer characteristics, and task characteristics are seen as having an effect on the interaction process, which again produces outcome factors. Interaction processes refer to “the basic processes through which the exchange of resources is carried out and controlled” (Möller & Wilson, 1995, p. 26).

Interaction processes are divided into exchange processes, adaptation processes, and coordination processes (Möller & Wilson, 1995). Further, the exchange processes can be divided into the exchange of resources and social resource exchange, and exchange is argued to concern a bundle of different kinds of resources (Möller & Wilson, 1995). Exchange processes can be described through episodes, which refer to action or the outcomes of actions performed by organizations or the representatives of organizations (Baptista, 2013; Möller & Wilson, 1995). The adaptation process means the extent to which buyer and seller make substantial investments in the relationship (Baptista, 2013), and it is defined as “behavioral or organizational modifications at the individual, group or corporate level, carried out by one organization, which are designed to meet the specific needs of one other organization” (Brennan, Wilson, & Turnbull, 2003, p. 1639). Although prior research has shown the relevance of the adaptation process in the development of a business relationship, the prior research has focused on the role of adaptation and its consequences as an interaction process (e.g., Baptista, 2013; Brennan et al., 2003; Håkansson, 1982), it is stated that interaction episodes merit more attention (Baptista, 2013; Schurr, 2007). Finally, coordination refers to “the development and use of mechanisms that facilitates the

control of exchange processes” (Möller & Wilson, 1995, p. 27). However, it is argued that adaptation and coordination processes are hard to differentiate, and that a coordination process is strongly affected by the contextual factors of a relationship (Baptista, 2013).

2.2 The practice-based approach to interaction

Practice-based approaches are seen as complementary to the IMP approach when studying interaction processes in business relationships (La Rocca et al., 2017). Even though practice theories have long traditions and the roots of the practice-based approach can be described in different ways, some ideas and their basis have been used in understanding interorganizational interaction without using practice theories fundamentally (La Rocca et al., 2017). The influences of practice-based approaches that are used in interaction research have largely been adapted from organization and market research.

The practice-based approach has been influenced by Giddens’s (1984) theory of structuration, which argues that individual agency and larger social structures should not be viewed as opposed to one another. Accordingly, researchers should understand that individuals create structure through action, and that at the same time they are restricted and enabled in their actions by that structure (Giddens, 1984; Jarzabkowski & Spee, 2009; Whittington, 1992). Therefore, Giddens (1984) contends that researchers should not focus either on individual agency or on social structures, but instead on shared social practices that involve elements of both. A practice-based approach is interested in practices and praxis. Practices are routinized types of behavior, while praxis refers to the actual activities (see e.g., Seidl & Whittington, 2014; Whittington, 2006). In other words, practice guides activities and praxis is the activity itself (Reckwitz, 2002b). Moreover, Jarzabkowski et al. (2007, p. 9) emphasized that “praxis is both an embedded concept that may be operationalized at different levels from the institutional to the micro, and also dynamic, shifting fluidly through the interactions between levels.” Regarding interaction research, a practice-based approach emphasizes the importance of studying both micro and macro interactions and the interplay between them (La Rocca et al., 2017). The dynamic roles of actors in business interactions are emphasized, and more specifically, the variety of roles in interaction in business relationships (La Rocca et al., 2017). Further, both practice and interaction research refer to actor-network theory (ANT), which consists of associations between a variety of actors, human and non-human (La Rocca et al., 2017; Nicolini, 2009; Seidl & Whittington, 2014). More specifically, ANT highlights how practices are collections of different elements, human and non-human, and that those elements shape each other (La Rocca et al., 2017; Reckwitz, 2002a). Non-human actors can be, for example, screens and phones. Further, it is argued that practices embody social relations, intentions, and competencies (La Rocca et al., 2017). It is also argued that the non-human actor focus of ANT can

lead research to focus more on ‘doing’ than ‘saying’, in other words, to direct the focus toward practice research (Seidl & Whittington, 2014). Further, ANT discusses micro (individuals, groups) and macro actors (institutions, organizations, parties) as separate entities (La Rocca et al., 2017).

Regarding the practice-based approach in business interaction research, metaphorical movements of ‘zooming in’ and ‘zooming out’ are required (e.g., La Rocca et al., 2017). By zooming in on a practice it is possible to gain a better understanding of what people are saying and doing, and further, what they are trying to do, how these practices occur in time and with what kind of effect (Jarzabkowski, Spee, & Smets, 2013; La Rocca et al., 2017; Nicolini, 2009). In business relationship interaction research, zooming in refers to exploration of micro interactions, social, cultural, and behavioral factors. In addition, zooming out is needed in order to assess the interrelatedness of practices and how those practices are related to the wider picture (La Rocca et al., 2017; Nicolini, 2009). Zooming out in business relationship interaction research means exploring both the spatial and temporal interdependences of single-interaction episodes across organizational boundaries (La Rocca et al., 2017). This zooming in and out emphasizes the importance of the relations of micro and macro actors that are discussed in ANT. Further, zooming in and out simultaneously highlights the importance of the interplay between intra- and interorganizational practices, and also sheds light on the roles and practices at the organizational boundaries (La Rocca et al., 2017).

Research has emphasized the importance of the roles actors play on organizational boundaries (Hjelmgren & Dubois, 2013). Actors at the organizational boundaries have multiple different roles that are related to a set of activities, responsibilities, and competencies (La Rocca et al., 2017). Overall, business relationships are expected to include different configurations of actors, because there are multiple touch points between organizations, such as engineers, managers, purchasing, sales, and various types of IT systems, facility interfaces, and documents (La Rocca et al., 2017). Moreover, individuals act as agents of their organization, which often consists of several different business and organizational units. Accordingly, actors have a variety of roles in interaction that need to be considered to acquire a complete picture of the complex interaction processes in business relationships.

2.3 Three perspectives of interorganizational interaction

Interorganizational interaction is a dynamic and dyadic process. Interorganizational relationships are seen to evolve and develop as a sequence of interactions between relationship parties (Holmlund, 2004). This dissertation views buyer–supplier interaction through three different lenses: interorganizational learning, persuasion, and cooperation. The interaction view of this dissertation is not purely drawn from SET or TCE, but is more of a combination of these as the limitations of one are countered by the strengths of the

other. According to Mayer and Sparrowe (2013, p. 917) “many research questions can’t be fully addressed by drawing only upon a single theory”. They suggest that integrating theories by taking two theories that speak to the same phenomena but from different perspectives could provide novel insights into the researched phenomena and a better understanding of it. The core of TCE is related to the decision to make or buy, which has largely influenced the business relationships literature (Eriksson, 2008). However, traditional TCE has been criticized for neglecting the importance of trust and social context of transactions (Granovetter, 1985; Eriksson, 2008). Even though, TCE was completed by a hybrid form of governance referring to various forms of long-term contracts and cooperative arrangements (Blois, 2002), the theory views relationships from a governing point of view, and therefore SET was selected as the second grand theory of the interaction view of this dissertation. SET has been argued to be among the most influential paradigms in understanding workplace behavior (Cropanzano & Mitchell 2005). SET views companies as embedded in social networks with other actors (e.g., Andersson et al., 2002; Dyer & Singh, 1998; Granovetter, 1985), and insights from SET suggests that interaction in business relationships is a critical part of ongoing exchange relationships that will influence future intentions and interactions between buyer and supplier (Thomas, Thomas, Manrodt, & Rutner, 2013). Previous buyer-supplier relationship research has also integrated TCE and SET and it is claimed that it would be naïve to assume that exchange relationships strictly follow the assumptions of TCE or SET (Hawkins, Wittmann, & Beyerlein, 2008). Therefore, in the interaction view of this thesis, TCE and SET are integrated, in order to present the relationship governance and social exchange view.

The interaction view of the thesis is not purely based on the interaction-models or practice-based approach, again its approach is a combination of those. The IMP approach as such focuses on what happens between organizations and among individuals acting as company representatives. This has led to an assumption that these representatives act rationally, purposefully and interpret the context to achieve the desired goals (Håkansson, 1982; Håkansson & Snehota, 1995). The recent theoretical developments of the IMP approach emphasize the micro-level research that acknowledges the important roles of actors in the development of solutions in business relationships and research has adopted a practice-based view (see e.g., Dahl et al., 2016; La Rocca et al., 2017). These approaches have been combined in the interaction view of the thesis; the practice-based approach guides the individual and organizational level investigations of interaction, while the IMP approach frames the interaction research based on previous interaction studies. Both approaches acknowledge the multilevel nature of interaction in buyer–supplier relationships.

Figure 2 illustrates the framework of the dissertation. In this dissertation, the main focus is on the interaction between buyer and supplier. Interaction occurs on multiple levels (see e.g., Håkansson & Snehota, 1995; La Rocca et al., 2017; Medlin,

2004; Möller & Wilson, 1995), and in this thesis the main interest lies in studying interaction on the relational, organizational, and individual levels.

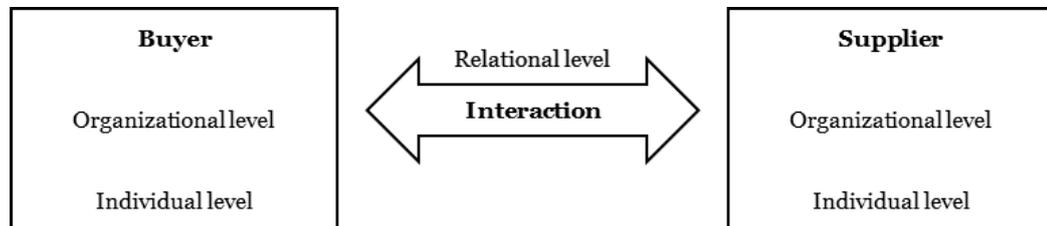


Figure 2. The overall research setting of the dissertation.

Interaction in business relationships can be distinguished as that happening in social and economic exchanges (Medlin, 2004). Economic exchanges are mainly related to exchanges of goods and services for economic gain, while social exchanges occur mostly in long-term buyer–supplier relationships that aim to deliver advantages through the relationship itself. Interaction literature highlights the importance of taking account of the time perspective, because of the dynamic nature of interaction processes in business relationships (La Rocca et al., 2017; Medlin, 2004).

The prior interaction research of IMP scholars has classified different types of interaction in relationships (see e.g., Cantillon & Håkansson, 2009; Holmlund, 2004; van der Valk et al., 2009). In the classification of Cantillon and Håkansson (2009) the interaction type varies from pure exchange to networking, while some researchers have classified interaction types according to product or service types (van der Valk et al., 2009). Moreover, van der Valk and Wynstra (2012) emphasized that interaction patterns need to be modified to move toward ideal interaction patterns for the current service if they are to deliver a certain level of exchange success. However, business relationships consist of various types of goods and services, and it would be difficult for companies to implement different interaction patterns for each type of good and service. Holmlund (2004) suggests that relationship interactions should be grouped based on their interconnectedness. Therefore, Holmlund (2004) classified interaction type as a configuration of actions, episodes, sequences, relationships, and partner base.

Prior interaction literature has shown that interactions can be classified in many ways and also shown that there are influential factors behind different interaction type that produce different outcomes (see e.g., Håkansson & Waluszewski, 2013). Accordingly, it can be assumed that the form of interaction is also different when relationship parties aim to learn from each other, to persuade the other party to act in a certain way, or when the parties are in a cooperation relationship. As prior

interaction literature has shown interaction can be analyzed on different levels, the focus of the dissertation is on relational, organizational, and individual levels. In order to gain a complete picture of interorganizational interaction this dissertation focuses on interaction from the perspectives of interorganizational learning, persuasion, and cooperation. Next, the three viewpoints of this dissertation are presented in more detail.

2.3.1 Interorganizational learning as interaction

There are several different perspectives on interorganizational learning (IOL) that have been widely used in prior research. The relationship learning view developed by Selnes and Sallis (2003) is one of the most cited (see e.g., Cheung, Myers, & Mentzer, 2011; Jean, Kim, & Sinkovics, 2012). Relationship learning is defined as “a joint activity between a supplier and a customer in which the two parties share information, which is then jointly interpreted and integrated into shared relationship-domain-specific memory that changes the range or likelihood of potential relationship-domain-specific behavior” (Selnes & Sallis, 2003, p. 86). Relationship learning consists of three sub-processes: information sharing, joint sense-making, and knowledge integration (Selnes & Sallis, 2003). Interorganizational learning starts from knowledge sharing. In order to coordinate collaboration and achieve operational efficiency, it is necessary for the parties to a relationship to share knowledge (Selnes & Sallis, 2003). Each organization has a different ability to acquire information and thus joint sense-making varies across organizations. Finally, acquired knowledge is integrated into relationship-specific memory, which encompasses organizational beliefs, behavioral routines, and physical artifacts (Selnes & Sallis, 2003). Knowledge integration is essential to bring the new knowledge into use and deliver the anticipated performance benefits (Kohtamäki & Partanen, 2016).

Another widely held view of IOL involves interactive learning. Interactive learning occurs when the parties to a relationship acquire knowledge from each other that is unique and difficult to imitate. Such knowledge acquisition requires intensive interaction (Lane & Lubatkin, 1998) and thus, the interactive learning perspective emphasizes that interaction between members of different organizations results in knowledge exchange and knowledge transfer between organizations (Hernández-Espallardo, Rodríguez-Orejuela, & Sánchez-Pérez, 2010; Huang & Chu, 2010; Knight, 2002). This knowledge transfer between organizations is seen as an intensive personal contact and interaction (Huang & Chu, 2010). The interaction approach (the IMP view) suggests that firms in a relationship simultaneously affect, and are affected by, each other in many ways (Håkansson & Snehota, 1995).

These perspectives accord with the view that interaction has an essential role in interorganizational learning. All these views acknowledge that information and/or knowledge sharing occurs in continuous interaction. In addition, the perspectives share the belief that IOL begins with information/knowledge sharing in an

interorganizational relationship, then the acquired knowledge is interpreted, and finally it is applied in practice. The main difference between these views is over whether the process of IOL occurs at a relationship level or at an organizational level. Prior literature on organizational and interorganizational learning has distinguished the different levels on which learning occurs (see e.g., Bapuji & Crossan, 2004; Jia & Lamming, 2013; Toiviainen, 2007). These levels are identified as individual, group, organizational, relationship, and network levels (Bapuji & Crossan, 2004). In this thesis, the interest lies mainly in examining organizational and relationship-level learning. The relationship learning perspective states that learning occurs at the relationship level. Once information has been shared, a joint sense-making process begins, and that leads to knowledge integration. In contrast, the interactive learning view holds that knowledge is shared and transferred at the relationship level, but assimilation or interpretation of the acquired knowledge occurs within organizations, which also means that applying knowledge in practice also occurs within organizations. Huang and Chu (2010) state that interactive learning can be viewed as a catalyst for internalized learning. In sum, relationship learning is joint learning, whereas interactive learning is more about knowledge acquisition. However, interaction between companies occurs between individuals on the organizational boundaries. Further, Lane and Lubatkin (1998) also argue that factors that influence one-way learning also affect two-way learning.

2.3.2 Persuasive interaction

The roots of persuasive interaction are in rhetoric, and this type of interaction has been widely recognized also in marketing literature, which addresses how the salespeople persuade consumers (see e.g., Friestad & Wright, 1994). Persuasion is conceptualized as seeking to change someone's attitudes or behavior (Miles, 2015). Persuasive interaction has attracted business-to-business scholars from different viewpoints. In the business relationship context, scholars have examined persuasion through a rhetorical approach that views the rhetoric used as a powerful means of persuasion and argumentation (Ruokolainen & Aarikka-Stenroos, 2015). The rhetorical view "deals with the art of persuading or influencing people through the use of language" (Andersen, 2001, p. 169).

Buyer-supplier relationships have traditionally been viewed as spanning a continuum from a transactional to a relational orientation (Pillai & Sharma, 2003; Rinehart, Eckert, Handfield, Page, & Atkin, 2004), from single transactions to relational exchanges (Macneil, 1980), or from arm's-length relationships to vertical integration (Lambert, Emmelhainz, & Gardner, 1996). However, the continuum thinking on relationships has been questioned and scholars have emphasized the importance of three basic mechanisms (market, hierarchy, and social) in governing relationships (Adler, 2001; Kohtamäki, 2010; Ritter, 2007; Vesalainen & Kohtamäki, 2015).

Competitive behavior is based on market governance and refers to taking advantage of the existence of market forces (Heide & John, 1988). By interacting competitively with suppliers, purchasers may use competitive bidding and short term contracts in order to achieve a low purchase price (Krause, Scannell, & Calantone, 2000; Stuart, 1993). Accordingly, competitive behavior is based on the threat of using alternative suppliers, implicitly by signaling such a possibility, or using market forces by referring to other companies during interactions with suppliers.

Hierarchical behavior exists when a party in a relationship tries to exercise power over another. Authoritarian power usually resides in organizations, in which power is legitimized through organizational hierarchy (Adler, 2001). Power in the interorganizational context is defined as the ability of the industrial purchase to influence the intentions and actions of a supplier (Handley & Benton, 2012; Maloni & Benton, 2000). The literature has identified five bases of inter-firm power: reward, coercion, expert, referent, and legitimate power (see e.g., Handley & Benton, 2012). When applying hierarchical behavior during interactions with suppliers, purchasers might refer to their legitimate right to demand things, their own expertise, or their power as a referent for a supplier. Moreover, purchasers might offer additional business to a supplier as a reward for fulfilling their requirements, or on the other hand purchasers might reduce the volume of business with a supplier, or cease to do business with it altogether.

Relational behavior is based on relational norms. Relational norms are based on Macneil's (1980) work that contracts are intentionally left incomplete so that actors have flexibility to adapt different situations (Ivens, 2006), and further, exchange partners develop joint values and expectations about "proper and acceptable behavior" (Macneil, 1980, p. 38). Scholars have identified 10 norms a basis of relational behavior: long-term orientation, role integrity, relational planning, mutuality, solidarity, flexibility, information exchange, conflict resolution, restraint in the use of power, and monitoring behavior (e.g., Blois & Ivens, 2006; Ivens, 2004, 2006). Accordingly, relational behavior includes the expectation that joint rather than individual outcomes are highly valued, which again shows in interorganizational interaction.

In this dissertation, persuasion interactions between buyer and supplier are conceptualized through these three relationship governance mechanisms. It is assumed that a purchaser's behavior can be seen as an interaction in which these different governance mechanisms are used to influence suppliers.

2.3.3 Coopetitive interaction

Coopetition refers to the simultaneous existence of cooperation and competition in a business relationship. Coopetition is defined as "a paradoxical relationship between two or more actors simultaneously involved in cooperative and

competitive interactions, regardless of whether their relationship is horizontal or vertical” (Bengtsson & Kock, 2014). Therefore, in this dissertation co-competition is viewed to consist of contradictory interactions. It is argued that the process of co-competition over time is related to levels of cooperation and competition (Bengtsson, Eriksson, & Wincent, 2010). Accordingly, co-competition can exist on different levels, such as the individual, organizational, interorganizational, and network levels (see e.g., Bengtsson et al., 2010; Dahl et al., 2016; Lindström & Polsa, 2016; Tidström, 2008). Co-competition strategy comprises cooperative and competitive activities that have consequences for the direction of particular interorganizational relationships and for the organization (Dahl et al., 2016). According to Dahl et al. (2016) cooperative activities emerge in mutual interactions between individuals at the interorganizational level, while competitive activities emerge in interactions among organizational members at the intraorganizational (i.e., organizational) level. The interplay between these types of activities forms the core of co-competition strategy (Dahl et al., 2016), and co-competitive relationships are viewed as complex because they comprise two different logics of interaction (Bengtsson & Kock, 2000).

A cooperative relationship can develop into co-competition or even into competition over time because of the dynamic nature of business relationships. The relationship between cooperation and competition differs according to the degree of cooperation and competition in a relationship, and accordingly relationships can be cooperation-dominated, equal, or competition-dominated, which refers to co-competition as a continuum from cooperation to competition (Bengtsson & Kock, 2000). However, Bengtsson et al. (2010) criticized the continuum-type of thinking and suggested that co-competition is a result of two continuums: cooperation and competition. The resulting two-continuum approach suggests that cooperation and competition are two different interaction processes that exist simultaneously within a co-competitive relationship. The strength of both interaction processes varies and thus the number of possible combinations of strong/weak cooperation and strong/weak competition is large. Moreover, co-competition studies suggest that the cooperative and competitive parts of a co-competitive relationship are divided between activities rather than actors (Bengtsson & Kock, 1999). This indicates that the competitive and cooperative parts of a co-competitive relationship involve the same actors, meaning that the same individual (or group) simultaneously cooperates and competes with the other relationship party.

Cooperative interactions between competitors are said to be dependent on agreed norms for interaction in terms of formal agreement and/or trust (Bengtsson & Kock, 1999; Dahl, 2014). Competitors are viewed to mutually store and learn from experiences while cooperating and competing with each other (Dahl, 2014). Accordingly, co-competitive interactions are seen to be dependent on experientially-learned agreements on cooperating and competing (Dahl, 2014). Competitive interactions have been argued to be dependent on enforced rules for acting that exist in the market (Bengtsson & Kock, 1999). In addition, it is argued that the existence of formally agreed or tacitly shared perceptions of the proper behavior

related to direct competitive actions is essential to establish and maintain a cooperative relationship over time (Dahl, 2014).

In cooperative relationships, the parties to the relationship continually face a dilemma concerning “the existence of attractive opportunities and risks of misappropriation by the partner” (Gnyawali & Park, 2011, p. 652). Moreover, an opportunistic situation may evolve through resource sharing and cooperative activities in cooperative relationships (Tidström, 2014). In an opportunistic scenario, one party exploits a weaker party’s interest (Osarenkhoe, 2010). Accordingly, TCE has been widely applied in cooperation research (see e.g., Bouncken, Gast, Kraus, & Bogers, 2015; Eriksson, 2008; Ritala, Hurmelinna-Laukkanen, & Nätti, 2012).

2.4 Summary: Viewing IOI through three lenses

According to Möller (2013) buyer–seller interaction research is rooted in transaction cost economics, social exchange theory, and resource dependency theory. In this thesis, the interaction view is built on the grand theories of transaction cost economics and social exchange theory. Interorganizational learning is based on social exchange theory, as it requires information sharing, which is a reciprocal and voluntary process that occurs in social networks in which firms are embedded. Interorganizational learning is also built on TCE, as information sharing is related to trust and the degree of closeness of the interactions between buyers and suppliers, which is related to relationship governance of trust (see e.g., Adler, 2001). In addition, it has been argued that learning and the exchange of knowledge should include opportunism risk caused by asymmetric learning (Bouncken et al., 2014). Persuasion is mainly built on TCE, as it is operationalized through relationship governance, but also includes elements of SET, as persuasion occurs through social interaction between buyers and suppliers. Cooperation is also related to both the grand theories TCE and SET. TCE is widely applied in cooperation research (see e.g., Bouncken et al., 2015; Eriksson, 2008; Ritala et al., 2012), as cooperating and competing are related to the main idea of TCE; making or buying. Cooperation research also states that the paradoxical situation of cooperating and competing might enable possible opportunistic behavior (see e.g., Tidström & Hagberg-Andersson, 2012). SET is related to cooperative interaction in cooperative relationships. The degrees of cooperating and competing differ across cooperative relationships and thus the type of interaction also differs across relationships.

Exchange processes are described through episodes, which refer to actions or the outcomes of actions performed by organizations or the representatives of organizations (Baptista, 2013; Möller & Wilson, 1995). This view of exchange processes highlights the importance of adopting a multilevel view in interaction research and of the role of practices and actions performed. This thesis presents three theoretical areas as possible lenses for studying interaction in buyer–

supplier relationships. The first lens is based on interorganizational learning being based on interaction, and further, that the actual interaction occurs between individuals, even if studies have approached IOL as something occurring on the organizational level. This highlights the importance of IOL research accounting for both the individual and organizational levels.

The second lens discussed portrays persuasion in business relationships as conducted through three governance mechanisms that manifest themselves in the purchasers' behavior at the supplier interface. Persuasion becomes relevant because purchasers cannot directly command suppliers, but they use persuasive rhetorical means to influence the conduct of suppliers. Persuasion happens through the rhetoric that purchasers use to convince suppliers to do as they want them to do by using language. In this thesis, persuasive interaction is conceptualized through multiple governance theory, and thus, persuasion occurs through purchasers' relational, hierarchical, and competitive behavior.

The third lens portrays cooperative and competitive interaction as occurring simultaneously in cooperative business relationships. These simultaneous contradictory interactions provide an interesting setting for interaction research as interactions are argued to have an influence on the development of a business relationship, and thus time should be considered in any examination of cooperation. Cooperation research highlights the importance of applying multilevel research when studying cooperative interactions.

Figure 3 presents the overall research setting of the dissertation and the three chosen theoretical lenses through which interaction is studied. The framework has similarities with the taxonomic model by Möller and Wilson (1995), as both accounts organizational and individual levels. However, the taxonomic model is more complex because it accounts also environmental context, task characteristics and outcome factors of interaction processes. As this dissertation aims to view interaction from multiple theoretical angles, it is not possible to adopt such a complex framework, and thus a simplified version was developed.

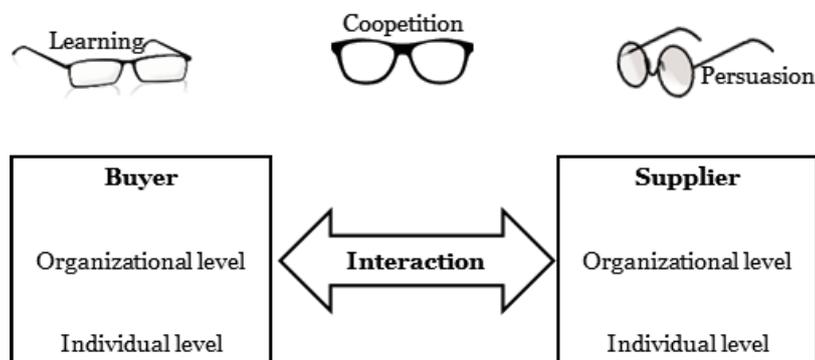


Figure 3. The overall research setting viewed through three different lenses.

3 METHODOLOGY

This chapter presents the methodological choices made in this dissertation. This chapter begins with the presentation of the ontological and epistemological choices made, then the research design is presented, which is followed by an explanation of the data collection and analysis procedures. Finally, the validity and reliability of the study is discussed.

3.1 Ontological and epistemological approaches

Ontology concerns the ideas and understanding of a social world, meaning the existence and relationship between people, society, and the world in general (Eriksson & Kovalainen, 2008). Epistemology addresses the question “what is knowledge and what are the sources and limits of knowledge?” (Eriksson & Kovalainen, 2008, p. 14). One division of ontology concerns the understanding of reality, whether it is understood as being subjective or objective. Burrell and Morgan (1979) classified different philosophical paradigms according to subjective–objective and regulation–radical change dimensions in their generally-accepted framework. The subjective–objective dimension refers to the nature of science, meaning whether reality is a social construction that does not exist outside human meaning (i.e., it is subjective), or whether the world exists as concrete structures, processes, and relationships that can be studied (objectively). Regulation–radical change refers to the nature of society (Burrell & Morgan, 1979). Accordingly, in the framework four paradigms exist: radical humanist, radical structuralist, interpretive, and functionalist. These four represent fundamentally different views on the analysis of social phenomena (Burrell & Morgan, 1979). Radical humanist and radical structuralist are defined by their concern to develop a sociology of radical change from a subjective (radical humanist) or an objective (radical structuralist) standpoint (Burrell & Morgan, 1979). Moreover, interpretive (subjective) and functionalist (objective) perspectives are concerned with how we understand the world.

The research approach of the thesis would best fit the functionalist paradigm of Burrell and Morgan’s (1979) classification. In line with the functionalist paradigm of seeking underlying structures in an objective reality, this thesis aims to find structures, relationships, and processes of interorganizational interaction. Functionalist research typically, relies on quantitative research methods, however, functionalist research can also combine elements of sociological positivism (rooted in the radical structuralist paradigm) and German idealism (rooted in the interpretive paradigm). Accordingly, this study also relies on quantitative methods, but also on qualitative methods to better understand the causalities and processes of interorganizational interaction. Accordingly, this thesis actually represents a critical realism view, because it allows the use of multi-methodological approaches, supports the view that there is an observable world

independent of human consciousness, and also suggests that knowledge is socially constructed (Eriksson & Kovalainen, 2008). In this context the word ‘critical’ refers to transcendental realism that “rejects methodological individualism and universal claims of truth” (Denzin & Lincoln, 2005, p. 13). Critical realism argues that “the world is socially constructed but not entirely so” (Easton, 2010, p. 120). Moreover, a critical realist view is interested in causalities and not only in describing what happens but also the mechanisms involved, which confers upon a researcher an active role in the process of identifying causal relationships (Ryan, Tähtinen, Vanharanta, & Mainela, 2012). Critical realist ontology also allows the analysis of micro and macro levels on their own terms and allows clarifications of the specific mechanisms through which different levels are linked over time (Herepath, 2014; Seidl & Whittington, 2014). Accordingly, it fits well with the interaction framework of the dissertation, because the critical realist ontology enables the use of qualitative and quantitative methods, and also enables the examination of causalities, and further it makes it possible to view interaction from a multilevel perspective. Moreover, it is argued that applying critical realist ontology suits well to the examinations of industrial relationships and networks (Ryan et al., 2012).

In addition, there are two basic approaches within scientific reasoning: induction and deduction (Eriksson & Kovalainen, 2008). Inductive reasoning follows the logic of proceeding from empirical research to theoretical results, while deduction proceeds from theory (hypotheses) to empirical results. Moreover, the combination of these is called abduction, which refers to a process of developing theory and new ideas by generating some preunderstanding based on existing theory and then moving back and forth between theory and empirical data (Eriksson & Kovalainen, 2008). This thesis follows a semi-deductive reasoning, because the thesis is theory driven, however, it includes elements that are not based on hypothesis, and not purely theory driven, but these elements are not inductive in nature.

3.2 Research strategy and design

The purpose of this thesis is to examine interorganizational interaction from three different perspectives: IOL, persuasion, and cooperation. A research strategy is a set of decisions that guides method selection throughout the research process. The research design is based on six related studies focusing on interorganizational interaction in buyer–supplier relationships.

This thesis uses triangulation as a research strategy by using several research methods and by applying several theoretical approaches. Triangulation refers to taking different perspectives on an issue that is studied, and these different perspectives can be fulfilled by using different methods and/or several theoretical approaches (Flick, 2017). Moreover, triangulation should provide knowledge on different levels, meaning producing knowledge that could not be produced by one

approach, and thus contributing to the quality of a piece of research (Flick, 2017). Five types of triangulation have been identified: data triangulation (the use of multiple ways to collect and analyze data involving time, space, and persons), investigator triangulation (the usage of multiple observers), multiple triangulation (combining multiple observers, theoretical perspectives, data sources, and methodologies in one investigation), theory triangulation (using multiple theoretical schemes in the interpretation), and methodological triangulation (using more than one quantitative or qualitative data sources or methods) (Jack & Raturi, 2006). In this thesis, triangulation has been used in the appended papers 3–6. Methodological triangulation is used in paper 3 as quantitative and qualitative methods have both been used. Papers 4–6 involve investigator triangulation, because two researchers were present in the interviews, and multiple triangulation as multiple theoretical perspectives and data sources were adopted.

As triangulation also refers to combining several research methodologies, the assumption is that “weaknesses inherent in one approach will be counterbalanced via strengths in another” (Jack & Raturi, 2006, p. 345). Therefore, the popularity of mixed-methods approaches has grown because a mixed-methods approach usually means using both quantitative and qualitative methods to gain a more detailed understanding of the research phenomena (Creswell, 2011). Combining quantitative and qualitative research approaches can help ensure that a research question is answered (Denzin & Lincoln, 2005). Qualitative research focuses on processes and meanings that are not experimentally examined or measured, while quantitative studies focus on the measurement of and causal relationships between variables (Denzin & Lincoln, 2005).

Moreover, the quantitative research strategy of the thesis is justified because it enables examination of the existence of different learning and persuasion interactions in buyer–supplier relationships. That quantitative research approach of the thesis is based on a meta-analytic approach (paper 1) and measuring persuasion and learning interactions and examining the causal relationships of these interactions and performance variables (paper 2). A meta-analytic approach enables examination of the current state of IOL research, while measuring different interaction types (persuasion and learning) makes it possible to explore the causal relations of these. Moreover, quantitative methods were used to identify different types of behavior in the supplier interface based on persuasive interactions used by buyers (paper 3). The measures used are presented in the papers in detail.

The qualitative research strategy fits the purposes of this thesis because qualitative data facilitate well-grounded and rich descriptions and explanations (Miles & Huberman, 1994). Moreover, qualitative research aims to search for an understanding of the whole (Janesick, 1994) and qualitative data might provide unexpected interesting findings, that might lead to new theoretical insights (Miles & Huberman, 1994). In this thesis, qualitative research strategy relies on a case

study approach. A case study is defined as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 2003). A case study can involve single or multiple cases and numerous levels of analysis (Eisenhardt, 1989). There are different applications involved in using a case study research strategy: explaining, describing, illustrating, exploring, and meta-evaluating (Yin, 2003). The case study method is widely used in business relationship research (Easton, 2010). In this thesis, a case study approach is applied as a research strategy to explain causal links in real-life interactions (papers 3 and 6) and to explore situations in which the interaction has no clear set of outcomes (papers 4 and 5) (Yin, 2003). Paper 3 applies a comparative case study method because the aim of the paper is to study different types of behavior and thus representatives of different behavior types are studied and compared. Papers 4, 5 and 6 use a single case study because the case represents a unique cooperative relationship between buyer and supplier (see e.g., Yin, 2003).

In sum, the research design of the thesis employs both quantitative and qualitative research strategies. The summary of the research design is presented in Table 2. The following sections briefly present the data collection, datasets, analysis methods, and finally discuss the reliability and validity of methodological choices. More detailed descriptions of these are presented in the papers attached.

Table 2. Research design.

Paper	Interaction type	Research strategy
1	IOL	quantitative meta-analysis
2	IOL/persuasion	quantitative
3	persuasion	quantitative and comparative case study
4	coopetition	single case study
5	coopetition	single case study
6	coopetition	single case study

3.3 Data collection

The empirical data consists of four different datasets, thus, data collection was conducted in different time periods and with different agendas. The first paper examines IOL based on prior research and the datasets used in that research through a meta-analytic procedure. The data for the first paper were collected through a systematic review process from databases of scientific articles, such as Scopus and EBSCO. The keywords used were: “interorganizational learning”, “inter-organizational learning”, “relationship learning”, “relational learning”, and “network learning”. As a result, 413 articles were found, and their abstracts were manually reviewed and 94 found to concern IOL. After reading the 94 articles, 70

were found to discuss the type of IOL that was central to Paper 1. After excluding conceptual and qualitative papers, 42 articles remained, and of those 21 reported a correlation between IOL and performance, and these studies formed the data for Paper 1.

Papers 2 and 3 exploit the same dataset. The data were collected through a web-based survey targeted at purchasing professionals and persons operating at the supplier interface. The target respondents were identified from Finnish manufacturing industry and companies employing more than 50 staff. This choice was made in order to improve the likelihood of a company having assigned roles (positions) dealing with suppliers and having several persons operating at the supplier interface. The data collection was conducted in two phases. In the first phase, a total of 415 companies were contacted to identify the persons responsible for purchasing, and then these persons were contacted by phone to request their participation in the survey. A total of 365 agreed to participate and 178 of them answered the survey and were then asked to nominate colleagues that could also participate in the survey. As a result, 196 nominated people were sent a link to the survey through e-mail and 92 of them completed the survey. In the second phase, more potential respondents were sought by contacting the 178 people who completed the survey in the first phase and asking them to nominate other possible respondents for the survey. The action resulted in a further 147 people being contacted and 79 new responses. Consequently, the final sample consists of a total of 349 responses (response rate 51 %) to the web-based survey. These respondents represent 162 different companies from the Finnish manufacturing sector.

For Paper 3, both quantitative and qualitative data were collected. The objective of the qualitative data was to understand why purchasers behave as they do at the supplier interface. Accordingly, the respondents were identified from the quantitative data in order to find interviewees who represent different types of behavior. As a result, 12 interviewees were selected to exemplify four different types of behavior, three of each type. The interviews lasted between 19 and 60 minutes with an average duration of around 35 minutes. The interviews were recorded and transcribed. The interviews included two parts: unstructured and theme-based parts. In the first part, interviewees were asked to describe factors affecting their behavior at the supplier interface and more specifically were asked to consider why they behaved in a particular way. In the second part of the interview, the interviewees were asked to consider if some factors identified in prior literature have affected their behavior style. These factors were personal characteristics, job description/position, and situational factors, such as supplier or company-related factors.

Papers 4, 5, and 6 are related to cooperative interaction and all exploit the same single case study. However, each of these papers have a different amount of data because the case studied is ongoing and data have been gathered over time during the period 2015–2017. The single case was purposefully selected as a unique case example of a long-term business relationship that developed over time and is based

on the simultaneous existence of cooperation and competition. The research methods used were interviews and reviewing documents. The interviews were personal interviews and were recorded and transcribed. The interviewees were selected based on a snowball sampling method, which is designed to find informants possessing valuable information. In practice, informants are asked to nominate other informants who could be interest to the particular research. Paper 4 exploits the data elicited from nine interviews from the buyer side of a relationship. These nine interviewees comprised the buyers who were directly involved in the cooperative relationship with the supplier. In this phase, it was not possible to interview people from the supplier side because of the sensitive nature of the topic and because the research access was provided by the buyer that preferred not to involve supplier representatives in the research at that point. Paper 5 included one new interview with a representative of the supplier with the permission of the buyer. Paper 6 includes a further two interviews with supplier representatives, and thus all the individuals directly involved in interactions in the cooperative relationship between buyer and supplier were interviewed. The interviews were unstructured and focused on the relationship between the companies. The focus was also on the details of the relationship and how it had developed over time, and on how interaction takes place in practice. The duration of the interviews varied from 30 to 85 minutes with an average of 50 minutes. In addition to interviews, information was acquired from documents, such as minutes of meetings from both internal meetings at the buyer firm and meetings between buyer and supplier, presentation slides from both types of meetings, e-mails, other documents (i.e., excel spreadsheets and to-do lists), and web pages of the companies. Reviewing these documents increased the trustworthiness of the studies, because this made it possible to confirm what was conveyed in the interviews.

Overall, four separate data collections were conducted; the processes are summarized in Table 3.

Table 3. Summary of the data collection.

Paper	Interaction type	Data collection method	Sample size
1	IOL	Systematic literature review	21 studies
2	IOL/persuasion	Web-based survey	349 respondents
3	persuasion	Web-based survey and interviews	349 respondents, 12 interviews
4	coopetition	Interviews, documents	9 interviews
5	coopetition	Interviews, documents	10 interviews
6	coopetition	Interviews, documents	12 interviews

3.4 Data analysis

As the dissertation includes four different data sets, the analysis of them was conducted in different ways. Table 4 summarizes the applied methods, which are then described in detail in the following subsections.

Table 4. Applied research methods in the papers.

Paper	Interaction type	Data used	Method of analysis	Unit of analysis
1	IOL	21 studies, 26 samples	Meta-analysis of correlations	Organization
2	IOL/persuasion	311 respondents, 124 companies	Structural equation model	Organization
3	persuasion	349 respondents, 12 interviews	Cluster analysis, content analysis	Individual
4	coopetition	9 interviews, documents	Content analysis	Multilevel case study
5	coopetition	10 interviews, documents	Content analysis	Multilevel case study
6	coopetition	12 interviews, documents	Content analysis	Multilevel case study

3.4.1 Quantitative analysis

Paper 1 focuses on examining the field of IOL through prior research and thus applies a meta-analysis of correlations. Meta-analysis is a technique that empirically combines the findings of previous studies in order to estimate the size of a relationship between variables. In this case, this relationship in focus is the relationship between IOL and performance. Meta-analysis controls for statistical artifacts, such as sampling and measurement error, and thus provides more accurate estimates than other types of assessments (Schmidt & Hunter, 2015). The current meta-analysis was conducted by following the Hunter-Schmidt method, because it corrects for artifacts that attenuate correlations. If an original study reported correlations of several sub-dimensions of learning and performance, these values were averaged to obtain a single estimate for each study (Crook, Ketchen, Combs, & Todd, 2008). Moreover, if a study reported correlations from a buyer and a supplier study separately, these were treated as two separate studies (Salas et al., 2008), thus the sample consisted of 26 samples from 21 studies. Effect size estimates were calculated as the mean of the sample size weighted correlations, and then measurement error was corrected by using the mean of available reliabilities. At this stage, it was possible to examine the overall relationship between IOL and performance. Finally, using the Hunter-Schmidt method it was possible to test and detect the existence of moderators, by testing for the presence of heterogeneity in the observed correlations through a chi-square test of homogeneity (Schmidt & Hunter, 2015).

Paper 2 examines the relationship between persuasion behaviors, IOL, and performance through a mediation model, because prior research has shown that IOL has a strong position as an indirect mechanism that explains relationship-specific or relationship-driven organizational performance (see e.g., Chang & Gotcher, 2010; Selnes & Sallis, 2003). The unit of analysis in this paper was an organization, thus the individual level data were aggregated to the organizational level by calculating the mean values of the respondents within each organization. Some companies were represented by a single respondent and these respondents were contacted to find out whether there were other people interacting with the company's suppliers. If there were several persons acting at the supplier boundary but only one had responded, the company was excluded from further analysis. Accordingly, the final sample consists of 124 organizations that were aggregated from 311 respondents. The number of respondents from an organization varied between 1 and 16 with the average being 2.5, which is in line with prior studies using aggregation (see e.g., Kaufmann & Wagner, 2017). The hypotheses set in paper 2 were tested through structural equation modeling using Stata 13.1 software. It is argued that the full mediation model should be tested with a path from the independent variables (here relational, hierarchical, and competitive behavior) to the mediator (here IOL) and from mediator to the dependent variable (here purchasing performance) (James & Brett, 1984). Indicating that direct relationships between independent variables and a dependent variable is not expected but can be controlled for (James, Mulaik, & Brett, 2006). Accordingly, direct relationships between relational, hierarchical, and competitive behavior and purchasing performance were tested for, but as expected, were not found. Further, the mediation model was tested and direct and indirect effects were examined.

Paper 3 exploits the same data as Paper 2, however, in Paper 3 it is used as individual level data and the full sample (n=349) is used. A cluster analysis was applied to identify the use of persuasion interaction (relational, hierarchical, and competitive) and further to find different behavior styles according to persuasion interaction. The cases (n=349) were clustered into homogeneous groups by using composite variables of three persuasion interaction constructs. Schwarz's Bayesian Criterion (BIC value) was used to specify the appropriate number of clusters. A smaller BIC value indicates a better fit than a greater value does. In this case, a 5-cluster solution offered the smallest BIC value, however, the difference in the values between the 4-cluster and 5-cluster solutions was very small, which indicated that statistically these solutions were equally good (Fraley & Raftery, 1998). Accordingly, the four-cluster solution was found to be the most relevant by demonstrating industrial purchasers' behavior style at the supplier interface in terms of the strength and type of persuasion interaction.

3.4.2 Qualitative analysis

Because Paper 3 identifies four types of behavior (clusters), interviewees were selected from these different clusters. The qualitative data analysis applies content

analysis, which started with coding the data according to themes that emerged from the interview transcripts. The analysis moved from concrete data toward a more conceptual understanding of the data, in that the analysis began by developing a set of codes that emerged from the interviews, these codes were: supplier-related reasons, company-related reasons, position-related reasons, and personal reasons. When new codes were not generated it was assumed that the point of theoretical saturation was reached.

Papers 4, 5, and 6 employ content analysis (Miles & Huberman, 1994). Further, the analysis in Papers 5 and 6 was also inspired by the technique used by Corley and Gioia (2004), meaning that data was structured into first order categories that were developed into second order categories and further combined into aggregated dimensions. In practice, the analysis moved from concrete data toward a more conceptual understanding of the data. Time plays big role in this single case study, and therefore, periods of time were also taken into account when analyzing the data. Finally, the interplay of different issues was analyzed.

3.5 Quality assessments

Quantitative and qualitative research strategies naturally prompt different methods of quality assessment. In a quantitative study, quality is assessed through reliability and validity, while in a qualitative study it is inferred from the trustworthiness of the study.

3.5.1 Reliability and validity of the quantitative studies

Reliability refers to consistency and validity to the accuracy of the constructs used. Reliability is seen as a prerequisite for validity and refers to the repeatability of the findings (Nunnally, 1978). Reliability tests the internal consistency of a set of items, and internal consistency refers to the degree to which several items measure the same general construct (Hair, Black, Babin, & Anderson, 2014). The most widely used tests of reliability are Cronbach's alpha and composite reliability. An analysis of composite reliability is used in Paper 2, while Cronbach's alpha is used in Paper 3.

According to Nunnally (1978) a Cronbach's alpha value of 0.7 is sufficient in the early stages of research instruments to suggest good internal consistency (see also Lance, Butts, & Michels, 2006), while with well-established measures a value of 0.8 might not be sufficient (Lance et al., 2006; Nunnally, 1978). In this thesis, the measures used are at a very early stage, and thus the lower Cronbach's alpha values should indicate an acceptable level of internal consistency. In the appended Paper 3, the Cronbach's alpha values varied between 0.72 and 0.77 suggesting acceptable levels of internal consistency. A widely used alternative to Cronbach's alpha is composite reliability (CR), which is usually used in conjunction with structural

equation modeling. Accordingly, Paper 2 reports CR values instead of Cronbach alphas, and the values vary between 0.68 and 0.85. These values suggest acceptable internal consistency according to suggested threshold values of 0.6 (Bagozzi & Yi, 1988) and 0.7 (Hair et al., 2014).

A measurement instrument might be reliable according to reliability tests and thus repeatable and internally consistent, but it might not be valid. Accordingly, also the validity of the measures used should be always assessed. According to Hair et al. (2014) validity refers to the extent to which measures accurately represent the concepts of interest. In other words, validity refers to whether the measurements measure what they are intended to measure (Nunnally, 1978). Four forms of validity have been distinguished as important forms for this study, and these are widely used in prior research, these are construct validity, content validity, external validity, and statistical validity (Nunnally, 1978).

Construct validity refers to the extent to which the operationalization of a construct measures the theoretical concept under examination (Bagozzi & Phillips, 1991; Nunnally, 1978). Construct validity can be separated into convergent and discriminant validity forms. Convergent validity means that variables are associated with the variables that they should be, while discriminant validity means that variables are not associated with the variables that they should not be. According to Bagozzi and Phillips (1991) confirmatory factor analysis is a powerful method of assessing construct validity. Accordingly, a CFA was conducted in Paper 2 to ensure that the items loaded significantly to their intended factor. This analysis indicated both the convergent and discriminant validity of the measures used.

Content validity means that items selected for a scale and the conceptual definitions of a scale match (Hair et al., 2014). The content validity of the scales used was established through an item-sorting process by an expert panel, which consisted of 10 academic experts who reviewed and sorted items into proposed categories (relational, hierarchical, and competitive behavior) and an “other” category (see e.g., Hensley, 1999; Hinkin, 1995). Then a content validity index (CVI) was calculated to examine the degree to which the instrument covers the content that it should measure, and according to these procedures, content validity was found to be acceptable.

External validity refers to the generalizability of the results of a study. External validity can be evaluated by assessing whether the population represents the entire population. The quantitative survey of this thesis was conducted in the Finnish manufacturing industry, and thus the generalizability of the findings is limited to this industry and context. Moreover, generalizability requires a large sample size in relation to the population, and this was enhanced in this study by contacting possible respondents by phone to achieve as high a response rate as possible.

Finally, *statistical validity* is the degree to which the conclusion about the existence of a relationship or the magnitude of a relationship is correct. Statistical validity is associated with type I and type II errors. A type I error refers to rejecting a null hypothesis when it is actually true, in other words, if research concludes that a relationship exists between study variables when there is no relationship. A type II error refers to not rejecting a null hypothesis when the alternative hypothesis is true, in other words, if research concludes that a relationship does not exist between study variables when it does exist. In order to avoid type I and II errors, all possible relationships were tested in Paper 2, including the relationships between independent and dependent variables, even though the aim of the paper was to study mediation.

3.5.2 Trustworthiness of the qualitative studies

The trustworthiness of a study can be assessed through four criteria: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Credibility refers to internal validity, which aims to ensure that a study measures or tests what is actually intended (Shenton, 2004). In other words, credibility refers to the congruence of the findings with reality (Shenton, 2004). Moreover, Lincoln and Guba (1985) argue that credibility is one of the most important factors in ensuring the trustworthiness of a study. In order to ensure credibility, procedures relating to the adoption of the case study method, data gathering, and analysis are detailed in the papers (see Shenton, 2004). Moreover, in the single case study, the data included supporting data (documents) and a wide range of informants were used and two researchers were present in the interviews (Shenton, 2004).

Transferability refers to the external validity of a study (Lincoln & Guba, 1985), meaning the extent to which the findings of one study can be applied to other situations (Shenton, 2004). In order to ensure transferability, contextual information about the cases is presented in the papers, which should allow practitioners to relate to the findings if they believe that their situation is similar to that described in the study (Lincoln & Guba, 1985; Shenton, 2004).

Dependability refers to the reliability of a study (Lincoln & Guba, 1985). In order to ensure dependability, the processes within a study should be reported in detail, so that it could be repeated, but not necessarily to deliver the same results (Shenton, 2004). Confirmability refers to objectivity (Lincoln & Guba, 1985). Meaning that the findings are the result of the experiences and ideas of the informants, not the characteristics and preferences of a researcher. In the papers appended to this thesis, in order to ensure confirmability, two researchers were present (Papers 4, 5, and 6), and detailed descriptions of the data and constructs emerging from the papers are presented (Shenton, 2004).

4 REVIEW OF THE RESULTS

The dissertation consists of six papers that examine interorganizational interaction from different viewpoints (Figure 4). This chapter summarizes the results of these six papers, and explains their contribution to the whole dissertation.

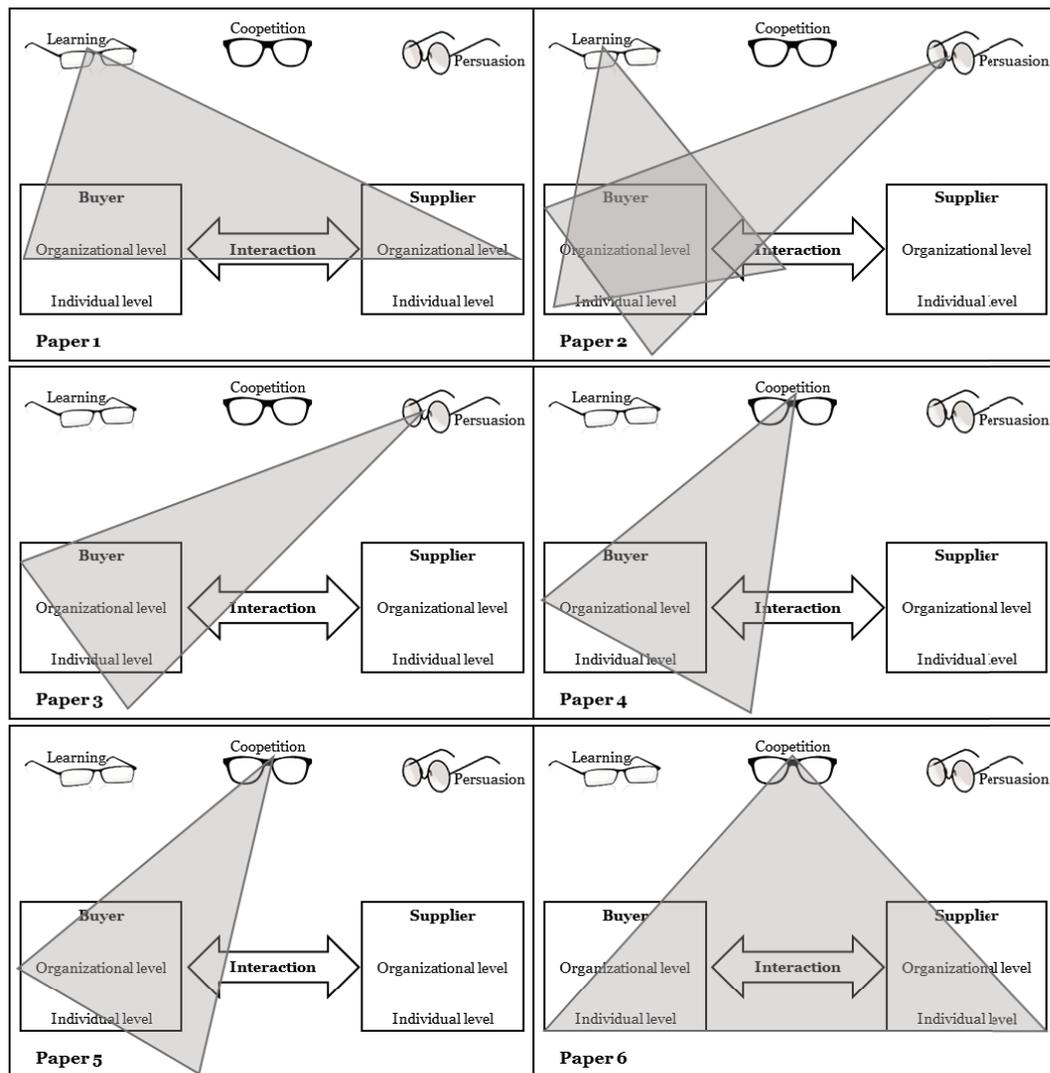


Figure 4. Illustration of the perspectives of interaction in the appended research papers.

4.1 IOL is based on interaction

Paper 1 “Examining the effects of interorganizational learning on performance: A meta-analysis” reviews the literature on interorganizational learning and its effects

on performance. Prior studies have acknowledged the positive effects of interorganizational learning on performance, but the performance measures applied have varied. This paper applies a meta-analytical approach to systematically analyze 21 independent studies (N=4618) so as to examine the overall relationship between interorganizational learning and performance. Moreover, the paper also goes beyond direct effects by investigating the moderating effects of different research designs. Prior research has acknowledged that interactions with external partners, and learning from them, can grant companies access to new knowledge, resources, and techniques (Fang, Fang, Chou, Yang, & Tsai, 2011). Furthermore, interorganizational learning (IOL) is seen as an important domain in the creation of competitive advantage (e.g., Ling-ye, 2006; Liu, 2012). While scholars appear to agree that IOL can enhance performance, an important question remains concerning the magnitude of IOL's effect on improving performance. A second unanswered question concerns which conditions affect the magnitude of the IOL–performance relationship, and more specifically, how different research designs affect the IOL–performance relationship. This paper aims to address these questions and to understand the effect that a research design has on the IOL–performance link.

Meta-analysis is a technique that empirically combines previous findings to estimate the size of a relationship between variables. Meta-analysis controls for statistical artifacts (i.e., sampling and measurement error) and therefore offers more accurate estimates than other types of assessments (Schmidt & Hunter, 2015). The results confirm that interorganizational learning has a positive relationship with performance. Moreover, the results show that different research designs affect the IOL–performance relationship: For example, the type of performance measured (operational performance, relationship performance, market performance, or innovation performance) affects the magnitude of the effect on the IOL–performance relationship. Other influential research designs were related to the datasets used (single country vs. multiple countries; single industry vs. multiple industries; buyer data vs. supplier data vs. mixed data), related to the theoretical background applied, and also related to the year of publication.

This paper contributes to the IOL literature by examining the IOL–performance link and how it differs in magnitude across different research settings. Moreover, the paper contributes to the IOL literature by comparing different perspectives on IOL applied in prior research, and by attempting to unify the different views. From an interaction perspective, all the different views on interorganizational learning agree that interaction is a crucial part of IOL. In addition, all views acknowledge that information sharing occurs in continuous interaction. The current study raises the question of whether different types of interaction have different effects on IOL.

4.2 Various interaction types have different effects on IOL

Paper 2, “Boundary-spanning behavior, interorganizational learning and purchasing performance” examines the indirect effects of boundary-spanning behavior on purchasing performance. The focus of the paper is on whether interorganizational learning mediates the purchasing performance effects of different persuasive modes of boundary-spanning behavior (the relational, hierarchical, and competitive). Recent theoretical developments have suggested studies treat interaction as a multidimensional instead of a unidimensional continuum type of interaction, and have highlighted the simultaneous appearance of different governance or interaction modes (e.g., Vesalainen & Kohtamäki, 2015; Zerbini & Castaldo, 2007). Accordingly, the paper conceptualizes boundary-spanning behavior through relationship governance and views boundary spanners as persuasive agents who are aiming to put their organization’s demands into practice. This paper aims to fill a gap in the interorganizational literature by studying the effects of interorganizational learning behavior on purchasing performance. Prior research has confirmed the positive effects of interorganizational learning on, for example, business performance (Liu, 2012), and relationship performance (e.g., Jean & Sinkovics, 2010; Selnes & Sallis, 2003), but the literature lacks a purchasing performance view.

The data consisted of 349 individual respondents, that were aggregated to the company level by calculating the mean values of respondents within each company. The analysis was performed with structural equation modeling. The analysis confirms that the relationships between relational boundary spanning behavior and purchasing performance, and between hierarchical boundary spanning behavior and purchasing performance were fully mediated by learning behavior. In addition, the results show that competitive boundary-spanning behavior has no relationship with learning behavior and thus learning behavior does not mediate its relationship with purchasing performance. Moreover, the direct paths between different boundary-spanning modes and purchasing performance were tested for, but none were found.

The paper contributes to the current knowledge of the mechanisms that generate useful interorganizational interaction, which leads to relationship-specific or relationship-driven performance. This paper contributes to the literature on boundary spanning in industrial markets by showing that governance mechanisms manifest themselves in the boundary spanners behavior through interorganizational interaction.

4.3 Various factors affect and shape buyers' persuasive interaction

Paper 3, "Untangling what underpins the communicative arsenal of buyers in customer–supplier relationships: A multiple governance approach to boundary-spanning behavior" investigates different types of boundary-spanning behavior and factors that affect the type of behavior boundary spanners adopt. Although the prior boundary-spanning research acknowledges the importance of individual actors in maintaining and establishing relationships, little is known about the buyers' interaction styles at the supplier interface (e.g., Johnston, Lewin, & Spekman, 1999). The paper focuses on the styles purchasers adopt when interacting with suppliers, and also on the motives for adopting a particular style.

The paper employs a mixed-method design by beginning with the data (n=349) used in Paper 2 in an examination of different boundary-spanning styles, and also introduces new data gathered from interviewing typical people representing different styles. Moreover, Paper 3 analyzes the quantitative data on an individual level, whereas, Paper 2 used the same data but aggregated to the company level. The quantitative data was analyzed by using cluster analysis to elicit the different styles of boundary-spanning behavior. Four styles were identified: a comprehensive style, a style combining hierarchical and competitive dimensions of behavior, a relational style, and a neutral style. Then three people were selected to represent each style and their behavior further scrutinized through interviews. The content analysis of the interviews revealed that various person-, position-, firm-, and supplier-related motives are associated with the styles adopted.

The findings contribute to current knowledge of interorganizational interaction because they demonstrate that purchasers' boundary-spanning behavior reflects governance modes, which form different styles of interaction behavior. The governance approach to boundary-spanning behavior fostered the appearance of a neutral style, in which none of the persuasion interactions stood out, suggesting a rather passive orientation in interactions. In addition, the findings indicate that individual buyers representing different boundary-spanning styles differ from each other in terms of their attitudes, role and buying policy interpretations, and their views of suppliers. One of the most interesting findings demonstrates that the possession of social capital can lead to active use of it (a relational style) or very passive behavior (a neutral style). Overall, the paper presents the differences in the use of persuasion interaction in supplier interaction, and the reasons behind adopting a particular interaction style.

4.4 Contradictory interactions shape coopetitive strategy

Article 4, "Coopetition strategy as interrelated praxis and practices on multiple levels" examines strategic practices and praxis in a coopetitive buyer–supplier

relationship. The paper answers the call for further research related to cooptation dynamics (Kylänen & Rusko, 2011). Drawing on strategy-as-practice theory, strategic activity occurs on different levels and strategic practice on a micro level is influenced by and influences strategic practices on the macro level. Strategy is related to practitioners, practices, and praxis, and all of those are interrelated on different levels (Seidl & Whittington, 2014). Accordingly, the focus of the paper is on activities and their interrelatedness on different levels (macro, meso, and micro), and how these interrelated activities shape cooptation strategy. In this case the macro level refers to a network level, the meso level refers to the relational and organizational levels, and the micro level refers to the team and individual levels.

The article investigates the phenomenon from a buyer's point of view and the empirical data are drawn from a single case study. The data were collected through interviews in which the focus was on the cooptative relationship and how the interaction within it takes place in practice. The findings of the paper provide support to the prior theoretical research of Dahl et al. (2016) by showing that cooptative activities can be found on multiple interrelated levels, and that cooptative activities can be either emergent, deliberate, or both. Moreover, the findings show how praxis on the micro level influences and is influenced by practices on the meso and macro levels, and also how the relationship between practices and praxis on different levels shapes cooptation strategy.

The paper makes several contributions to cooptation and strategy-as-practice research. First, this paper contributes to cooptation research by taking the strategy-as-practice perspective and empirically studying the phenomenon in a cooptative buyer–supplier relationship. Second, the findings demonstrate the important role of individual actors and their activities in shaping cooptation strategy on multiple levels. Third, the paper contributes to the strategy-as-practice research by illustrating the need to distinguish relational and organizational-level practices and individual and team-level praxis. In addition, the paper extends strategy-as-practice research by focusing on inter-firm cooptation.

From the interaction perspective, this paper emphasizes the importance of individual actors and their interaction with a supplier in shaping cooptative strategy. The findings also raise the question of whether an individual buyer's behavior also affects the shape of a cooptative relationship.

4.5 Contradictory interactions shape organizational buying behavior

Article 5, “A multilevel perspective on organizational buying behavior in cooptation – An exploratory case study” examines organizational buying behavior (OBB) in a cooptative buyer–supplier relationship. OBB has been researched since the 1960s, and a common characteristic of the existing studies is that they

view OBB from a process perspective (Aarikka-Stenroos & Makkonen, 2014; Johnston & Lewin, 1996; Makkonen, Olkkonen, & Halinen, 2012; Verville & Halington, 2003). Another common feature of OBB research is a multilevel perspective (Makkonen et al., 2012; Möller, 1985; Webster & Wind, 1972), meaning the research is related to both the macro and micro levels. This implies that interrelated activities on the individual, organizational, relational, and industry level form OBB (e.g., Makkonen et al., 2012). Although a multilevel perspective is recognized, there is scant research into how activities on different levels are related over time. Moreover, studies on OBB focus on the buying situation (e.g., Aarikka-Stenroos & Makkonen, 2014), without recognizing the nature of the business relationship, which indicates a gap in our knowledge related to business relationships that encompass both cooperation and competition. The aim of the paper is to increase understanding of the development of organizational buying behavior on multiple levels in a cooperative relationship.

The data used was the same as mentioned in the preceding study, but it was complemented with an interview of a key person from the supplier. The paper focuses on the buyer's view, and a representative of the supplier was interviewed in order to confirm the events that the buyer's representatives described. The findings of the study confirm that OBB is shaped by interrelated activities on multiple levels over time. Those findings also show that when the relationship develops from being cooperative to become competitive, the nature and the level of activities changed. In the cooperative phase, activities on the individual level dominated and individual level interaction affected the development of the relationship; while in more competitive phases, organizational-level activities dominated.

The findings contribute to the prior knowledge of OBB by focusing on the content and the dynamic nature of activities in different periods. Moreover, the paper contributes to OBB research by studying a cooperative buyer–supplier relationship, while prior research has focused on either cooperative relationships (e.g., Wilson, 1996) or discrete transactions (e.g., Bunn, 1993; Moon & Tikoo, 2002).

From the interaction perspective, the findings show that the emphasis of interaction shifts from the cooperation-dominated to become competition-dominated, the level of activities shifts from the individual level to organizational-level dominance. This finding indicates that more strategic activities are undertaken and more control exerted on the organizational level when competitive interaction dominates a cooperative relationship. Such findings indicate that some conflict might emerge when the relationship simultaneously involves both cooperative and competitive interactions.

4.6 Contradictory interactions cause conflicts

Paper 6, “Unmasking conflict in vertical cooptition” examines conflicts and conflict management in a cooptitive buyer–supplier relationship. The paradoxical nature of cooperation and competition interactions might cause conflicts in cooptitive business relationships (e.g., Gnyawali, Madhavan, He, & Bengtsson, 2016). Although, there is prior research on conflict and conflict management in horizontal cooptition and cooperative buyer–seller relationships, the nature of the cooptitive buyer–supplier relationship is different from those and therefore merits further examination. Accordingly, the aim of the paper is to examine different types of conflicts and conflict management in a cooptitive buyer–supplier relationship on different levels over time.

The data used was the same as in the two cooptition papers above, but it was complemented with two more interviews with representatives of the supplier. The findings indicate that both dysfunctional and functional conflicts related to processes, tasks, and the relationship emerge in cooptitive buyer–supplier relationships and these conflicts were managed in various ways. The conflict management style was found to vary across levels (the relational and organizational). The conflict management styles applied were the collaborative, accommodative, competitive, avoiding, and compromising forms.

The findings contribute to the prior literature on conflict in cooptition by showing that most conflicts occur on the relational level, while prior cooptition research has focused on role conflicts occurring on an individual level (see e.g., Bengtsson & Kock, 2000; Raza-Ullah, Bengtsson, & Kock, 2014). The findings also indicate that conflicts in vertical cooptition are related to processes and tasks occurring within the interaction between companies. Finally, the findings show that even though a conflict was managed in a collaborative manner, emergent competitive activities might be the outcomes of the conflict.

From an interaction perspective, this paper demonstrates that the simultaneous existence of cooperative and competitive activities might produce both functional and dysfunctional conflicts. These conflicts have an effect on the relationship and also the direction in which the relationship develops over time.

5 DISCUSSION AND CONCLUSIONS

This chapter presents the overall conclusions and contributions based on the results from the six papers that are appended to this dissertation. Further, some practical implications, limitations, and suggestions for further research are presented.

5.1 Theoretical contribution

The theoretical contribution of this dissertation is multidimensional. The six papers individually contribute to one of the three different theoretical discussions: interorganizational learning, persuasion, and coopetition. These contributions are detailed in the appended papers. However, together these papers aim to contribute to the discussion of interorganizational interaction, and this chapter first presents the overall contribution of these articles to interaction research before reviewing the distinct contribution of each paper.

The overall contribution

The aim of the dissertation was to heighten understanding of the different types of interorganizational interaction in customer–supplier relationships. To meet that aim, interorganizational interaction was viewed through three different theoretical lenses. Together these lenses provide interesting insights into IOI, and also how IOI should be viewed from different perspectives as has also been pointed out in prior literature (see e.g., Möller & Wilson, 1995). In addition, IOI is viewed as a multilevel phenomenon, meaning that the relational, organizational, and individual levels are empirically covered.

Three research questions were addressed. The first one concerns the interrelatedness of interaction and interorganizational learning. The findings of this dissertation indicate that interaction plays a central role in IOL. Although it is possible to distinguish different perspectives of IOL, such as interactive learning and relationship learning, these perspectives agree that IOL begins with information and/or knowledge sharing that occurs through interaction. The main difference between the different perspectives is the level on which the learning occurs. The interactive learning perspective states that knowledge is shared and transferred on a relational level, but assimilation or interpretation of the acquired knowledge occurs within organizations, which again also means that applying knowledge in practice occurs within organizations. In contrast, relationship learning views learning as occurring at the relational level: once information is shared, a joint sense-making process begins that leads to knowledge integration. In sum, interactive learning is more about knowledge acquisition, whereas relationship learning is joint learning. The findings of the dissertation demonstrate that different types of interaction (relational, hierarchical, and competitive) have different effects on IOL. Relational and hierarchical interactions were found to

have positive effects on IOL, while competitive interaction was found to have no effect on IOL. This is not particularly surprising, because in relationships that are based on competitive bidding and bargaining might not be as strategically important to a buying company as investing time in the interaction with supplier would be beneficial. These findings show that relational and hierarchical behavior function in the same way as relational and hierarchical management in a relationship, as they positively affect IOL (see e.g., Kohtamäki, 2010). However, prior research offers contradictory findings relating to whether hierarchical management has a less positive effect (or even a negative effect) on IOL (Hammervoll, 2012; Hernández-Espallardo et al., 2010), or if the pressure exerted by hierarchical management positively influences IOL (Kohtamäki, 2010). This dissertation provides support for the findings of Kohtamäki (2010), but also contributes to the prior knowledge by showing that relationship governance features in purchasers' interactions with suppliers; a contribution related to the second research question addressed.

The second research question asked how does persuasive interaction occur in a customer–supplier relationship. The findings of the dissertation show that persuasion occurs through a multiple governance mechanism and manifests itself in the purchasers' relational, hierarchical, and competitive behavior. Four different styles were formulated as configurations of the three persuasion interaction dimensions: the comprehensive, competitive/hierarchical, the relational and the neutral styles. Adopters of a comprehensive style aimed to persuade suppliers by using all of the three dimensions simultaneously, while adopters of a competitive/hierarchical style mainly used hierarchical and competitive interaction. Moreover, adopters of the relational style mainly leaned on relational interaction and behavior, whereas adopters of a neutral style were passive in persuasion and none of the interactions stood out in their behavior. Further, the study raises the question of why purchasers adopt different styles at the supplier interface, and the findings show that the reasons behind adopting different styles are related to self-image, position, company-related issues, and supplier-related issues. These reasons had different weights in different styles: for example, adopters of relational behavior did not think that their position had any effect on their behavior, while adopters of a competitive/hierarchical style emphasized that their position requires them to play a certain authoritarian role. Different company-related issues emerge as influencing the reasons for adopting different style, this reflects that company-level policies also affect interaction even though these reasons were not particularly emphasized in the study, which may refer to the lack of clear policies in buying companies governing the interaction and strategies used at the supplier interface.

The third research question addresses how contradictory interactions (coopetition) influence individuals and the development of a customer–supplier relationship. The findings of the dissertation emphasize the dynamic nature of activities in a coopetitive relationship, thus it can be assumed that such a relationship also requires dynamic interaction between companies. Moreover,

accounting time and multilevel perspectives reveal the important roles of individual actors in shaping and developing a coopetitive buyer–supplier relationship, which provides support to prior research that has highlighted the important roles of individual actors (see e.g., Guercini et al., 2014). The findings also highlight that individual actors had more active and influential roles in a phase where cooperation was dominant, and that organizational-level strategies and activities became dominant as competition and competitive interaction increased. The findings demonstrate that interaction was central role to the development of a relationship, a result similar to those reported in prior interaction literature (see e.g., Holmlund, 2004). However, the findings also demonstrate that not interacting related to competition negatively affecting the cooperation between companies. The contradictory interactions influenced the development of the buyer–supplier relationship from cooperative to competitive, but these also influenced the organizational-level strategies and individual actors. Individual actors actually made the decision to bring competition to the relationship, which ultimately caused organizational-level policies to become more organized and to foster the introduction of strategic thinking into the buyer organization. After competition became evident in the buyer–supplier relationship, the supplier also needed to make quite radical changes to keep up in the competition, maintain the profitable relationship with the buyer, and also be able to find new customers, in the event the buyer–supplier relationship dissolved. In the case studied, that meant personnel changes and also more strategic thinking from the supplier company. Contradictory interactions were found to cause conflicts on multiple levels, however, the conflicts mainly occurred on the relational and organizational levels, suggesting that individual actors were able to behave and interact in a professional way, even though they were simultaneously cooperating and competing. Conflicts also became significant in the development of the relationship, because after conflicts were managed, the outcomes shaped the relationship. The findings also demonstrated that conflicts were actively managed in the coopetitive relationship, which provides interesting evidence that the actors concerned are not only coping within their network (see e.g., Harland & Knight, 2001), but are able to actively manage relationships.

Overall, the findings of the dissertation indicate that interaction in a customer–supplier relationship seems very different from different theoretical perspectives. The findings of the thesis confirm the arguments presented in prior interaction literature that IOI should be studied from different viewpoints (Möller & Wilson, 1995), and that zooming in and zooming out between levels would provide a more complete picture of the complex phenomenon of IOI (see e.g., La Rocca et al., 2017). This thesis also applies a multilevel perspective on IOI examination to provide empirical evidence of how interaction occurs on different levels. Moreover, it has been suggested that a practice-based approach should be applied to interaction research (La Rocca et al., 2017). This dissertation includes parts that have employed a practice-based approach in business relationships, and thus provides interesting empirical insights into how practices and activities shape

customer–supplier relationships. For example, individual level activities were critical in changing the cooperative relationship into a competitive one, and organizational level practices were found to shape not only individual level activities, but also activities on the relational level.

Papers 3–6 appended to the thesis also shed light on the interplay of intraorganizational and interorganizational interaction, which has been neglected in prior IOI research (La Rocca et al., 2017). Company policies were found to have an effect on the behavior style that purchasers adopt. However, this particular finding also hints at company policies related to interaction with suppliers perhaps not being either well-established or well communicated, because purchasers report that other elements have more influence on their behavior. Moreover, in the competitive buyer–supplier relationship, the interplay between intraorganizational and interorganizational interaction was demonstrated through practical examples. For instance, the purchaser’s representatives held an internal meeting before a key interorganizational meeting, during which they finalized their strategy for the coming discussions with the supplier. This finding also reflects the attempt to manage the relationship, not just cope with it, which indicates the importance of the network management perspective, that critics have suggested is lacking from the IMP research (see e.g., Pels et al., 2009).

Theoretical contributions of the papers

The first paper views IOL from the wider perspective and focuses on its effects on performance. The paper contributes to the prior IOL literature by showing how adopting different research designs affects the magnitude of the IOL–performance relationship. The results demonstrate that scholars should pay attention to the type of performance measured, because while relationship performance is relatively intuitive, innovation, market, and operational performance may take time to materialize. Therefore, a time lag in measuring IOL and performance can be recommended when focusing on other types of performance than relationship performance. This paper also highlights the importance of interaction in IOL. Accordingly, the second paper focuses on different types of interaction and how these affect IOL. Prior boundary-spanning research has mainly studied boundary spanners’ interaction through examining their different roles (Ancona & Caldwell, 1992; Au & Fukuda, 2002), and Paper 2 contributes to the literature by showing that relational, hierarchical, and competitive governance mechanisms manifest themselves in boundary spanners’ interactions at the supplier interface. The results show that relational and hierarchical interaction have a positive effect on IOL, while competitive interaction had no effect on it. Prior research has focused on studying governance mechanisms as relationship management mechanisms (Hammervoll, 2012; Kohtamäki, 2010), and thus, Paper 2 also contributes to prior research by showing that governance mechanisms also emerge in the behavior of boundary spanners when interacting with suppliers. Prior research has reported contradictory results on the effects of hierarchical management on IOL: some studies reported less positive or even negative effects (Hammervoll, 2012;

Hernández-Espallardo et al., 2010), while Kohtamäki (2010) argued that the pressure exerted by hierarchical management can have positive effects on IOL. The results of Paper 2 are in line with the findings of the Kohtamäki study (2010) in that they show that hierarchical behavior enhances IOL.

The third paper aimed to foster deeper understanding of the boundary-spanning behavior that manifests itself through relationship governance mechanisms. The findings contribute to the boundary-spanning literature by showing that these behavioral orientations are mutually non-exclusive. This result is in line with prior research that has established the coexistence of different orientations (e.g., Heide & Wathne, 2006). Moreover, prior literature has criticized the categorization of roles for being overly simplistic, and asserted that single dimensions may not fully capture the true nature of relationship interactions (Heide & Wathne, 2006), which supports the suggested three-dimensional view of boundary-spanning behavior presented in Paper 3. The findings of Paper 3 showed that four different boundary-spanning behavior styles can be distinguished: comprehensive, competitive/hierarchical, relational, and a neutral style. The findings showed that buyers' behavior was influenced by their self-image, current position, company-related factors, and situational factors mainly associated with supplier firms and their representatives. The findings also emphasize the important role of individual action in network management. Finally, the findings show that having social capital does not always lead to the use of social capital (e.g., Kwon & Adler, 2014), but can lead to very passive behavior.

The fourth paper focuses on strategic praxis and practices in coopetition. The findings offer several contributions to coopetition research. The findings show that coopetitive activities are found on different levels (the relational, organizational, team, and individual levels) and that these activities may be emergent, deliberate, or both. These findings are similar to those of Dahl et al. (2016), however, the study by Dahl et al. (2016) is theoretical, and the study informing Paper 4 provides empirical evidence of the phenomenon. The findings of Paper 4 are based on a study that includes the perspectives of time and the dynamics of strategic activities on multiple levels. Further, the findings show that coopetitive activities may simultaneously be influenced by practices and activities on several levels, suggesting a more complex interrelationship between coopetitive activities than is suggested in prior research. The findings also show that both strategy praxis and practice can be temporary and that these do not have to be long-term or rooted, because they occur simultaneously on different levels and are interrelated. Finally, the findings suggest that praxis becomes more evident in coopetition than in practice.

The fifth paper sheds light on OBB in a coopetitive relationship. The findings show that OBB is shaped by interrelated activities on multiple levels (the individual, organizational, and relational levels) over time. The paper contributes to prior OBB literature by capturing the interplay between activities on multiple levels. Although prior OBB research has acknowledge the multilevel nature of the

phenomenon (e.g., Lewin & Johnston, 1996; Makkonen et al., 2012), it has not been able to capture it. The paper contributes to OBB research by introducing a coepetitive relationship, while prior research has focused either on cooperative relationships (e.g., Wilson, 1996) or on discrete transactions (e.g., Bunn, 1993; Moon & Tikoo, 2002). The findings demonstrate that individual level activities dominate OBB in a more cooperative phase, while organizational-level activities became more clearly marked after competition became evident in a relationship. Moreover, the findings of the paper extend OBB research by showing the dynamics of simultaneous cooperative and competitive activities and the interrelatedness of those activities.

The sixth paper focused on conflict in a coepetitive buyer–supplier relationship. The findings revealed process, task, and relationship conflicts, that are in line with prior conflict research (e.g., Jehn & Mannix, 2001; Mele, 2011). However, prior coepetition research has typically focused on role conflicts that arise on the individual level (e.g., Bengtsson & Kock, 2000; Raza-Ullah et al., 2014). Accordingly, the findings contribute to prior coepetition literature by introducing new types of conflicts that mostly occur on the relational level. The findings supported prior conflict research by illustrating the dynamic nature of different types of conflict (Jehn & Mannix, 2001; Mele, 2011). The findings also provide new insights for conflict management in coepetitive relationships. Prior coepetition research has leaned on separation/integration logic in managing conflicts in horizontal coepetition, however, the findings showed that this logic would not work in a coepetitive buyer–supplier relationship. This particular finding contributes to the prior research by indicating that conflict management is different in horizontal and vertical coepetition. The findings showed that conflicts are an inevitable part of business relationships (Duarte & Davies, 2003; Plank & Newell, 2007), and not something that should be avoided in a relationship, as some prior research has argued (Plank, Newell, & Reid, 2006). Finally, the findings provide support to prior research on conflicts in coepetition by demonstrating that conflicts also have positive outcomes (Tidström, 2008).

5.2 Practical implications

This thesis can provide interesting knowledge for practitioners. First, the findings highlight the importance of being aware of what occurs at the company's boundaries and who initiates action there. The seller side of the customer-seller dyad is usually well aware who is in contact with the customer and interactions are well documented in customer relationship management (CRM) systems, whereas the boundaries might not be as organized on the customer side of the dyad. The case study reported in this thesis (Papers 4-6) demonstrated that customer personnel were not aware who was interacting with the supplier, which led to some difficulties on organizational and relational level. Accordingly, buying companies should organize their boundaries in a way that supplier-facing roles and strategies

to be followed with suppliers are clearly stated and implemented in order to efficiently manage supplier relationships. Moreover, if management and its representatives are not fully aware what happens in supplier relationships, it is questionable if those relationships can be managed efficiently.

Second, firms should invest in documenting the interactions with suppliers so that every representative that is involved in a particular supplier relationship is aware what kind of meetings, development projects, and other activities are ongoing. This also requires enabling systems, for example collaborative tools with supplier, in order to function. Moreover, the documentation may also positively affect learning, which might otherwise remain at individual level if the new information or knowledge is not documented anywhere. Documentation is also central role to increasing transparency and awareness of what happens on the company boundaries.

Third, clear rules and policies should be established. Rules should clearly define what can be shared with a supplier, however, an overly strict non-disclosure agreement can hinder IOL. The establishment of information sharing norms requires time and resources (Tong & Crosno, 2015), and the information sharing occurs on the individual level according to organizational-level rules. Further, because information sharing requires rules, the protocol for handling acquired knowledge should also be established, to aid turning knowledge into learning, and thus into practice. Moreover, the current research argues that in short-term relationships, learning occurs through observation, while in long-term relationships, companies learn jointly through continuous interactions (Kohtamäki & Bourlakis, 2012). Accordingly, supplier relationships should be classified in a way that clearly signals what kind of interaction with a supplier is anticipated and if the expectation is for short-term efficiency gains or long-term learning-enhancing effects. For example, the interaction with a strategically important supplier is very different from a supplier that is easy to replace.

Fourth, the efficient management of relationships also requires that some kind of goals are set for relationships. Relationships that are based on discrete transactions or a series of discrete transactions have different goals than strategically important relationships. However, before targets can be set, measurements should be defined and then relationship level data should be collected in order to monitor the achievement of targets and help in setting new targets. The appointed goals also help purchasers to choose and use persuasion tactics that are in line with the targets of a relationship. As the use of different persuasive interactions leads the relationship in different directions, it is important that interaction supports the achievement of targets. The findings of the thesis suggest that a neutral style might not be a suitable alternative to IOI in important supplier relationships, because such behavior carries the risk of passive relationship handling. Accordingly, managers should consciously encourage the active use of persuasive interaction.

Fifth, the simultaneous existence of cooperative and competitive interactions sets challenges to practitioners. The findings of the thesis demonstrate that individual actors have a central role to play in the development of a relationship, and thus in a cooperative relationship, clear direction and strategy regarding the development of the relationship would benefit practitioners in interacting with suppliers. Moreover, the findings suggest that hiding competitive activities may benefit a company, but simultaneously may harm a customer–supplier relationship, which again indicates the need for clear strategy in cooperation. In addition, activities on different levels are related, thus, all these levels should develop the relationship and business in the preferred direction. Accordingly, company level policies should provide direction for individual level activities so that individual actors can efficiently shape and manage a relationship. The findings of the thesis emphasize that relationships are dynamic, and accordingly, companies should be able to adapt their strategies and activities according to dynamic relationships. This again suggests that companies need to create structures and procedures governing their supply management activities that enable the use of agile strategies and activities.

5.3 Limitations and suggestions for future research

The dissertation offers some interesting insights regarding interaction in industrial buyer–supplier relationships. However, the thesis should be considered in light of some limitations. While each of the appended papers discuss the limitations and future research opportunities from the viewpoint of the particular paper, this section discusses the limitations from a more general viewpoint and provides suggestions for some potential research directions.

First, the thesis aims to view interaction from different theoretical perspectives and find differences in order to provide support for the assumption that interaction should be viewed from different points of view. However, the studies from different theoretical perspectives in this thesis are based on different methods and datasets, which complicates any comparison. While this is a strength of the dissertation, it can also be considered a limitation. Moreover, most of the data are collected only from firms involved in the Finnish manufacturing industry (except for the meta data and single-case data), which also reflects only the interaction in that industry and in the Finnish business environment, which limits the potential to generalize from the findings. Accordingly, future research could benefit from collecting multinational datasets to address the limitation of conditions in a particular country.

Second, the thesis aimed to view interaction from a multilevel perspective and the quantitative data were collected from several individuals within a company in order to create company level variables. This kind of data collection is recommended (see e.g., Boyer & Verma, 2000; Kaufmann & Wagner, 2017; Kohtamäki & Partanen, 2016); however, it was not possible to confirm how closely these individuals worked as a team, which is a limitation of a study. Moreover,

owing to the quite low number of respondents from the same company, it was not possible to use multilevel modeling and conduct an analysis using multilevel methods. Accordingly, future research could benefit from collecting multilevel datasets and conducting multilevel studies through quantitative methods. In addition, the multilevel analysis of qualitative data is based on the interpretation of two researchers, which can also be viewed as a limitation.

Third, quantitative data collection was limited to the buyer side of the buyer–supplier relationship. The survey is based on the self-assessment of purchasers and the results could be somewhat different if supplier representatives had assessed the purchasers' behavior. Future studies might benefit from a more dyadic approach and soliciting information from the supplier side of a dyad. Fourth, although the single case study includes both buyer and supplier perspectives, the results rely on an analysis of that particular unique case, which limits the generalizability of the findings beyond the case. Future studies may benefit from taking multiple cases or trying to quantitatively measure contradictory interactions in buyer–supplier relationships.

Fifth, capturing interaction is complicated. In business relationships activities are interrelated and also connected to activities of other firms, and distinguishing internal and external activities may be difficult (see e.g., Holmlund, 2004), which is also a limitation of the thesis, because the distinguishing of activities on different levels in the single case study is based on the interpretation of two researchers. However, the dissertation emphasizes the importance of accounting for multiple perspectives, multiple levels and the role of time when examining business relationships. Accordingly, future studies might benefit from including these or some of these in their research designs. As business relationships are dynamic, the time aspect can be key when examining the development of a relationship. Further, the results of two studies might differ when adopting multiple perspectives and viewing the same phenomenon and data from different viewpoints. In addition, viewing interaction in a business relationship as a multilevel phenomenon gives a more complete picture of a very complex phenomenon.

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**EXAMINING THE EFFECTS OF INTERORGANIZATIONAL LEARNING ON PERFORMANCE:
A META-ANALYSIS**

Anni Rajala

Abstract

Purpose: Relationship learning is viewed as an important factor in enhancing competitiveness and an important determinant of profitability in relationships. Prior studies have acknowledged the positive effects of interorganizational learning on performance, but the performance measures applied have varied. The purpose of the current paper is to examine the relationship between interorganizational learning and different types of performance. The paper also goes beyond direct effects by investigating the moderating effects of different research designs.

Design/methodology/approach: This paper applies a meta-analytic approach to systematically analyze 21 independent studies (N=4618) to reveal the relationship between interorganizational learning and performance.

Findings: The findings indicate that interorganizational learning is an important predictor of performance, and that the effects of interorganizational learning on performance differ in magnitude under different research conditions.

Research limitations/implications: The paper focuses on interorganizational learning, and during the data collection some related topics were excluded from the data search in order to retain the focus on learning.

Practical implications: The study evinces the breadth of the field of interorganizational learning and how different research designs affect research results. Moreover, this meta-analysis indicates the need for greater clarity when defining the concepts used in studies, and for definitions of the concepts applied in the field of interorganizational learning to be unified.

Originality/value: This study is the first to meta-analytically synthesize literature on interorganizational learning. It also illuminates new perspectives for future studies within this field.

Keywords: Interorganizational learning, relationship learning, performance, meta-analysis

Paper type: Research paper

1 Introduction

Interorganizational knowledge sharing and learning are one of the main avenues for improving the performance of the supply chain in today's business environment (Hernández-Espallardo, Rodríguez-Orejuela, & Sánchez-Pérez, 2010). Moreover, it has been argued that competition is no longer among companies but among supply chains (Hernández-Espallardo et al., 2010; Wowak, Craighead, Ketchen, & Hult, 2013). We are also witnessing growing interest in the extent to which supply chains affect performance. Through interactions with external partners, and learning from them, companies access new knowledge, resources, and techniques (Fang, Fang, Chou, Yang, & Tsai, 2011). Furthermore, interorganizational learning (IOL) is seen as an important domain in the creation of competitive advantage (e.g., Ling-yee, 2006; Liu, 2012), and accordingly scholars have recently turned their attention to the relationship between learning and performance (e.g., Gao, Li, Cheng, & Feng, 2017; Huang & Li, 2017; Jean, Chiou, & Sinkovics, 2016).

Various conceptualizations of IOL can be observed in the extant literature. In some cases, IOL has been defined as a joint activity through which parties share information, interpret it, and integrate it into relationship-specific memory (e.g., Selnes & Sallis, 2003), while others indicate that IOL is an interactive process resulting in knowledge exchange (e.g., Huang & Chu, 2010). Although researchers agree that IOL requires information sharing, there has been no consistent agreement regarding which activities contribute to forming IOL. Thus, there is a lack of consensus among researchers as to what constitutes IOL. However, regardless of the variety of conceptualizations, the positive effects of IOL on performance are widely acknowledged (e.g., Chang & Gotcher, 2007; Chen, Lin, & Chang, 2009; Selnes & Sallis, 2003). The positive effects of IOL on performance relate to market performance (e.g., Chen et al., 2009), relationship performance (e.g., Selnes & Sallis, 2003), innovation performance (e.g., Leal-Rodríguez, Roldán, Ariza-Montes, & Leal-Millán, 2014), and operational performance (e.g., Cheung, Myers, & Mentzer, 2010).

Even though there appears to be agreement among researchers that IOL can enhance performance, an important question remains concerning the magnitude of IOL on improving performance. Some studies report strong IOL-performance relationships (e.g., Cheung, Myers, & Mentzer, 2011; Leal-Rodríguez et al., 2014; Selnes & Sallis, 2003), while other studies find it more modest (e.g., Johnson & Sohi, 2003; Sobrero & Roberts, 2001; Wang & Hsu, 2014). Consequently, there are different findings among studies concerning the effects of IOL on performance. Moreover, a second unanswered question concerns under what conditions the IOL-performance relationship have different magnitude, and more specifically, how do different research designs affect the IOL-performance relationship. Understanding the effect of a research design on the IOL-performance link is important because it has implications for future research. For example, if the relationship is stronger under a certain condition, researchers might want to explain the difference in strength under other conditions and address how it might be overcome.

The paper investigates the overall relationship between IOL and performance in supply chain context, and how various research designs affect the connection. To investigate these issues, the present study examines 21 independent studies (including 26 samples, $N=4618$) systematically through a meta-analytic procedure. Meta-analysis is a technique that empirically combines previous findings to estimate the size of a relationship between variables. Meta-analysis controls for statistical artifacts (i.e., sampling and measurement error) and therefore offers more accurate estimates than other types of assessments (Schmidt & Hunter, 2015). This paper contributes to the IOL literature by examining the IOL-performance link and how it differs in magnitude across different research settings. The main objective of the paper is to examine the efficiency of various forms of IOL on performance, and whether the impact of IOL on different types of performance varies. Further, the aim of the paper is

not merely to examine the IOL-performance relationship but also to consider which research conditions might alter that relationship. Moreover, the paper contributes to the IOL literature by comparing different perspectives on IOL applied in prior research, and by attempting to unify the different views.

The paper is organized as follows. It begins by setting out the theoretical background and outlining the development of its hypotheses. Next, the method is described, and then results are presented. Finally, the main findings are discussed and implications for future research and for management are proposed.

2 Theoretical background and hypotheses

Prior research has viewed interorganizational learning (IOL) from several different perspectives. One of the most cited perspectives on interorganizational learning is that of relationship learning proposed by Selnes and Sallis (2003) (see e.g., Cheung, Myers, & Mentzer, 2011; Jean, Kim, & Sinkovics, 2012; Ling-ye, 2006). Relationship learning is defined as “a joint activity between a supplier and a customer in which the two parties share information, which is then jointly interpreted and integrated into shared relationship-domain-specific memory that changes the range or likelihood of potential relationship-domain-specific behavior” (Selnes & Sallis, 2003, p. 86). Relationship learning includes three sub-processes: information sharing, joint sense-making, and knowledge integration (Selnes & Sallis, 2003). A starting point of interorganizational learning is information sharing. In order to coordinate collaboration and achieve operational efficiency, it is necessary for parties to a relationship to share knowledge (Selnes & Sallis, 2003). Each organization has a different ability to acquire information and thus joint sense-making varies across organizations. Finally, acquired knowledge is integrated into relationship-specific memory, which encompasses organizational beliefs, behavioral routines, and physical artifacts (Selnes & Sallis, 2003). Knowledge integration is essential to bring the new knowledge into use and deliver the expected performance benefits (Kohtamäki & Partanen, 2016).

Moreover, IOL has also been conceptualized through absorptive capacity, which is “a firm’s ability to recognize the value of new, external knowledge, assimilate it, and apply it to commercial ends” (Lane & Lubatkin, 1998, p. 462). Thus, IOL occurs when a partner acquires knowledge, assimilates it, and exploits it in its operations (Schildt, Keil, & Maula, 2012). Furthermore, Lane and Lubatkin (1998) argue that interactive learning is necessary to add unique value to a firm’s own capabilities. Interactive learning occurs between two firms, and the acquired knowledge is unique and hardly imitable. Moreover, acquiring that complex knowledge demands intensive interactions (Lane & Lubatkin, 1998). However, there are also views arguing that absorptive capacity is a company’s internal capability that is needed to enhance performance in a similar manner to relationship learning (Chen et al., 2009). In addition, absorptive capacity is seen as an indicator of a firm’s ability to learn and build anew on prior knowledge, and accordingly different organizations will have different abilities to assimilate and apply new knowledge (Liu, 2012). Thus, absorptive capacity is also seen as an antecedent of relationship learning (Liu, 2012).

Moreover, the interactive learning perspective views acquisition of new knowledge as occurring through interaction between members from different organizations, which results in knowledge exchange and knowledge transfer between organizations (e.g., Hernández-Espallardo et al., 2010; Huang & Chu, 2010; Knight, 2002). Thus, this knowledge transfer between organizations is seen as an intensive personal contact and interaction (Huang & Chu, 2010). Moreover, scholars have adopted a communicative and interactive perspective when investigating interorganizational learning (e.g., Huang & Chu, 2010). Further, the interaction school suggests that firms in a relationship

simultaneously affect, and are affected by, each other in many ways (Håkansson & Shenota, 1995). There are also studies (e.g., Yang, 2012) that view IOL as knowledge acquisition across organizational boundaries. Moreover, Knight (2002) state that IOL literature has a strong focus on what each firm can learn from interaction with other firms, and further that such interaction might lead to joint learning; however, the focus is typically on how each firm can derive private benefits.

Despite the different perspectives on IOL, there are similarities. Common to all the perspectives on IOL is that each emphasizes the importance of interaction. Moreover, all these views acknowledge that information and/or knowledge sharing occurs in continuous interaction. In addition, the perspectives share the belief that IOL begins with information/knowledge sharing in an inter-organizational relationship, then the acquired knowledge is interpreted, and finally it is applied in practice. The main difference between these views is if the process of IOL occurs at a relationship level or at an organizational level. The relationship learning perspective states that learning occurs at the relationship level. Once information has been shared, a joint sense-making process begins, and that leads to knowledge integration. In contrast, the absorptive capacity/interactive learning view holds that knowledge is shared and transferred at the relationship level, but assimilation or interpretation of the acquired knowledge occurs within organizations, which also means that applying knowledge in practice also occurs within organizations. Moreover, Huang and Chu (2010) state that interactive learning can be viewed as a catalyst for internalized learning. In sum, relationship learning is joint learning, whereas interactive learning is more about knowledge acquisition. However, Lane and Lubatkin (1998) also argue that factors that influence one-way learning also affect two-way learning.

Prior studies have examined the effects of interorganizational learning from different viewpoints. Relationship learning has been viewed as an important factor in enhancing competitiveness and an important determinant of profitability in relationships (Chen et al., 2009; Ling-yee, 2006; Yang & Lai, 2012). A widely used performance measure in IOL studies is relationship performance (e.g., Johnson & Sohi, 2003; Ling-yee, 2006; Selnes & Sallis, 2003), which addresses the extent to which the parties to the relationship are satisfied with the effectiveness (i.e., doing the right things) and the efficiency (i.e., doing things in the right way) of the relationship (Jean & Sinkovics, 2010). Further, prior studies have confirmed the positive relationship between IOL and operational performance (e.g., Cheung, Myers, & Mentzer, 2010; Hernández-Espallardo et al., 2010). Operational performance includes measures such as cost, quality, speed, development capability, and delivery performance. Moreover, the positive effect of IOL on market performance (i.e., market share, sales growth, profitability) has been addressed in previous studies (e.g., Chang & Gotcher, 2010; Jean, Sinkovics, & Kim, 2010). Studies have also found a positive innovation performance effect (i.e., product innovation, process innovation, overall innovativeness) resulting from IOL (e.g., Chen et al., 2009; Fang et al., 2011).

Based on the number of publications that have provided empirical support for the IOL–performance link (e.g., Chen et al., 2009; Cheung et al., 2010; Selnes & Sallis, 2003), it is hypothesized a positive performance effect resulting from interorganizational learning.

Hypothesis 1: Interorganizational learning is positively related to performance.

The current research considers the effect of several potential moderators in its attempt to examine the relationship between IOL and performance closely. First, to structure the analysis of the effect of interorganizational learning on performance, the type of performance is classified into four dimensions: market performance, relationship performance, innovation performance, and operational

performance. Prior studies have confirmed a positive relationship between IOL and all of these performance types. Interorganizational learning requires interaction and information sharing in relationships (e.g., Huang & Chu, 2010; Selnes & Sallis, 2003), and thus as two organizations engage in mutual learning, they become more likely to understand each other, which results in enhanced relationship performance (Selnes & Sallis, 2003). Although this acquired learning can result in innovation or operational performance, it can be assumed that IOL has a stronger relationship with relationship performance than with other types of performance. Moreover, market performance is an outcome of a combination of multiple variables, and IOL is one such (e.g., Chang & Gotcher, 2010; Fang et al., 2011). However, it can be assumed that the effects of IOL are weaker on market performance than other types of performance, because it takes time to turn IOL into something useful in practice, and thus the profit from learning is subject to a time lag. Accordingly, it is hypothesized:

Hypothesis 2A: Research designs studying the link between IOL and relationship performance will report a stronger IOL–performance connection than research designs relying on other performance types.

Hypothesis 2B: Research designs studying the link between IOL and market performance will report a weaker IOL–performance relationship than research designs relying on other performance types.

Moreover, IOL has been viewed through different theoretical lenses. Studies building on relationship learning theory have adapted the view and measures from the work of Selnes and Sallis (2003), which is quite established in the context of studying IOL in a network setting. Other theoretical backgrounds suggested for IOL have not established ways to measure and conceptualize IOL to the same extent. Accordingly, it can be predicted that studies adopting the relationship learning perspective will report a stronger IOL–performance link than studies built on other theoretical foundations. This is because the relationship learning measure is established and has been found to be suitable for measuring IOL, while other types of IOL measures are diverse and focus on different aspects of IOL.

Hypothesis 3: Studies relying on the relationship learning view will have a stronger positive IOL–performance relationship than studies relying on another theoretical background.

2.1 Interorganizational learning and performance: methodological moderators

These moderators relate to how the original studies were designed. It is assumed that a potential moderator between IOL and performance is global breadth. Studies using data from single countries may report a stronger connection between IOL and performance, because it has been argued that “by focusing on a single country, researchers can theorize and design their research to more fully capture the nuances of the country” (Wowak et al., 2013, p. 847). Moreover, samples from multiple countries may be diverse in terms of cultural impact, governmental regulations, and overall development, and these issues may affect the extent to which companies share information (Liu, 2012; Wowak et al., 2013). Thus, it is hypothesized:

Hypothesis 4: IOL–performance connection is stronger in research designs using samples from single countries than in studies relying on samples from multiple countries.

Similar to the reasoning identifying the potential moderator of global breadth, industry diversity may have an impact on the IOL–performance relationship. Articles that use samples from multiple industries may not fully capture the effect of IOL on performance, because it may differ across

industries. Studies focusing on a single industry may reflect the effect of IOL on performance more accurately, because those studies are designed and implemented according to contextual dimensions of the industry. Hence, it is hypothesized:

Hypothesis 5: IOL-performance connection is stronger in research designs using samples from single industry than research designs relying on samples from several industries.

Finally, IOL studies assert that interaction and information sharing are necessary antecedents of IOL (e.g., Chen et al., 2009). Prior IOL studies have argued that inter-firm learning moves from buyer to supplier (see e.g., Hammervoll, 2012; Rebolledo & Nollet, 2011). This is logical because suppliers aim to attract customers and adapt their products and services to customer needs. Suppliers are also willing to invest time and resources to obtain knowledge from their customers that can move them closer to their markets (Cheung et al., 2011). Some sub-dimensions of IOL might also demand time and resources from the buyers, while simultaneously enhancing the relationship value for suppliers (Cheung et al., 2011). It is therefore logical that the IOL-performance connection will be reported to be stronger in studies using samples drawn only from suppliers. Moreover, correlations between IOL and performance seem to be stronger in supplier studies than in buyer studies (see e.g., Cheung et al., 2011) suggesting that the relationship might be reported as stronger in studies using supplier samples. Thus, it is hypothesized:

Hypothesis 6: IOL-performance connection is stronger in research designs focusing on suppliers than in studies focusing on customers, or for both customers and suppliers.

3 Method

Meta-analysis incorporates variations in independent and dependent variables depending on the hypothesis and the purpose of the original study, designs, measures, and samples. This is known as the “apples and oranges” problem (Cheung & Vijayakumar, 2016; Schmidt & Hunter, 2015), and it is a common criticism of meta-analysis. However, Schmidt and Hunter (2015) argue that synthesizing findings from different settings is actually a strength of meta-analysis.

The present study applies meta-analytical techniques to previously conducted research to examine the relationship between interorganizational learning and performance. Furthermore, an analysis is conducted to determine the existence of the hypothesized moderators above.

3.1 Literature search and study selection

A systematic literature review was conducted. The target was to identify scientific articles from the Scopus database and EBSCO Business Source using the key words: “interorganizational learning”, “inter-organizational learning”, “relationship learning”, “relational learning”, and “network learning”. Conference abstracts, working papers, dissertations/theses were excluded from the results and a total of 413 articles were subsequently found. The abstracts of those articles were reviewed manually, and a total of 94 articles identified as concerning the topic in question. It was set criteria for the inclusion and exclusion of studies in line with the methodological approach, the scope of the research topic, and the availability of the data. These 94 articles were read and 70 of them found to discuss the type of interorganizational learning that is central to this paper. Among the 70, 19 were qualitative studies and nine were conceptual, and therefore those 28 were excluded from further analysis. Among the remaining 42 quantitative articles, learning was treated as an antecedent in 11 articles, as a mediator in 15 articles, as a moderator in four articles, and as an outcome 12 articles. In 21 of these 42 articles the authors reported a correlation between interorganizational learning and

performance and accordingly, these studies were included in the meta-analysis. Ultimately, the literature search and screening process identified 21 independent studies, including 26 samples and a total sample size of 4618 buying and supplying firms. This sample size is in line with other studies using meta-analysis. For example, Nair (2006) conducts a meta-analysis on 23 articles, and MacKelprang and Nair (2010) on 25 articles.

After the articles were collated, the unit of analysis used was the study itself, not the individual effect. Studies were coded accordingly, however, two studies reported on buyer and supplier studies separately and these were treated as separate studies in the next stage of the analysis. If a study report multiple effects, the correlations were averaged and a single estimate was used (Schmidt & Hunter, 2015). Further, studies were coded in accordance with the hypotheses. For H2, articles were coded in accordance of the studied performance type, more specifically, articles were grouped into one of the four performance categories: market performance (i.e., market share, sales growth, or profitability), relationship performance (i.e., relationship efficiency, relationship effectiveness, or commitment), innovation performance (i.e., product innovation, process innovation, or overall innovativeness), and operational performance (i.e., quality, speed, development capability, or cost); for H4, articles were coded in accordance with their global diversity (single country/multiple countries); for H5, in accordance with industry diversity (single industry/multiple industry); and for H6, in accordance with the source of the data (customer/supplier/both). The number of studies in these different groups varied depending on whether the particular information was reported in an original article and could therefore be included in the groups. Table 1 presents the papers included in the meta-analysis.

Table 1. Summary of studies used for meta-analysis.

Authors	Year published	Journal	Source of data	Sample size	Performance type	Global diversity	Industry diversity	Theoretical background
Sobrero & Roberts	2001	Management Science	Both	50	relationship	Multiple countries		Other
Johnson & Sohi	2003	Journal of Business Research		176	relationship	Single country	Single industry	Other
Selnes & Sallis	2003	Journal of Marketing	Customer Supplier	315 315	relationship relationship	Multiple countries		Relationship learning Relationship learning
Li	2006	Industrial Marketing Management		414	relationship	Single country		Relationship learning
Chang & Gotcher	2007	Journal of World Business	Supplier	118	relationship	Single country	Single industry	Relationship learning
Chang & Gotcher	2008	International Journal of Technology Management	Supplier	118	relationship	Single country	Single industry	Relationship learning
Chen et al.	2009	Industrial Marketing Management		106	market innovation	Single country	Single industry	Relationship learning
Chang & Gotcher	2010	Industrial Marketing Management	Supplier	101	market	Single country	Single industry	Relationship learning
Jean et al.	2010	Journal of International Marketing	Supplier	246	market innovation	Single country	Single industry	Relationship learning
Jean & Sinkovics	2010	International Marketing Review		246	relationship			Relationship learning
Cheung et al.	2010	Journal of Operations Management	Customer Supplier	126 126	operational operational	Multiple countries	Multiple industries	Relationship learning
Hernandez-Espallardo et al.	2010	Supply Chain Management: An International Journal		219	operational	Single country	Single industry	Other
Huang & Chu	2010	Journal of Business and Industrial Marketing	Supplier	147	operational	Single country	Single industry	Other
Cheung et al.	2011	Strategic Management Journal	Customer Supplier	126 126	relationship relationship	Multiple countries	Multiple industries	Relationship learning
Zhao & Wang	2011	Journal of Strategic Marketing	Both	306	relationship	Single country	Single industry	Relationship learning
Fang et al.	2011	Industrial Marketing Management		161	innovation	Single country	Single industry	Relationship learning
Liu	2012	International Business Review		160	relationship	Single country	Single industry	Relationship learning
Leal-Rodriguez et al.	2013	Service Industries Journal		139	innovation	Single country	Single industry	Relationship learning
Leal-Rodriguez et al.	2014	International Journal of Project Management		110	innovation	Single country	Single industry	Relationship learning
Wang & Hsu	2014	Technological Forecasting and Social Change	Both	104	innovation	Single country	Single industry	Relationship learning
Liu	2015	Management Learning		211	operational	Single country	Multiple industries	Other

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3.2 Meta-analytic procedures

The meta-analysis was conducted by following the Hunter–Schmidt method because it corrects for artifacts that attenuate correlations. The method dictates that if a study reports correlations between several sub-dimensions of learning and performance, or uses several performance measures, these values should be averaged to obtain a single estimate for each study (Crook, Ketchen JR, Combs, & Todd, 2008). However, if a study reports correlations separately from a buyer and a supplier study, these should be treated as two separate studies (Salas et al., 2008).

Effect size estimates were calculated as the mean of the sample size weighted correlations: $\bar{r} = \sum [n_i r_i] / \sum n_i$, where n_i is the sample size and r_i is the effect reported in the i th study (Schmidt & Hunter, 2015). This particular estimate provides greater precision than the estimates obtained from any study because positive and negative sampling errors cancel each other out (Crook et al., 2008; Hunter & Schmidt, 1994; Schmidt & Hunter, 2015). After sampling errors, measurement error has the second largest impact on findings. However, most IOL studies do not report reliability coefficients for every measure, and it is therefore impossible to correct each study individually for measurement error. Thus, the mean of available reliabilities was used to correct \bar{r} to \bar{r}_c by using the formula $\bar{r}_c = \bar{r} / (\sqrt{\bar{r}_{xx}} \sqrt{\bar{r}_{yy}})$ (Wowak et al., 2013).

A chi-square test of homogeneity was conducted to test for the presence of heterogeneity in the observed correlations (Schmidt & Hunter, 2015), moreover, an important question in meta-analysis is if a large amount of unexplained variance remains after accounting for study artifacts. This can be tested by calculating $X^2_{K-1} = (T / (1 - \bar{r}^2)^2) s^2_{\bar{r}}$, where K is the number of effects, T is the total sample size, and $s^2_{\bar{r}}$ is the observed variance of \bar{r} . A significant chi-square value indicates the presence of moderators in the samples (Combs & Ketchen, 2003; Tong & Crosno, 2015). Confidence intervals were calculated around each \bar{r} using formulas provided by Schmidt and Hunter (2015). Confidence intervals were used to facilitate the hypothesis testing (e.g., Whitener, 1990). Relationships without a zero in the confidence intervals are considered to be significant (Lewin & Donthu, 2005). Further, overlapping confidence intervals indicate that these studies have the same population or category (Schmidt, 1996). Moreover, according to Schmidt and Hunter (2015) a moderator variable manifests itself in two ways: (1) varying average correlations among subsets, and (2) the corrected variance will average lower results in the subsets than for the whole data.

Finally, a funnel plot was used to investigate whether publication bias might impact the results. If the publication bias is not present, a funnel plot is symmetric around the mean effect (McDaniel, Rothstein, & Whetzel, 2006; Schmidt & Hunter, 2015). The funnel plot is symmetric in the current case, except that two samples are located at the middle, right-hand side of the funnel. However, these samples could not be removed because they derive from the original work of Selnes and Sallis (2003), which is one of the most cited papers on relationship learning. Consequently, the file drawer test was conducted, which means that Rosenthal's fail-safe N was calculated. The fail-safe N computes how many missing effect sizes would have to be retrieved and incorporated in the analysis to affect the results. There are no clear guidelines for the fail-safe N , but a general guideline used states fail-safe an N equal to or greater than five times the number of studies in the original meta-analysis, plus 10 studies ($5K+10$) should indicate that the meta-analytic results are robust in the face of publication bias (McDaniel et al., 2006). In the current meta-analysis, the fail-safe N is 134.82, which is marginally below the guideline threshold of 140 (calculated according to $5K+10$). Thus, it was concluded that the risk of publication bias is a tolerable one.

4 Results

H1 suggesting that IOL has a positive relationship with performance was supported. The estimate of the effect size is $\bar{r} = 0.46$. This estimate rises after correcting for measurement to $\bar{r}_c=0.53$. Moreover, the X^2 statistic is significant ($X^2= 212.19$, $p<0.001$), which indicates that moderators probably exist. Because of the results of the funnel plot, H1 was also tested without the samples from Selnes and Sallis (2003), because of their relative weight in the analysis. These results are in line with earlier ones and show that IOL has a positive relationship with performance ($\bar{r} = 0.42$; $\bar{r}_c=0.48$), however, excluding the samples from the work of Selnes and Sallis (2003) does weaken the relationship somewhat. Further, the confidence intervals in single studies did not overlap with each other, which indicates that moderator variables exist.

H2 suggests that the IOL-performance is moderated by the type of measured performance. More specifically, H2a suggest that IOL-performance connection is stronger in studies using relationship performance than other types of performance, and the analysis provided partial support for this hypothesis. The confidence intervals of studies using relationship performance overlap with each other, which indicates that H2a is supported (see e.g., Schmidt, 1996). H2b predicts that studies using market performance will report a weaker relationship between IOL and performance and the analysis partially supports this prediction. Again, the confidence intervals of market performance strongly overlap, indicating that market performance studies can be treated as the same category and the result can be evaluated as significant. The effects of different types of measured performance are market performance $\bar{r} = 0.36$ ($\bar{r}_c=0.43$), relationship performance $\bar{r} = 0.50$ ($\bar{r}_c=0.57$), innovation performance $\bar{r} = 0.40$ ($\bar{r}_c=0.44$), and operational performance $\bar{r} = 0.47$ ($\bar{r}_c=0.55$).

H3 suggests that studies relying on the relationship learning perspective would report a stronger IOL–performance relationship than studies relying on another theoretical foundation. The analysis provides partial support for this hypothesis. The effect for studies drawing on relationship learning is $\bar{r} = 0.48$ ($\bar{r}_c=0.55$) compared to $\bar{r} = 0.37$ ($\bar{r}_c=0.43$) for studies that rely on another theoretical background of IOL. Studies relying on relationship performance can be treated as belonging to the same category, because their confidence intervals of these studies strongly overlaps. In contrast, in studies relying on another theoretical background the confidence intervals varied, as did the extent of the overlaps, which indicates that these studies cannot be treated as elements of the same population. Further, H3 was also tested without the samples from the Selnes and Sallis study (2003), and the results show that the effect of relationship learning on performance remains positive ($\bar{r} = 0.43$; $\bar{r}_c=0.49$), but somewhat weaker than those obtained with the Selnes and Sallis samples included.

H4 predicts that the IOL-performance connection is moderated by global diversity, and more specifically that IOL-performance connection is stronger in studies using samples from single countries than research designs relying on samples from multiple countries. The analysis did not provide support to H4, as the estimated effect size of samples from a single country is $\bar{r} = 0.39$ ($\bar{r}_c=0.45$) while the effect size of samples from multiple countries is $\bar{r} = 0.63$ ($\bar{r}_c=0.69$), indicating that IOL–performance connection is stronger in studies using samples from multiple countries. However, the analysis revealed that global breadth is a moderator between IOL and performance, but in the opposite direction to that hypothesized.

H5 suggests that the IOL–performance relationship is moderated by industry diversity. The effect for studies using samples from a single industry is $\bar{r} = 0.40$ ($\bar{r}_c=0.46$) compared to $\bar{r} = 0.46$ ($\bar{r}_c=0.55$) for studies that used samples from multiple industries. Thus, H5 is not supported. Then again, the analysis indicates that industry diversity is a moderator between IOL and performance, but in the opposite direction to that hypothesized. Finally, H6 predicting that IOL-performance connection is stronger in

studies using samples only from suppliers was not supported. The effects for studies using only supplier samples is $\bar{r} = 0.44$ ($\bar{r}_c=0.50$), while the effects for studies using customer samples and both customer and supplier samples are $\bar{r} = 0.50$ ($\bar{r}_c=0.57$) and $\bar{r} = 0.58$ ($\bar{r}_c=0.65$), respectively. The results of the analyses are presented in Table 2.

Table 2. Meta-analytic results.

Hypothesis	N	K	\bar{r}	\bar{r}_c	$\sigma^2_{\bar{r}}$	σ^2_e	Residual variance	99% CI	95% CI	90% CI
H1: IOL - Performance	4618	25	0,46	0,53	0,03	0,00	0,02	0,38 : 0,55	0,40 : 0,53	0,41 : 0,52
H2: Performance type										
<i>Market performance</i>	453	3	0,36	0,43	0,00	0,01	0,00	0,26 : 0,46	0,28 : 0,44	0,30 : 0,42
<i>Relationship performance</i>	2470	12	0,50	0,57	0,03	0,00	0,03	0,38 : 0,63	0,41 : 0,60	0,42 : 0,59
<i>Innovation performance</i>	866	6	0,40	0,44	0,03	0,00	0,02	0,22 : 0,57	0,26 : 0,53	0,28 : 0,51
<i>Operational performance</i>	829	5	0,47	0,55	0,02	0,00	0,02	0,29 : 0,64	0,34 : 0,60	0,36 : 0,58
H3: Theoretical background										
<i>Relationship learning</i>	3815	21	0,48	0,55	0,02	0,00	0,02	0,38 : 0,57	0,41 : 0,55	0,43 : 0,54
<i>Other</i>	803	5	0,37	0,43	0,03	0,00	0,03	0,16 : 0,58	0,21 : 0,53	0,23 : 0,51
H4: Global diversity										
<i>Single country</i>	2942	17	0,39	0,45	0,02	0,00	0,01	0,31 : 0,48	0,33 : 0,46	0,34 : 0,45
<i>Multiple countries</i>	1184	7	0,63	0,69	0,03	0,00	0,02	0,47 : 0,79	0,51 : 0,75	0,53 : 0,73
H5: Industry diversity										
<i>Single industry</i>	2317	15	0,40	0,46	0,02	0,00	0,02	0,31 : 0,50	0,33 : 0,48	0,34 : 0,47
<i>Multiple industries</i>	715	5	0,46	0,55	0,01	0,00	0,01	0,33 : 0,59	0,36 : 0,56	0,38 : 0,54
H6: Source of data										
<i>Both</i>	1090	5	0,58	0,65	0,05	0,00	0,05	0,32 : 0,84	0,38 : 0,78	0,41 : 0,75
<i>Customer</i>	378	3	0,50	0,57	0,00	0,00	0,00	0,44 : 0,56	0,45 : 0,55	0,46 : 0,54
<i>Supplier</i>	1016	7	0,44	0,50	0,01	0,00	0,00	0,35 : 0,53	0,37 : 0,51	0,38 : 0,50

5 Discussion

This study makes an important contribution by discussing on the extent to which interorganizational learning impacts performance. More specifically, based on a sample of 4618 cases within 21 studies (26 samples), the results show that interorganizational learning is related to performance at $\bar{r}_c = 0.53$. This means that roughly 53 % of the utility available from predicting performance difference among companies is provided by interorganizational learning. This does not mean that interorganizational learning itself is a lever for improving performance. However, the finding does indicate that significant benefits can flow from having higher levels of interorganizational learning than one's competitors.

One benefit of meta-analysis is its ability to clarify unresolved questions in an area of study (Lewin & Donthu, 2005). Moreover, meta-analysis enables scholars to statistically aggregate findings across studies and through that aggregation derive more accurate estimations of the empirical evidence around a phenomenon (Wowak et al., 2013). This study complements the recently conducted meta-analysis by Wowak et al. (2013), on the effects of supply chain knowledge on performance. That work found that possessing supply chain knowledge is related to performance at $\bar{r}_c = 0.39$. Comparing

the results to those of the current study, it can be concluded that interorganizational learning has an even stronger impact on performance than supply chain knowledge. This is not surprising, because supply chain knowledge is defined as “knowledge within a firm about its supply chain partners and processes” (Wowak et al., 2013, p. 844), while interorganizational learning is a complete process where information and knowledge is transferred, through which companies learn.

Moreover, the results show that the relationship between IOL and performance is moderated by different factors. More specifically, the results show that IOL has a stronger impact on relationship performance than other types of performance (i.e., market, operational, or innovation). The effects of IOL on relationship performance are intuitive whereas the other performance types take time to manifest, for example the effects on innovation performance may sometimes take years to manifest. Therefore, the results suggest that scholars need to incorporate a temporal lag when investigating market, innovation, or operational performance as companies often need to engage in IOL and then integrate what they learn in order to gain competitive advantages. If market, operational, or innovation performance are examined without a temporal lag, the results actually may not capture the true impact of IOL. Further, this also indicates that the effects sizes used in this meta-analysis may be quite conservative estimates. The results indicate that IOL has a weaker relationship with market performance than with other types of performance. These same results provide support for an assumption that market performance consists of a great number of influential factors, and thus it might be unproductive to explain differences in market performance by reference to IOL. This result therefore provides insight for scholars considering incorporating performance measures into their future IOL research.

This study extends the IOL literature by examining the moderating effects of global diversity, industry diversity, and source of data in the IOL–performance relationship. The results indicate that differences in findings in the literature may be attributed to the diversity of the research design. More specifically, the findings show that using samples from multiple countries, from multiple industries, and/or from both customers and suppliers results in a stronger IOL–performance relationship. However, the difference in the magnitude of the IOL–performance relationship was not substantial in different research settings, except that of global diversity. This indicates that the IOL–performance relationship seems to be a universal phenomenon that is not overly sensitive to differences in research settings, but also that the IOL–performance relationship is not a country-specific phenomenon. Thus, the study contributes to the IOL literature by providing further evidence that IOL is an important antecedent of performance.

Finally, the results show that studies relying on the relationship learning perspective reveal stronger IOL–performance relationships than studies drawing other theoretical background. Most of the quantitative studies found in the systematic review rely on the relationship learning view, which might be because it has well established measures that are easily adopted. Studies that used other theoretical backgrounds had varying conceptualizations and measures, which resulted in finding weaker IOL–performance relationships. The fact that the majority of the identified studies draw on the relationship learning perspective also indicates that scholars have favored the view of joint learning in relationships over that of interactive learning, which is essentially knowledge acquired from suppliers and applied for a firm to acquire private benefits. Moreover, this paper contributes to IOL literature by reviewing the different perspectives on IOL and making an effort to collate the concepts used and illustrate the different IOL perspectives.

5.1 Managerial implications

This study provides valuable knowledge for practitioners. The results suggest that practitioners should invest time in establishing and maintaining practices that enhance interorganizational learning in their close inter-firm relationships. First, practitioners should pay attention to their company's network capability, in other words, they should develop the ability to handle and exploit relationships (see Vesalainen & Hakala, 2014). Network capability also includes the ability to interact with other organizations, and the ability to develop relationships (Vesalainen & Hakala, 2014). More specifically, information sharing has been viewed as a basis of IOL, which means that practitioners should create structures that enable information sharing in their interorganizational relationships. Establishing information sharing norms requires time and resources (Tong & Crosno, 2015), and in practice, information sharing is done by individuals known as boundary spanners working within the parameters set by an organization. Accordingly, enhancing IOL requires enabling structures but also clear rules on which information can be shared, and on how acquired information should be treated. However, information sharing per se does not deliver IOL, and it is important to recognize that an organization's capability to interpret and utilize the knowledge it acquires are central to its achieving competitive advantage.

Second, practitioners should be clear on the goal of each interorganizational relationship; whether that be short-term efficiency gains or longer-term learning-enhancing effects. Moreover, it has been argued that in short-term market relationships, learning occurs through observation, while in long-term partnerships, companies learn jointly through continuous interaction (Kohtamäki & Bourlakis, 2012). Thus, practitioners should assess their company's relationships and clearly define the type and desired interaction intensity of a relationship. Then the structures that enable information sharing, and further IOL, should be created or maintained in order to take advantage of the benefits. In addition, practitioners should be aware that if the other party is not willing to share information to a similar degree, the possibility of self-interest seeking increases, in other words, information asymmetry increases the risk of opportunism (Tong & Crosno, 2015).

5.2 Limitations and suggestions for future research

A comprehensive effort was undertaken to analyze the literature in order to deliver research findings capable of enriching the theory on the IOL–performance link. However, the results of the study should be considered in light of some limitations. First, relatively few published studies have investigated the IOL–performance link, meaning the meta-analysis could rely on only a relatively small number of studies (21 studies, 26 samples). Although that sample size is in line with other meta-analyses, further meta-analysis should be conducted when the number of studies increases. Second, the degree of artifact correction achieved through this meta-analysis is limited. This study covered sampling error and measurement error based on their availability in the studies included in the analysis, but inevitably the current research could not address other potential artifacts.

The study offers several suggestions for future research. The literature review conducted shows that there is a lack of consensus in defining IOL, thus, future research is needed to unify the concepts and activities that comprise IOL. Moreover, the findings of the study should encourage future research to use multinational and/or multi-industry data sets. This suggestion is in line with the argument of Cheung et al. (2010) that multi-country representation is not well understood in IOL studies.

Furthermore, the company interface is multifaceted, such that information sharing does not occur between companies, but between people, or boundary spanners. Therefore, the reality of a company interface is multiple boundary spanners interacting with the boundary spanners of another

organization. However, most of the data in the studies included in the meta-analysis were collected using the key informant approach, and as such do not account for the multifaceted nature of company boundaries. Thus, future research should approach interorganizational learning from a multilevel perspective, and conduct multilevel analyses. A multilevel approach makes it possible to gather data, for example, from multiple respondents and from dyadic settings in one study. The approach could benefit IOL studies by delivering a more complete picture of how IOL is actually formed in relationships. Future research could, for example, study if a business network consisting of learning relationships performs better than a business network consisting of market relationships. Or if a company that targets having many learning relationships performs better than a company trusting in a few learning relationships. Moreover, multilevel studies could benefit the whole supply chain, and interorganizational relationship research streams.

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BOUNDARY SPANNING BEHAVIOR, INTER-ORGANIZATIONAL LEARNING AND PURCHASING PERFORMANCE

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Abstract

Purpose: This paper investigates the relationships among boundary spanning behavior (BSB), inter-organizational learning behavior, and purchasing performance in the manufacturing industry. BSB is viewed through relationship governance theory, and we conceptualize boundary spanners as persuasive agents who aim to implement an organization's governance modes when interacting in an inter-organizational context.

Design/methodology/approach: The paper examines whether BSB has an antecedent role in the mechanisms that generate purchasing performance. Moreover, the indirect effect of BSB on purchasing performance as mediated by inter-organizational learning behavior is tested.

Findings: The results show that relational BSB and hierarchical BSB are positively associated with inter-organizational learning behavior and indirectly influence purchasing performance. Market-oriented BSB was not found to have any direct or indirect effect on purchasing performance.

Research limitations/implications: The generalizability of the findings is limited, particularly because of the relatively small sample drawn from a single industry.

Practical implications: The results suggest that managers should clearly delimit the appropriate relational strategy that boundary spanners are to apply. Purchasing professionals are advised to pay attention to the type of behavior they use in supplier interactions and to deliberately choose a tactic in line with the purchasing strategy.

Originality/value: This paper connects the business negotiation and industrial marketing literature by considering the effects of situational factors on negotiation behavior. Moreover, this study examines the negotiation behavior of purchasing professionals, whereas the previous negotiation literature has mainly relied on student samples.

Keywords: Boundary spanning behavior, inter-organizational learning, purchasing performance, governance, business negotiation

Paper type: Research paper

1 INTRODUCTION

Negotiation is one of the most important elements in the business exchange process (Agndal, Åge, & Eklinder-Frick, 2017; Herbst, Voeth, & Meister, 2011; Preuss & van der Wijst, 2017). Typically, in a

negotiation, two or more parties seek to influence one another through various means of communication with the aim of achieving their own and common goals (Agndal et al., 2017). Boundary spanners are in a key position with respect to communication, knowledge exchange and learning in inter-organizational relationships when acting as representatives of their organizations. Boundary spanning behavior (BSB) generates information flows (Dollinger, 1984; Turkulainen & Swink, 2017) that are essential to learning (Kellogg, Orlikowski, & Yates, 2006; Lindgren, Andersson, & Henfridsson, 2008; Marrone, 2010). Traditionally, BSB has been studied by scrutinizing different boundary spanning roles (Aldrich & Herker, 1977; Ancona & Caldwell, 1992; Friedman & Podolny, 1992; Marrone, 2010), which reflect different types of individual behaviors. The more recent literature has shifted from an individual level to collective or group-level investigations (Banerjee & Corredoira, 2014; Marrone, Tesluk, & Carson, 2007) and team-level investigations (Ancona & Caldwell, 1992; Marrone, 2010; Marrone et al., 2007). Similarly, negotiation studies have focused on negotiation teams, arguing that in the business-to-business context, teams are often favored over individuals (Aykac, Wilken, Jacob, & Prime, 2017).

Prior research has demonstrated the effects of boundary spanning on performance (Ancona & Caldwell, 1992; Dollinger, 1984). Our study expands the research by conceptualizing such behavior through relationship governance theory and assuming that BSB is situational and manifests itself in relational, hierarchical, and market-oriented negotiation styles. We expect that when interacting in an inter-organizational context, boundary spanners use a certain governance form to enhance the fulfillment of organizational goals. Thus, this paper conceptualizes BSB through relationship governance theory, demonstrates the measurement of BSB, and studies its direct and indirect effects on purchasing performance. Inter-organizational learning is used as the mediator in the indirect mechanism because it has a strong position among those mechanisms that explain relationship-specific or relationship-driven organizational performance. Several empirical studies have verified inter-organizational learning as a strong mediator (Chang & Gotcher, 2010; Cheung, Myers, & Mentzer, 2010; Johnson & Sohi, 2003; Selnes & Sallis, 2003) between various antecedents and performance criteria.

This research contributes to the current knowledge on the mechanisms generating useful inter-organizational interaction, which leads to relationship-specific or relationship-driven organizational performance. We assume that the BSB adopted by purchasers in various interactions with suppliers has an effect on the relationship atmosphere in general and, specifically, on the learning behaviors realized. As Kim and Choi (2015:77) noted, “when two parties hold each other in high regard,” there is a higher probability that they will choose to transfer accurate information to each other. This study also provides insights into the effects of inter-organizational learning behavior on purchasing performance. While prior research has illustrated the positive effects of relationship learning on business performance (Liu, 2012), relationship performance (Jean & Sinkovics, 2010; Johnson & Sohi, 2003; Selnes & Sallis, 2003; Zhao & Wang, 2011), and alliance performance (Emden, Yaprak, & Cavusgil, 2005), little is known about the effects of inter-organizational learning on purchasing performance. Moreover, this paper contributes to the business negotiation literature by connecting the business negotiation and industrial marketing literature, as called for by Agndal et al. (2017).

This paper is structured as follows. The first section introduces the relevant literature on BSB, inter-organizational learning, and purchasing performance. Second, the logic behind the hypothesized model is presented, and hypotheses are developed. Third, the method and measures are introduced, and the results are presented. Finally, the main findings and contributions are presented, followed by the managerial implications, the limitations of the study, and suggestions for future research.

2 LITERATURE REVIEW AND HYPOTHESES

2.1 Theoretical background

The need for spanning boundaries between firms in order to manage knowledge sharing, knowledge transfer, innovativeness, and effectiveness is obvious (Andersen, Kragh, & Lettl, 2013; Joshi, Pandey, & Han, 2009; Tsai & Ghoshal, 1998). A key element of good purchasing strategy is interaction with suppliers (Janda & Seshadri, 2001), and boundary spanning individuals are important to such interactions because they act as exchange agents between the organization and its external environment (Adams, 1980). We rely on a situational approach (Janowicz-Panjaitan & Noorderhaven, 2009; Moran & Ghoshal, 1996); that is, we believe that organizational factors, such as the clarity of organizational norms (Aquino & Becker, 2005) and the power derived from the negotiators' interdependence, are important in explaining negotiation behavior (Ma & Jaeger, 2005). Our research focuses on the relationship of boundary spanning to the strategies that the boundary persons apply when dealing with their external environment (Ancona & Caldwell, 1992). The theoretical foundation of our study is multidimensional governance theory. We suggest that organizational governance modes provide the situational context in which purchasing boundary spanning activities occur, and we presume that these activities comply with the organization's governance mode. Recent theoretical developments have led to suggestions to adopt a multidimensional approach, highlighting the simultaneous appearance of different governance or interaction modes (Bengtsson & Kock, 2000; Jap, 1999; Vesalainen & Kohtamäki, 2015; Zerbini & Castaldo, 2007). Multidimensionality is usually manifested as a duality between cooperative and competitive behaviors (Bengtsson & Kock, 2000; Zerbini & Castaldo, 2007). The present study takes a broader perspective and defines three behavioral modes relevant to industrial purchasers by adding a third, *hierarchical* type of interaction. The relevance of the third type of interaction is grounded in general governance theory (Adler, 2001; Bradach & Eccles, 1989), which suggests three independent dimensions of governance: the *hierarchical*, the *competitive*, and the *relational*. These three dimensions provide the foundations for different BSBs.

We conceptualize *hierarchical BSB* through authority and power. Authoritarian power usually resides in organizations, in which power is legitimized through organizational hierarchy (Adler, 2001). In the inter-organizational context, hierarchical BSB exists when the parties in a relationship attempt to exercise power over each other. In this context, power can be defined as the ability of the industrial purchaser to influence the intentions and actions of the supplier (Handley & Benton, 2012; Maloni & Benton, 2000). The amount of power and its direction are determined by the dependencies in a relationship. When the

dependency is more asymmetric, there is greater potential for authoritarian behavior in the relationship (Ritter, 2007).

Competitive BSB involves offsetting investments in other relationships to signal the existence of market forces (Heide & John, 1988). Market governance “describes the rules of arm’s length market exchanges” (Ghosh & John, 1999). An industrial purchaser’s goal in using competitive BSB is to optimize prices. Arm’s-length relationships are typical in industrial business, and a buying firm usually applies the competitive force of the market by requesting competitive bids from multiple suppliers (Dyer & Ouchi, 1993; Krause, Scannell, & Calantone, 2000). Traditionally, customers attempt to avoid situations that require them to depend on a single supplier. Although interest in collaborative buyer-supplier relationships has increased, price and competitive bidding remain paramount among the routine tasks of buyer representatives. Thus, the market-driven behavior of a buyer is based on the implicit threat of using alternative suppliers, either by signaling such a possibility or by benchmarking the market by referring to other firms.

Relational exchange is based on an assumption that contracts are agreements that are intentionally left incomplete so that the actors retain the flexibility to adapt to changes in the environment (Ivens, 2006). Exchange partners develop joint values and expectations about “proper and acceptable behavior” (Macneil, 1980). Drawing on Macneil’s (1980) work, scholars have defined ten norms as a basis for relational behavior that are applicable for industrial purchasers (Blois & Ivens, 2006; Ivens, 2004). We conceptualize *relational BSB* through these norms: long-term orientation, role integrity, relational planning, mutuality, solidarity, flexibility, information exchange, conflict resolution, restraint in the use of power, and monitoring behavior (Ivens, 2004).

Our conceptualization of learning behavior is based on relationship learning and learning behavior perspectives. *Relationship learning* is defined as “a joint activity between a supplier and a customer in which the two parties share information, which is then jointly interpreted and integrated into shared relationship-domain-specific memory that changes the range or likelihood of potential relationship-domain-specific behavior” (Selnes & Sallis, 2003). Selnes and Sallis viewed relationship learning as a capability of the relationship in line with the relational governance perspective (Heide & John, 1990), in which two parties collaborate and trust each other to secure or improve their business performance. The view also resonates with that of the interaction school, which suggests that firms in a relationship simultaneously affect, and are affected by each other in many ways (Håkansson & Snehota, 1995).

Prior studies have applied the *learning behavior* perspective in group-level investigations (Edmondson, 1999; Gibson & Vermeulen, 2003) and in inter-organizational investigations (Mu, Peng, & Love, 2008; Petruzzelli, Albino, Carbonara, & Rotolo, 2010; Rangarajan, Chonko, Jones, & Roberts, 2004). In group-level studies, learning behavior is defined through a cycle of learning activities: experimentation, reflective communication, and knowledge codification (Edmondson, 1999; Gibson & Vermeulen, 2003). The first phase is experimentation, when a team generates ideas for potential improvements. In the second

phase, the team must achieve a common understanding about the proposed solution by combining their different views through a process of reflective communication. Finally, the ideas must be translated into practices and actions through a process of knowledge codification (Gibson & Vermeulen, 2003).

We conceptualize inter-organizational learning through three phases: *experimentation*, *reflective communication*, and *knowledge codification*. We define inter-organizational learning as a cycle of learning activities, in accordance with Edmondson (1999) and Gibson and Vermeulen (2003). Our conceptualization uses elements from both the relationship learning and the learning behavior literature. In the *experimentation* phase, the focal firm experiments with new practices at the supplier interface, aiming to improve general inter-organizational practices. In the *reflective communication* phase, the two companies' views are combined. A focal company holds open discussions with a supplier in order to obtain feedback that fosters further improvement, similar to the joint sense-making process defined by Selnes and Sallis (2003). In the *knowledge codification* phase, both the learning behavior and the relationship learning literature are integrated in that knowledge is transferred into practices and activities.

2.2 Boundary spanning behavior and learning behavior

Previous studies have discovered connections between the different governance mechanisms and inter-organizational learning. For example, the combination of relational and hierarchical governance mechanisms can enhance learning at the organizational level (Adler, 2001; Kohtamäki, 2010; Kohtamäki, Vesalainen, Varamäki, & Vuorinen, 2006). Hernández-Espallardo, Rodríguez-Orejuela and Sánchez-Pérez (2010) studied the effects of governance mechanisms on inter-firm learning and performance and conceptualized governance mechanisms in the form of monitoring, incentives, and social enforcement. The same research found that trust (i.e., social enforcement) plays an important role in inter-firm relationships: it not only facilitates knowledge sharing in supply chains but also directly affects learning and supply chain performance. Håkansson et al. (1999) also emphasized the role of trust in learning. Kim and Choi (2015) highlighted the atmosphere of the relationship and determined that casual interactions may increase the opportunity for exposure to new ideas and perspectives regardless of the level of trust, given that the parties are cognitively and strategically independent of each other, as is often the case in short-term, arm's-length relationships. Cavusgil et al. (2003) strongly emphasized the importance of relationship strength and inter-firm collaborative experience in obtaining tacit knowledge from partner firms. In addition, Hammervoll (2012) found that hierarchical governance has a less positive (or even negative) effect on different forms of inter-organizational learning. Hernández-Espallardo et al. (2010) concluded that monitoring is the least influential governance tool; client monitoring of a supplier's activities favors knowledge sharing and learning, but the effect is not as strong as the effect of trust. Kohtamäki (2010) found that relationship learning requires a trusting atmosphere as well as pressure created by the customer. As the previous studies suggest, relational and hierarchical governance mechanisms have positive effects on inter-organizational learning, and the positive effects should also be seen in the boundary spanners' behavior in the supplier interface. Thus, we hypothesize as follows:

H1a. There is a positive relationship between relational BSB and inter-organizational learning behavior.

H1b. There is a positive relationship between hierarchical BSB and inter-organizational learning behavior.

Kohtamäki (2010) found that lower-level learning occurs more frequently in *market-governed relationships* than in other types of relationships. In addition, Hammervoll (2012) argued that market governance has a less positive (or even a negative) effect on different forms of inter-organizational learning. Thus, we hypothesize the following:

H1c. There is a negative relationship between competitive BSB and inter-organizational learning behavior.

2.3 Inter-organizational learning behavior and purchasing performance

Prior studies have confirmed positive relationships between forms of learning and performance, for example, between intra-organizational learning and firm-level performance (Calantone, Cavusgil, & Zhao, 2002; Liu, 2012) and between joint venture learning and performance (Lane, Salk, & Lyles, 2001). Inter-organizational learning has also been found to be positively associated with relationship performance (Jean & Sinkovics, 2010; Johnson & Sohi, 2003; Lai, Pai, Yang, & Lin, 2009; Liu, 2012; Selnes & Sallis, 2003), that is, the extent to which a supplier is satisfied with the effectiveness and efficiency of the inter-organizational relationship (Jean & Sinkovics, 2010). The efficiency of the relationship (i.e., doing things the right way) is defined in terms of cost control (Jean & Sinkovics, 2010; Selnes & Sallis, 2003). Effectiveness (i.e., doing the right things) refers to the extent to which the parties consider the relationship worthwhile, productive, and satisfying (Jean & Sinkovics, 2010; Liu, 2012; Selnes & Sallis, 2003). However, prior studies of inter-organizational learning have lacked a purchasing performance perspective. Given that the prior research has established a positive relationship between inter-organizational learning and different performance outcomes, we hypothesize the following:

H2. There is a positive relationship between inter-organizational learning behavior and purchasing performance.

2.4 Indirect effects of boundary spanning behavior on purchasing performance

The mediating role of inter-organizational learning has been recognized in prior research (Chang & Gotcher, 2010; Cheung et al., 2010; Selnes & Sallis, 2003). Hernández-Espallardo et al. (2010) found that monitoring (as a hierarchical mechanism) does not have a significant direct effect on performance, whereas social enforcement (as a relational mechanism) has a direct, positive, and significant effect. Ambrose, Marshall, and Lynch (2010) concluded that commitment, trust, communication, dependence, and power do not directly drive relationship success. We propose that the effects of relational and hierarchical BSB on purchasing performance are realized through inter-organizational learning behavior. In addition, because market governance favors transactions over relationships, we propose that competitive behavior does not have a significant indirect relationship with purchasing performance, and

consequently, competitive behavior cannot be assumed to produce learning. In sum, we hypothesize the following:

H3a. Inter-organizational learning mediates the relationship between relational BSB and purchasing performance.

H3b. Inter-organizational learning mediates the relationship between hierarchical BSB and purchasing performance.

H3c. Competitive BSB has an insignificant indirect relationship with purchasing performance.

In line with the above discussion and hypotheses, we test the direct and indirect effects of BSB on inter-organizational learning behavior and purchasing performance. The model below introduces the mediating effect of learning practices between BSB and purchasing performance.

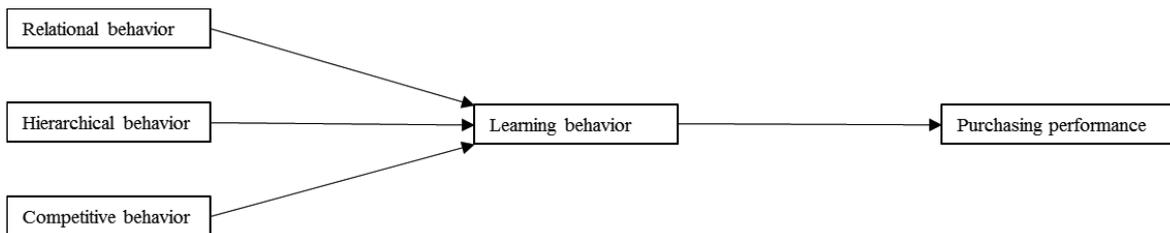


FIGURE 1. Hypothesized model.

3 METHOD

3.1 Data collection and analysis

The unit of analysis in our study is a company, which consists of several respondents working in boundary spanning positions. The data collection was conducted in two phases. *In the first phase*, a research assistant telephoned 415 companies to identify the person or persons responsible for purchasing and then telephoned that person to request his/her participation in the survey. A total of 365 people responsible for purchasing agreed to participate, 52 declined, and 36 could not be contacted. The 365 people who agreed to participate were sent a link to the survey by e-mail. In total, 178 people answered the survey, and these people were asked to nominate colleagues in purchasing positions. The original group suggested a further 196 people, who were also sent the survey. Of the additional group of 196, 92 responded to the survey. The original group of purchasing representatives (178 people) was contacted again to identify more potential respondents, who were then contacted by telephone. *In the second phase*, 147 people were contacted, of whom 123 agreed to participate, 6 declined, and 18 advised that the respondent contacted first was the only person in their company who dealt with suppliers. As a result, 79 new survey responses were received from the second data collection round.

Consequently, the sample consists of 349 responses (response rate 51 %) to the web-based survey. As in prior research on sourcing teams (Kaufmann & Wagner, 2017), the individual-level data were aggregated at the organizational level by calculating the mean values of the respondents within each company. In accordance with the suggestions of Kohtamäki and Partanen (2016) and Boyer and Verma (2000), multiple respondents were canvassed to minimize common method variance. The number of respondents from a company varied between 1 and 16, and the average was 2.5, in line with prior team-level studies (Kaufmann & Wagner, 2017). Some companies were represented by a single respondent, and these companies were contacted to confirm whether there were other people interacting with the firm's suppliers. If several persons acting in the supplier boundary were recognized but only one had responded, the company was excluded from further analysis. Smaller companies with only one person interacting with suppliers were not excluded from the analysis. The final sample consisted of 124 companies (aggregated from 311 respondents). The firms in the sample on average are 26 years old with 1084 employees and a 300-million-euro turnover and have 6 % earnings before interest and taxes (EBIT) margins.

3.2 Measures

Learning behavior. We developed a scale of 11 items (see Appendix 1) to measure learning behavior, including experimentation (4 items), reflective communication (4 items), and knowledge codification (4 items). These items were inspired by Gibson and Vermeulen (2003) and Selnes and Sallis (2003); the relevance of the items was tested with practitioners and further with academics. The exploratory factor analysis (EFA) was performed, and three factors were found: the item loadings varied from 0.5 to 0.77, and the side loadings were low. These results of EFA suggest that the developed learning behavior measure was suitable for further use. Thus, the confirmatory factor analysis (CFA) was performed to ensure the validity of the learning behavior scale. The fit statistics ($\chi^2/df=2.31$, CFI=0.97, TLI=0.95, RMSEA=0.06) showed satisfactory model fit and validate that learning behavior is a second-order construct. All items loaded significantly on their latent construct ($p<0.001$). The composite reliabilities of 0.85, 0.79, and 0.76 suggest that the measure has internal consistency and reliability.

BSBs are measured through three dimensions: relational behavior, hierarchical behavior, and competitive behavior (Vesalainen, Rajala, & Wincent, 2016). Relational BSB is measured through five items and includes the expectation that joint rather than individual outcomes are highly valued. Hierarchical BSB is measured by four items based on the five bases of inter-firm power defined in the literature: reward, coercion, expert, referent, and legitimate power. Competitive BSB is based on the rules of arm's-length relationships. In this type of behavior, the main goal is to optimize the price, and the behavior involves using markets as a benchmark to persuade suppliers' representatives. All items loaded significantly on their latent construct ($p<0.001$). The composite reliability values for the three dimensions were 0.77, 0.68, and 0.74, respectively, suggesting that the measures have internal consistency and reliability.

The prior literature suggests that purchasing performance measures should follow the organizational-level strategy and should be measured from different viewpoints, for example, raw materials and total purchasing costs (Easton, Murphy, & Pearson, 2002). Quality and delivery reliability are seen as important aspects of purchasing performance but are not as critical as purchase cost/price and total purchasing cost (Easton et al., 2002). Purchasing performance can also be measured by delivery, quantity, cost, and quality performance (Mady, Mady, & Mady, 2014). In line with the previous research, purchasing performance is measured through three self-assessment performance measures related to the efficiency of purchasing, the existence of quality anomalies, and the commitment and development activity of companies in the value chain. Objective performance measures have the advantage of avoiding potential problems of self-assessment; however, subjective scales have been shown to be highly correlated with objective performance measures (Andersen, 2004; Cruz-González, López-Sáez, Navas-López, & Delgado-Verde, 2014). In addition, objective purchasing performance measures are not reported as widely as overall company performance figures; therefore, we decided to use a self-assessed purchasing performance scale. Because we were using self-assessed performance measures, we also tested whether our purchasing performance measures were associated with company-level objective performance measures, that is, whether purchasing performance had a positive and statistically significant relationship ($p=0.03$) with a company's EBIT margin. All items loaded significantly on the latent construct ($p<0.001$). The composite reliability value of the purchasing performance measure of 0.73 exceeded the threshold value (0.7).

Two control variables, company size and company age, control whether variables beyond the model studied might have affected learning behavior and purchasing performance. These variables were drawn from the Orbis database that consists of financial data from companies' financial statements. Company size may affect performance outcomes, as larger companies possess more heterogeneous resources for learning (Kim, Hur, & Schoenherr, 2015). Company age is used as a control because the knowledge base of a company is assumed to accumulate over time (Kim et al., 2015).

3.2.1 Tests of measures

The CFA was used to assess the quality of the 5-factor measurement model in addition to the measurement of the individual constructs. The measurement model (including the second-order learning behavior dimensions, three behavioral dimensions, and a performance dimension) provided an acceptable fit to the data ($\chi^2/df=1.66$; RMSEA=0.05; CFI=0.94; TLI=0.93; SRMR=0.06). The loadings are presented in Appendix 1. We also tested the extent to which the survey items learning behavior, BSBs, and purchasing performance might foster common method bias. Further, we tested whether the model fit improved as the complexity of the research model increased (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The single-factor model was compared to the more complicated (5-factor) measurement model, and we found that the 5-factor model provided better goodness-of-fit statistics ($\chi^2/df=4.95$; RMSEA=0.11; CFI=0.60; TLI=0.56; SRMR=0.10). This test also indicates that common method variance was not an issue in the data set.

4 RESULTS

Table 1 presents the correlation matrix for the constructs used in the study. Multi-collinearity was tested by using the variance inflation factor (VIF) index. All the values of independent constructs were well below 2 (the threshold value being 10). It can be concluded that the data are satisfactorily free from multi-collinearity. Moreover, inter-rater agreement (rwg) was calculated for justifying the aggregation to the company level, and mean rwg values were above the commonly used cut-off criterion of 0.7 (Kaufmann & Wagner, 2017), indicating that aggregation is reasonable.

TABLE 1. Means, standard deviations, and correlations.

Construct	Mean	SD	Average rwg	1	2	3	4	4A	4B	4C	5
(1) Relational behavior	5.71	0.61	0.96	1.00							
(2) Hierarchical behavior	4.30	1.03	0.78	0.26***	1.00						
(3) Competitive behavior	4.28	1.10	0.79	0.14**	0.47***	1.00					
(4) Inter-organizational learning	4.60	0.92		0.39***	0.35***	0.21***	1.00				
(4A) Experimentation	4.16	1.13	0.84	0.21***	0.38***	0.22***	0.84***	1.00			
(4B) Reflective communication	5.22	0.97	0.97	0.46***	0.22***	0.13*	0.84***	0.54***	1.00		
(4C) Knowledge codification	4.23	1.15	0.95	0.33***	0.30***	0.17**	0.88***	0.59***	0.64***	1.00	
(5) Purchasing performance	4.86	0.74	0.92	0.22***	0.12*	0.15**	0.48***	0.40***	0.44***	0.39***	1.00

*p<0.05, **p<0.01, ***p<0.001 (two-tailed test); SD=standard deviation; n=311.

The hypotheses were tested through structural equation modeling, using Stata 13.1 software. A full mediation model should be tested with the path from the independent variables (i.e., relational, hierarchical, and competitive behavior) to the mediator (i.e., learning behavior) and from the mediator to the dependent variable (i.e., purchasing performance) (James & Brett, 1984). Thus, a direct relationship between independent and dependent variables is not expected, but it can be controlled for (James, Mulaik, & Brett, 2006).

The direct relationships between behavioral orientations and purchasing performance were controlled for, but no significant direct paths from independent variables to the dependent variable were found. Next, we tested whether the control variables influence purchasing performance. The model revealed no statistically significant impact on purchasing performance for the control variables of company age ($\beta=-0.01$, n.s.) or company size ($\beta=-0.12$, n.s.).

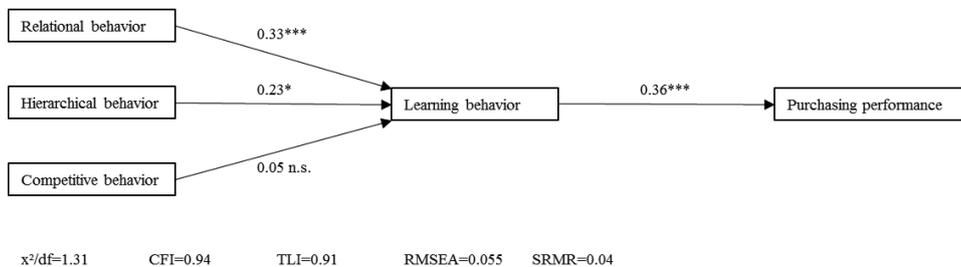
H1a suggests that relational BSB is positively associated with learning behavior. The analysis supports this hypothesis ($\beta=0.33$, $p<0.001$). In addition, hierarchical BSB is hypothesized to be positively associated with learning behavior (H1b), and the analysis reveals a significant relationship ($\beta=0.23$, $p<0.02$). Finally, H1c suggests that competitive BSB has a negative impact on learning behavior. The

analysis does not support this hypothesis, identifying instead a statistically insignificant positive relationship ($\beta=0.05$, n.s.).

The positive relationship between learning behavior and purchasing performance (H2) is confirmed ($\beta=0.36$, $p<0.000$). Further, the results indicate that the hypothesized relationship between relational BSB and purchasing performance is mediated by learning behavior (H3a). The analysis confirms H3a by showing a statistically significant positive indirect effect of relational BSB on purchasing performance ($\beta=0.18$, $p<0.001$). Further, the results of the Sobel-Goodman mediation test show that the proportion of the total effect of inter-organizational learning behavior’s mediation between relational BSB and purchasing performance is 72 %. Thus, the test provides further support for H3a.

H3b suggests that the relationship between hierarchical BSB and purchasing performance is also mediated by learning behavior. The analysis supports this hypothesis by revealing a statistically significant positive relationship ($\beta=0.09$, $p<0.009$). The results of the Sobel-Goodman mediation test confirm that the relationship between hierarchical BSB and purchasing performance is fully mediated by inter-organizational learning behavior. Thus, the test provides further support for H3b. H3c suggests that competitive BSB has an insignificant indirect relationship with purchasing performance. The analysis supports this hypothesis ($\beta=0.01$, $p<0.714$).

DIRECT EFFECTS



INDIRECT EFFECTS

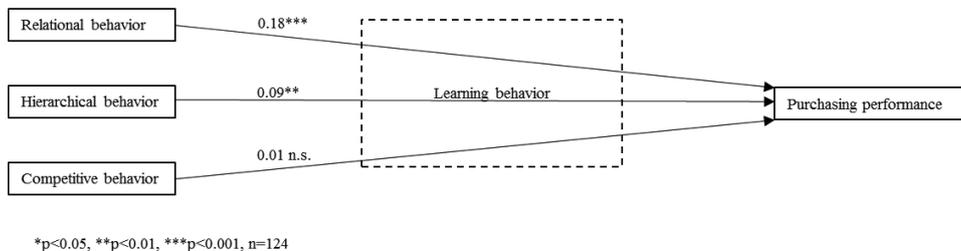


FIGURE 2. Direct and indirect effects.

5 DISCUSSION

This paper provides several contributions to the business negotiation literature. First, this paper answers the call to connect the business negotiation and industrial marketing literature (Agndal et al., 2017). Second, prior research has mainly viewed buyer-seller negotiation styles as the characteristics of individuals without considering situational factors, despite the impact of corporate objectives and strategies on negotiation behavior (Brooks & Rose, 2004). Furthermore, the majority of negotiation literature has focused on rational negotiation strategies related to the negotiators' self-interest and goals while ignoring the long-term and continuous aspects of negotiation and downplaying relational strategies (Åge & Eklinder-Frick, 2017). Third, this study examines the negotiation behavior of purchasing professionals, whereas the previous negotiation literature has mainly relied on student samples (Agndal et al., 2017; Herbst et al., 2011). For example, the negotiation style study of Preuss and van der Wijst (2017) and team-level negotiation study of Aykac et al. (2017) both relied on student samples. However, the use of a student sample can produce different results compared to the use of professional samples (Agndal et al., 2017; Herbst et al., 2011).

Our findings contribute to the growing body of literature on boundary spanning in industrial markets (Andersen et al., 2013; Zhang, Viswanathan, & Henke, 2011; Zhang, Wu, & Henke, 2015) by empirically examining the effects of different BSBs on learning behavior and on purchasing performance. Previous research has confirmed that relational management and hierarchical management have positive effects on inter-organizational learning (Hammervoll, 2012; Kohtamäki, 2010). These studies approached inter-organizational relationships purely from the governance perspective. The current research views BSB as a situated relationship governance. Here, BSB refers to the orientation by which purchasers aim to influence the conduct of suppliers. This study contributes to the existing literature by showing that governance mechanisms are manifested in the behavior of the purchasers in supply relationships. Our findings suggest that the relationship between BSB and purchasing performance is mediated by inter-organizational learning behavior. More precisely, our results show that relational and hierarchical BSB function in the same way as relational and hierarchical governance, i.e., they positively affect inter-organizational learning, and their effect is mediated through learning to influence purchasing performance. Our results indicate that when the level of learning behavior is high, procurement costs and the number of quality defects are reduced, and supplier commitment to development activities increases. Previous studies have reported contradictory results on the effects of hierarchical governance on inter-organizational learning. For example, Hammervoll (2012) and Hernández-Espallardo et al. (2010) found that hierarchical governance had a less positive (and occasionally even negative) influence on inter-organizational learning, whereas Kohtamäki (2010) emphasized the positive effect of the pressure exerted on inter-organizational learning by hierarchical governance. Our results provide further support for the findings of Kohtamäki (2010) by demonstrating the positive effects of hierarchical BSB on inter-organizational learning. Moreover, Hammervoll (2012) found market (competitive) management to have less positive (and even negative) effects on inter-organizational learning. Our results, however, indicate that competitive BSB has *no effect* on inter-organizational learning or purchasing performance. This

finding is logical because the gains achieved through bargaining and other competitive means are not relational but firm-specific and transactional.

Previous BSB research has approached behavior through different roles (Ancona & Caldwell, 1992; Au & Fukuda, 2002) and has viewed BSB through the lens of role theory (Heide & Wathne, 2006; Marrone et al., 2007). Our study contributes to the BSB literature by introducing how boundary spanning individuals implement relationship governance modes designed at the corporate level in their behavior in supplier relationships. The dimensions of BSB are treated separately to examine the performance effects of each dimension. In contrast to previous studies (Ancona & Caldwell, 1992; Dollinger, 1984), our results show that BSB has no direct relationship to purchasing performance. However, our results confirm the mediating role of inter-organizational learning behavior between BSB and purchasing performance. These findings provide interesting insights to complement both the literature on inter-organizational learning and that on BSB.

5.1 Managerial implications

Our study confirms that purchasers' behavior when interacting with suppliers has an effect on inter-organizational interaction in terms of learning behavior. Thus, organizational persuasion through boundary spanners becomes a tactical means to manage relationships. We advise corporate-level executives who can influence the overall strategic direction of the organization to clearly delimit the appropriate relational strategy that the boundary spanners are to apply. The purchasing professionals, in turn, are advised to pay attention to the type of behavior they use in supplier interactions and to deliberately choose a tactic in line with the purchasing strategy. That is, if a relational strategy highlighting openness and close interaction with certain suppliers is chosen, then the behavior must align with it. Extremely competitive persuasion behavior by one or more representatives of a firm may adversely affect the atmosphere of otherwise close relationships. On the other hand, competitive persuasion behavior may be an effective tactic in relationships that are intended to remain transactional.

5.2 Limitations and future research

Like all research, this study has certain limitations. First, the potential to generalize from the findings is limited, particularly because of the relatively small sample drawn from a single industry. The generalizability of the results could be improved with a large sample and an extension of the study to other industries. In addition, a more international sample would benefit the generalizability of the findings. Second, because quantitative methods are incapable of fully capturing the complexity and variety of BSB, future studies could benefit from commissioning in-depth case studies concentrating on the role of BSB in inter-organizational learning or in other relationship-level outcomes.

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APPENDIX 1. Factor loadings and composite reliabilities (n=311).

Constructs and items	Mean	SD	Loading
<i>Control variables</i>			
Company age	26.10	23.92	
Company size	1083.58	275.46	
<i>Main variables</i>			
Boundary spanning behavior			
Assess your behavior when interacting with the suppliers of your company. I act in the following way (1=never, 7=very often):			
<i>Relational behavior (CR: 0.77)</i>			
I avoid searching for the reasons for problems only from the supplier's point of view and aim to examine the situation as a whole.	5.85	0.84	0.61
I aim to discover mutually beneficial solutions.	5.87	0.77	0.68
I am open to various points of view and solutions.	5.97	0.79	0.53
I make it known that objectives and means are planned together with suppliers.	5.25	1.00	0.63
I aim to see things also from the supplier's point of view and thus search for a mutual solution.	5.52	0.93	0.70
<i>Hierarchical behavior (CR: 0.68)</i>			
I emphasize that we as a client have a right to receive all the relevant information about the supplier's behavior related to this client relationship.	4.31	1.39	0.77
I make it clear to the supplier that neglecting our demands will have consequences.	4.24	1.33	0.62
I emphasize that we as a client have a right to demand that things are carried out the way we prefer.	4.30	1.27	0.52
<i>Competitive behavior (CR: 0.74)</i>			
I explain the importance of continuous cost savings given the tight, competitive situation of my company.	5.12	1.36	0.51
I stress that we are continuously searching the markets for suppliers operating in new and innovative ways.	3.99	1.45	0.81
I highlight that there are low-cost suppliers available on the market.	3.70	1.31	0.77
Learning behavior			
Assess the accuracy of the following claims concerning supplier relationships as they pertain to your own work community (1=completely disagree, 7=completely agree):			
<i>Experimentation (CR: 0.85)</i>			
We very actively test new methods with a supplier interface.	4.12	1.31	0.81
Our objective is to continuously renew practices in supplier relationships.	4.27	1.38	0.74
We constantly search for good examples in order to renew the practices of our supplier relationships.	4.35	1.35	0.78
We are known for being active in adopting new operations models in our relationships with suppliers.	3.88	1.32	0.72
<i>Reflective communication (CR: 0.79)</i>			
We are continuously engaged in an open dialogue with our suppliers.	5.35	1.12	0.58
We gladly receive feedback from suppliers and openly discuss it.	5.70	1.06	0.64
We encourage our suppliers to participate in an active discussion about our mutual operations.	5.17	1.29	0.80
We frequently meet with our suppliers and extensively discuss different opportunities to develop operations.	4.58	1.34	0.74
<i>Knowledge codification (CR: 0.76)</i>			
We keep a record of so-called best practices for dealing with suppliers.	4.25	1.58	0.68
We maintain a database about ideas on how to develop operations in supplier relationships.	3.85	1.66	0.56
The feedback and ideas received from suppliers influence the development of our operations.	5.05	1.10	0.64
We systematically and openly monitor the realization of the developmental measures agreed with the suppliers.	4.49	1.47	0.76
Purchasing performance (CR: 0.73)			
Purchasing efficiency (purchasing value/costs of the purchasing organization) has significantly improved.	4.90	0.94	0.74
Occurrence of quality anomalies in purchased products in relation to the general level in our field is very small.	4.83	1.09	0.42
The commitment and development activity of the companies in our supply chain is generally very high.	4.86	1.01	0.86

UNTANGLING WHAT UNDERPINS THE COMMUNICATIVE ARSENAL OF BUYERS IN CUSTOMER–SUPPLIER RELATIONSHIPS: A MULTIPLE GOVERNANCE APPROACH TO BOUNDARY-SPANNING BEHAVIOR

Vesalainen, Rajala & Wincent

Abstract

This study introduces a framework of persuasive tactics central to understanding how individual buyers behave as boundary spanners to manage customer–supplier relationships. Drawing from the multiple governance approach, we assume persuasive tactics reflect hierarchical, competitive, and relational behavioral orientations, those orientations being independent from each other. Boundary-spanning behavior thus manifests itself as individuals’ styles of persuasion based on the three dimensions. In a sample of 349 purchasers, we find support for the existence of four styles: competitive/hierarchical, relational, comprehensive, and neutral. A subsequent follow up study of 12 interviews with managers from the four groups suggests storylines that reflect the background of why buyers use the different persuasive styles. The findings outline the background that helps understand the persuasion tactics used by buyers, and how such buyers assume and act upon the boundary-spanning role in their relationships with suppliers.

Keywords: Boundary-spanning, customer–supplier governance, persuasion, mixed-method

1 INTRODUCTION

The nature of inter-firm relationships depends largely on the governance mechanisms buyer firms’ use when managing their networks. Taking a buyer-firm position in a dyadic business relationship, governance manifests in person-to-person interaction where the representatives of the buyer firm try to manage their suppliers’ conduct. The individual actors involved are usually called boundary role persons (Adams, 1976), key contact employees (Charvet & Cooper, 2011), or simply boundary spanners. Such actors play an important role in inter-organizational interaction by providing the linking mechanism across organizational boundaries. Despite the importance of the topic, little is known about industrial buyers’ interaction styles in the direct interaction process between individual buyers and sellers (Lamming et al. 1996; Johnston, 1999). This research focuses on boundary personnel interaction (Blois, 2002) in the context of inter-organizational relationships. More specifically, we address the topic of the persuasion tactics applied by purchasers from buyer firms

and study it as a three-dimensional phenomenon in line with the multiple governance literature (Adler, 2001; Bradach & Eccles, 1989). The multiple governance view interprets governance mechanisms (hierarchical, competitive, and relational) as mutually non-exclusive dimensions enabling the existence of various configurations of governance. We extend the usual firm-level focus of governance to the individual level investigation by assuming that purchasers' boundary-spanning behavior reflects the relational, hierarchical, and competitive dimensions of interaction forming various configurative styles.

The boundary-spanning literature provides a promising, yet somewhat limited, account of the roles and behavior of agents in inter-organizational contexts. Prior studies of boundary-spanning behavior have primarily focused on team-level investigations (e.g. Ancona & Caldwell, 1992; Joshi, Pandey, & Han, 2009; Marrone, Tesluk, & Carson, 2007), and have viewed boundary-spanning behavior as the intention to establish relationships and interactions with external actors that can assist the boundary-spanning team in meeting its goals (Ancona & Caldwell, 1992; Joshi et al., 2009; Marrone, 2010; Marrone et al., 2007). Prior research fails to explain how purchasers engage styles in dealing with suppliers. We focus attention to this discrepancy in the boundary-spanning literature while arguing that boundary-spanning behavior is more than achieving a boundary-spanning team's or an organization's goals: it is a dyadic process that is based on individuals' behavior and interaction in an inter-organizational context. Although literature focusing on the relational view (Dyer & Singh, 1998) and trust in relationships is rich, there is still room for a better understanding of the role of purchasers as developers and users of social capital in supplier relationships. The relations that individual boundary spanners create with suppliers provide opportunities to formulate broader agendas between organizations, because purchasers acting as boundary spanners perform a broad range of activities, from representing their companies' strategic goals and intent to applying their expertise to maintain buyer-supplier collaborations (Perrone, Zaheer, & McEvily, 2003; Zhang, Viswanathan, & Henke, 2011). That said, while it seems natural to expect purchasers to follow the strategic goals of their organization, studies report that boundary spanners in general tend to act upon other motives (Korschun, 2015). Without attention to this variation of motives and rationales for using different styles and tactics, the scholarly understanding of buyers' boundary-spanning behavior and the particular styles they use in interacting with suppliers is necessarily incomplete.

The present study adds to the knowledge on the nature of inter-organizational relationships by focusing on individual boundary spanners' behavior in a cross-border context. We particularly study the styles purchasers from a customer firm adopt in trying to interact with suppliers. Drawing from the multiple governance literature we have been able to define and empirically verify the manifestation of four different styles of boundary-spanning behavior: a comprehensive style, a style combining hierarchical and competitive dimensions of behavior, a relational style, and a neutral style. By taking the four behavioral styles as a starting point, we subsequently chose to interview three typical representatives from each group to elicit their motivation for adopting their chosen style. The results show that various person-, position-, firm-, and supplier-related motives are associated with the styles adopted. In addition, we make a theoretical contribution to social capital theory by showing that *having* social capital does not necessarily precede *using* social capital. Prior research on social capital in inter-organizational relationships has often built on the assumption that individuals will

take advantage of their network contacts, but our results show that this assumption is not necessarily justified. Social capital theory emphasizes the active involvement and intensive exchange of knowledge and learning, while we identify an alternative view where trust leads to very passive behavior.

2 LITERATURE REVIEW

2.1 Boundary-spanning behavior and social capital

The literature on boundary-spanning emphasizes the effects of the different roles of boundary spanners (e.g., Ancona & Caldwell, 1992). The categorization of boundary spanners' roles includes representatives versus gatekeepers (Friedman & Podolny, 1992), and roles as scout, ambassador, sentry, and guard (Ancona & Caldwell, 1992). Moreover, boundary-spanning research largely focuses on team-level investigations within intra-organizational contexts (e.g. Ancona & Caldwell, 1992; Joshi et al., 2009; Marrone et al., 2007). Team-level studies are mostly based on individual boundary spanners' behaviors that are further aggregated to the team level. Moreover, boundary-spanning research is interconnected with social capital theory (e.g., Huang, Luo, Liu, & Yang, 2016; Joshi et al., 2009).

Social capital represents "the relational resources attainable by individual actors through networks of social relationships" (Tsai, 2000, p. 927). Social capital has also been described as two dimensional because it has both structural and relational components. Structural embeddedness refers to an actor's network position (Nahapiet & Ghoshal, 1998) and it has been argued that holding a central network position is an important aspect of social capital that facilitates individual boundary spanner's occupational attainment, power, and external resource acquisition (Tsai, 2000). Relational embeddedness refers to trustworthiness and a trusting relationship existing among network actors (Nahapiet & Ghoshal, 1998; Tsai, 2000). Previous research has shown that trustworthiness constrains opportunistic behavior by parties and reduces the cost of finding an exchange partner (Tsai, 2000). Moreover, trust facilitates the resource and information exchange that are important for performance but are difficult to transfer in market oriented relationships (Uzzi, 1996). Developing relationships and social ties with suppliers can provide a network of valuable resources for boundary spanners, for example purchasers can connect to other important social actors, develop trust and social support, and exchange information (Nahapiet & Ghoshal, 1998). Moreover, it has been argued that boundary spanners who are socially embedded, are more likely to develop a shared understanding of how to behave in order to achieve performance benefits (Bernardes, 2010).

Several factors have been identified as determinants of boundary-spanning behavior. First, personal characteristics are a source of varying behavior (Choi, 2002; Zhang et al., 2011). In addition, some personal factors related to motivation and competency can be critical for increasing an individual's engagement, effectiveness, and persistence in boundary-spanning behavior (Marrone, 2010). Second, it is argued that individuals develop an understanding of appropriate action on the basis of the rules of their organization (Ruyter, Jong, & Wetzels, 2009). Moreover, Heide and Wathne (2006) argued

that rules of behavior are rooted in norms and in the appropriateness of behavior. They considered relationship roles through general governance mechanisms (see e.g., Heide, 1994), and viewed individuals as collections of various roles resulting in the coexistence of calculative and heuristic orientations and the associated roles of a businessperson and a friend. Third, boundary spanners maintain a certain type of external communication because of their formally assigned roles. Johnson and Chang (2000), for example, emphasize that individuals shape their external communication patterns in the frames of their formal position. Similarly, it is suggested that the formal job functions specified by an organization set frames for boundary spanners' behavior, but also that boundary spanners subjectively interpret the formal job description and then shape their behavior (Perrone et al., 2003; Zhang et al., 2011). Fourth, the situation per se influences the manifestation of the boundary-spanning behavior (Prior, 2015). One important aspect of a situation relates to the other party to a relationship. Relationships with good inter-organizational fit presumably demand different boundary-spanning behavior than more distant ones.

2.2 Boundary-spanning behavior in purchasing

Buyers' boundary-spanning roles are multifaceted; buyers are responsible for establishing and maintaining a supplier relationship, while they also need to respond to the needs of multiple parties within their organization (Hallenbeck, Hautaluoma, & Bates, 1999). Zhang et al. (2011) classified purchasing agents' external representation functions as communicating information to the environment; using their knowledge and expertise to influence the external environment; and striking a compromise between their organization and their operating environment. In a similar vein, scholars have identified information processing and external representation as the main roles of boundary spanners (Huang et al., 2016; Ireland & Webb, 2007; Zhang, Wu, & Henke, 2015). Further, Zhang et al. (2011) argue that purchasing agents need to have boundary-spanning capabilities including strategic communication; professional knowledge; and an ability to reach a compromise with suppliers in order to represent the policies and strategic directions set by their company and to proactively shape the interaction environment between buyers and suppliers.

Its boundary spanners enable a buyer firm to connect with its suppliers, which can result in collaborative behaviors in pursuit of mutual goals (Huang et al., 2016). This type of behavior links to relational embeddedness in social capital theory. However, supplier relationships might produce unexpected situations and conflicts, which require purchasing professionals to act as problem-solving conduits, so as to negotiate and resolve issues through persuasion and joint actions (Friedman & Podolny, 1992; Huang et al., 2016). Unexpected situations might also require a structural embeddedness if they are to be solved. Accordingly, the boundary-spanning role in purchasing is essentially multifaceted and requires the presence of various mechanisms to support purchasers seeking to influence suppliers. Furthermore, social capital research suggests that prior social relationships facilitate the establishment and governance of future relationships (Tsai, 2000). Kwon and Adler (2014) argued that sources of social capital lie in the social relations among boundary spanners, but that those social relations differ in relations of market exchange and in hierarchical authority. In addition, Uzzi (1996) viewed trust as a governance mechanism that facilitates

information exchange and the exchange of resources that are integral to high performance, but difficult to transfer via market exchange relationships.

2.3 Multiple governance and buyers' boundary-spanning behavior

Traditionally buyer-supplier relationships have been considered to exist along a continuum of single transactions to relational exchanges (Dwyer, Schurr, & Oh, 1987; Macneil, 1980), from transactional to relational relationships (Rinehart, Eckert, Handfield, Page, & Atkin, 2004), or from arms-length relationships to vertical integration (Lambert, Emmelhainz, & Gardner, 1996). However, scholars have questioned the continuum thinking on relationships and emphasized the importance of a set of basic mechanisms (market, hierarchy, and social) in governing inter-organizational relationships and in identifying the boundary position (Adler, 2001; Kohtamäki, 2010; Ritter, 2007; Vesalainen & Kohtamäki, 2015). In this study, we conceptualize the interactions between buyer and supplier as a relationship governance mechanism where the purchaser is an active boundary spanner. By doing so, we highlight the important role of individual boundary spanners (Johnston, et.al, 1999) in maintaining inter-organizational relationships, a boundary-spanning space that has attracted only a limited amount of research.

Bradach and Eccles (1989) argued that in contrast to conventional approaches that treat market and hierarchy as mutually exclusive mechanisms (or as poles of a continuum), price, authority, and trust are independent and can be combined in a variety of ways. Adler (2001) continued this line of reasoning by arguing that all institutions (with an inter-organizational relationship being one of them) embody varying mixes of three ideal-typical organizational forms, each using a specific coordination mechanism. Hierarchies are coordinated by authority, markets by price, and communities by trust. These ideal-typical modes of organizing can be seen as independent dimensions appearing in varying proportions in different institutions: "*inter-firm relations in real markets embody and rely on varying degrees of trust and hierarchical authority, even if their primary mechanism is price*" (Adler, 2001, p. 216). In the present study, we follow the same basic reasoning and assume purchasers' boundary-spanning behavior gains its influence logic from *hierarchical*, *competitive*, and *relational* behavioral orientations when interacting with suppliers.

The multiple governance view carries an important message. Following the three-dimensional logic, each mode of organizing is an independent dimension, and does not represent an opposite end of a unidimensional governance continuum. Instead, the modes imply that purchaser boundary behavior is actually a mixture of various behavioral tactics. Another important consequence of the three-dimensionality of inter-organizational relationships concerns the zero-point behavior, which is here typified by a neutral purchaser position toward a supplier. In addressing governance mechanisms, Adler (2001) labeled this kind of organization mode an 'asocial horde,' metaphorically describing a chaotic situation in which none of the three coordination mechanisms is activated. Similarly, in classical management models, neutral managerial behavior is categorized as *laissez-faire* management (Lewin, Lippitt, & White, 1939). Within this setting, the *laissez-faire* managerial style

scores low in both autocratic and democratic dimensions, thus essentially representing the same idea of zero-point behavior as Adler's (Adler, 2001) 'asocial horde.'

Authoritarian power usually resides in organizations in which power is legitimized through organizational hierarchy (Adler, 2001). In the inter-organizational context, *hierarchical behavior* exists when the parties to a relationship try to exercise power over each other. In this context, power can be defined as the ability of the industrial purchaser to influence the intentions and actions of the supplier (Handley & Benton, 2012; Maloni & Benton, 2000). From a market governance perspective, an industrial purchaser can adopt *competitive behavior* (Walker & Weber, 1984), which means offsetting investments in other relationships to signal the existence of market forces (Heide & John, 1988). *Relational behavior* is based on social capital and relational orientation to maintain relationships. In the present research, boundary behavior tactics describe the manner in which relationships are maintained with suppliers; indeed, these mechanisms differ radically across governance forms (Heide, 1994).

To summarize, the theoretical discussion above proposes that industrial purchasers' boundary-spanning behavior can be observed by using three distinct behavioral dimensions. The chosen dimensions—*hierarchical*, *competitive*, and *relational*—are consistent with the multiple governance view presented (Adler, 2001; Bradach & Eccles, 1989). Inter-organizational boundary-spanning behavior can therefore be seen as a mode of interaction in which different persuasion tactics can be combined. This approach also accepts the appearance of a zero-point behavior, in the form of a neutral style of boundary-spanning behavior.

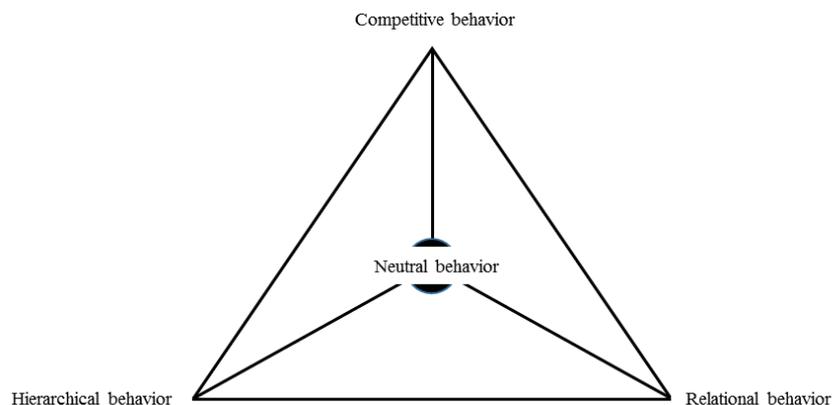


Figure 1. The multiple governance approach to boundary-spanning behavior

3 METHOD

Our study employs a mixed-method design, which combines aspects of quantitative and qualitative research. The mixed-method approach does not provide a perfect solution, but attempts to combine insights provided by quantitative and qualitative research into a workable solution, and it also incorporates the strengths of both methodologies (Bell, Fisher, Brown, & Mann, 2016; R. B. Johnson & Onwuegbuzie, 2004). Moreover, it has been argued that mixed-methods research has the potential to address some of the problems associated with using singular methods (Johnson & Onwuegbuzie, 2004).

Study 1 is a piece of quantitative research exploring the different boundary-spanning behavior styles of purchasers. It measures¹ the different dimensions of the boundary-spanning behavior of those purchasers and examines the extent to which behavioral styles differ. The quantitative research method permits the capture of different dimensions of purchasers' boundary-spanning behavior and reveals different styles of behavior. However, the quantitative method does not explain *why* purchasers act as they do. We therefore also conduct a qualitative study to explore the reasons for adopting a particular behavioral style. Based on the identified boundary-spanning behavior styles in Study 1, the interviewees were selected by their behavioral style to inform Study 2, which examines why purchasers behave in the way they do, and the extent to which the existence of social capital affects their behaviors. This combination of quantitative and qualitative research enables us to capture the phenomenon of purchasers' boundary-spanning behavior.

3.1 Study 1: Mapping industrial purchasers' styles of boundary-spanning behavior

3.1.1 Data

The data used to study industrial purchasers' boundary-spanning styles were gathered from the Finnish manufacturing industry, and collected in two phases. In the first phase, a research assistant telephoned 415 companies to identify the person or persons responsible for purchasing, and then called the nominated people directly to request their assistance with a survey. A total of 365 persons responsible for purchasing agreed, 52 declined, and 36 could not be reached. The 365 people who agreed to accept the survey were sent a link via email, and of those, 178 eventually returned completed surveys. These 178 were asked to nominate some of their colleagues who also acted in purchaser or other boundary roles. As a result, the research team sent the survey link to an additional 196 people and received survey responses from 92 of them. In the second phase, these companies were contacted again to identify more respondents and additional survey candidates were contacted by telephone. In the second phase, 147 persons were contacted; a total of 123 persons agreed to participate, six declined, and 18 informed us that in their company the phase one respondent was the only person working with suppliers. As a result of phase two, 79 new survey responses were received.

¹ For the validation of the measure see Vesalainen, Rajala & Wincent, (2016)

The final sample consisted of 349 responses to the web-based survey (a response rate of 51%). The vast majority (79%) were men, mainly working in the purchasing function of the company (72%), and usually holding a supervisory level position (42%). The respondents mainly worked in Finnish-owned companies (57%), and the company size varied from 50 to over 1,000 employees. The operating revenue of the companies ranged from EUR 10 million to over EUR 1,000 million.

3.1.2 Measures

Boundary-spanning behavior is measured by a three-dimensional construct comprising relational behavior, hierarchical behavior, and competitive behavior. Respondents were asked to rate how often they use certain tactics on a scale anchored with *hardly ever* (1) and *very often* (7) when interacting with suppliers. Relational behavior is measured by five items, such as “I make it known that objectives and means are planned together with suppliers,” and “I aim to discover mutually beneficial solutions.” Hierarchical behavior is measured by five items, for example “I make it clear to the supplier that neglecting our demands will have consequences” and “I emphasize that we as a client have a right to demand that things are carried out the way we prefer.” Competitive behavior is measured by three items, such as, “I make it known that we are continuously searching for new accomplished low-cost suppliers to our network” and “I highlight that there are low-cost suppliers available on the market.”

3.1.3 Analysis

A confirmatory factor analysis (CFA) was performed to validate the scale used. The fit-statistics indicated a satisfactory model fit (CFI=0.94, TLI=0.92, RMSEA=0.06, SRMR=0.05, $\chi^2/df=2.1$). All items loaded significantly on their latent construct ($p<0.001$). The Cronbach's alpha values for different dimensions were 0.77 (relational behavior), 0.72 (hierarchical behavior), and 0.74 (competitive behavior), suggesting that the measure has internal consistency and reliability.

Further, a cluster analysis was conducted to identify the use of various tactics and to find different boundary-spanning behavior styles. The respondents were clustered into homogeneous groups by using composite variables of the three constructs of boundary-spanning behavior. Schwarz's Bayesian Criterion (BIC value) was used to specify the appropriate number of clusters; the smaller the BIC value, the better the fit. A 5-cluster solution registered the smallest BIC value. However, the difference between BIC values of the 4-cluster and 5-cluster solutions at 538.2 and 539.1, respectively was very small, indicating that statistically the solutions were equally good (Fraley & Raftery, 1998). Consistent with these recommendations, we concluded the four-cluster solution was the most relevant by showing that industrial purchasers attempt to influence suppliers by adopting different styles in terms of behavioral strength and type.

3.1.4 Results

Cluster 1 consists of buyers with a *comprehensive* style of boundary-spanning behavior. In this style, all dimensions score high (relational = 0.48; hierarchical = 0.94; competitive = 0.90). The appearance of such a cluster provides evidence that all the persuasion logics can be present simultaneously in the purchaser's communicative arsenal. The second cluster, the *competitive/hierarchical* style, encompasses industrial purchasers whose persuasion tactics are based on the use of the customers' hierarchical position and the threat of competition. In this style, competitive behavior (0.11) scores relatively high. Hierarchical behavior (-0.18) is close to average while relational behavior scores low (-0.84). The third cluster consists of industrial purchasers who were not willing to threaten suppliers with competitive forces or to use their hierarchical power as a customer, but chose instead to emphasize the importance of long-term relationships and demonstrate a willingness to develop the relationship. These respondents have adopted the *relational style*, typified by a high score on relational behavior (0.77) while the other behavioral dimensions score low (hierarchical = -0.27; competitive = -0.53). The fourth cluster consists of purchasers who use the *neutral style*, where none of the tactics of boundary-spanning behavior dominate in the purchasers' interaction with suppliers. All the behavioral dimensions scored very low (relational = -0.67; hierarchical = -1.47; competitive = -1.57).

Table 1. The 4-cluster solution.

Cluster	Number of cases (%)
1. Comprehensive style	108 (31%)
2. Competitive/hierarchical style	113 (32%)
3. Relational style	89 (26%)
4. Neutral style	39 (11%)

Finally, the clusters were analyzed against a few background variables. Purchasers with the competitive/hierarchical style spend less time interacting with suppliers than purchasers with the comprehensive style ($p = .005$). The comprehensive style is mostly used by purchasers working in the purchasing function of a company; the *laissez-faire* style is mostly used by persons working in the production function ($p = .003$). The relational style is used by persons working in the R&D function, whereas the comprehensive style is characteristic of purchasing professionals ($p = .04$). We did not find significant differences between the clusters in terms of gender, age, educational background, or hierarchical level.

The exploratory study showed that purchasers adopt different orientations when investigated by a measure derived from the multiple governance approach. The categorization of purchasers in terms of their behavioral orientation is a result per se, and it advances the knowledge of how buyers interact in inter-organizational contexts. All the types are interesting and especially the appearance of a buyer type with a neutral style seems to be something previous literature has not acknowledged. A categorization is still a descriptive outcome of research and it evokes further questions more than it completely fulfills researcher needs. One of those questions is: Why does a certain purchaser use a style that seems to become typical for her/himself? As pointed out earlier in this article, the possible reasons are manifold, ranging from personal characteristics to situational factors or position-related expectations to firm-specific policies. In order to shed light on the background of purchasers' behavioral orientations, we continued the study by interviewing three typical respondents from each category to elicit their personal understanding of the reasons behind their behavioral orientation.

3.2 Study 2: Factors affecting purchasers' boundary-spanning behavior

3.2.1 Data

In order to understand the factors affecting purchasers' boundary-spanning behavior, we conducted a qualitative study by interviewing 12 purchasers, who we identified from the different clusters found in Study 1. The interviews lasted approximately 35 minutes on average, with the length varying from 19 minutes to 60 minutes. Details of the interviewees are presented in Table 2.

Table 2. The purchasers interviewed.

Style	Interviewee	Position	Length of interview (min)
Comprehensive	C1	head of supplies	30
Comprehensive	C2	strategic purchaser	29
Comprehensive	C3	purchasing manager	47
Competitive/hierarchical	CH1	purchaser	28
Competitive/hierarchical	CH2	purchasing manager	24
Competitive/hierarchical	CH3	head of supplies	25
Relational	R1	production manager	19
Relational	R2	strategic purchaser	49
Relational	R3	purchasing manager	27
Laissez-faire	LF1	strategic purchaser	41
Laissez-faire	LF2	purchasing manager	60
Laissez-faire	LF3	purchasing manager	33

The interviews included two parts: the first part was unstructured and the second part was theme-based. In the first part, the interviewees were asked to describe factors related to their boundary-spanning behavior style and more specifically they were asked why they behave in a particular way in the supplier interface. In the second part, the interviewees were asked if some factors identified in prior literature have an effect on their behavior. These factors related to the respondents' self-image, job description/position, firm-specific factors, and factors related to relationships or suppliers.

3.2.2 Analysis

The interview data were analyzed in two phases combining contents analysis and cross-case analysis. The first data-driven content analysis phase addressed the whole data-set to reveal its thematic structure (Dooley, 2016). The data were analyzed using NVivo10 software. As mentioned above, our interview protocol consisted of two phases: an open and a thematic phase. The content analysis did not reveal any new content category and the four thematic categories found were in line with the prior literature. The content categories for the background of the purchasers' boundary-spanning behavior relate to 1) person (P) 2) position (PO), 3) customer firm (F) and 4) supplier (S). The analysis was continued by generating second-order themes within the main categories (Miles & Huberman, 1994), simultaneously controlling the four groups of the representatives of different styles (Dubois & Araujo, 2007). This analysis produced four different second-order content categories for each first order category, where the second-order categories content varies between groups of different styles.

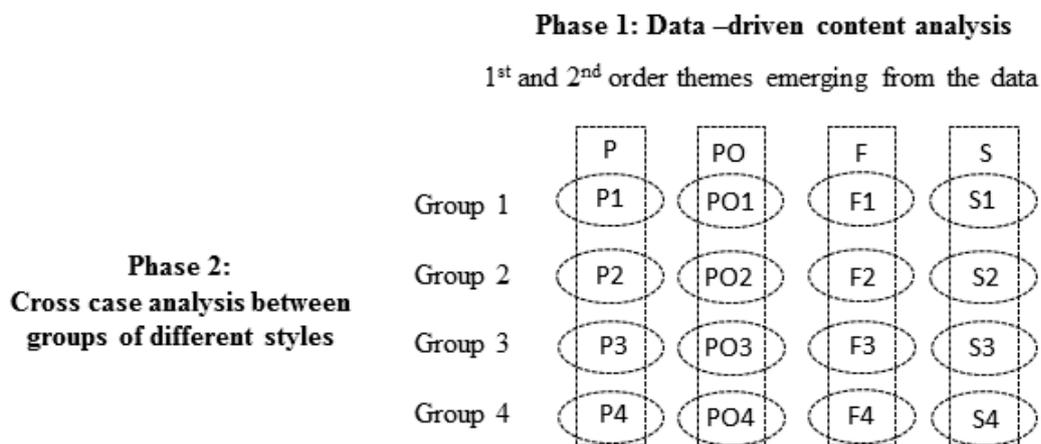


Figure 2. The logic involved in analyzing the interview data.

3.2.3 Findings

At the commencement of the interviews, the interviewer presented the results from Study 1 to the interviewees and asked if they recognized themselves as members of the cluster they were assigned to. Eleven interviewees agreed with the styles, one informant identified as adopting a competitive/hierarchical style disagreed, but during the interview the informant described her behavior in a way that reflects the use of a competitive/hierarchical style. This proceeding further validated the clusters found in Study 1.

The open part of the interview, that without any explicit thematic orientation, did not reveal any new aspects that could influence purchaser behavior, so the motives recognized in the prevailing literature appeared to be relevant in this study too. That was because the interviewees were able to connect their behaviors to personal reasons, position-related reasons, firm-related reasons, and supplier-related reasons. The thematic coding therefore produced four cause categories for purchaser boundary-spanning behavior. Personal reasons were related to the self-image and ways of working of a purchaser, while position-related reasons reflect how a purchaser interprets his/her position. Firm-related reasons reflect the culture, policies, and practices of a company and supplier-related reasons emphasize how suppliers are viewed by a purchaser.

Below, we detail how purchasers with different boundary-spanning styles make sense of their behavior.

Personal self-image and attitudes reflecting the behavioral orientation

The self-image and attitudes of the purchasers varied substantially between the categories. Where the purchasers with a competitive/hierarchical style seem to have a *dog-trainer attitude*, with straightforward and even aggressive feedback to suppliers, the purchasers with a relational style highlighted the importance of an attitude that could be labeled *let's-solve-the-problems-together*, which invokes openness and a long-term orientation. Further, the purchasers with a neutral style seem to possess a trusting and committed personal attitude toward suppliers. They stress commitment and trust without building actions on social capital, but rather try to avoid personal confrontations. This kind of behavior tends to reflect what might be termed a *go-with-the-flow* attitude. Even the respondents with the comprehensive style highlighted fairness and honesty as a personal guiding principle (a *fairness-above-all* attitude). It thus seems that purchasers with a behavioral orientation other than the competitive/hierarchical form employ a positive but different relational tone in their personal attitude toward suppliers. When purchasers who adopt a relational style seem to have a more active approach to cooperation, those purchasers with a neutral style just rely on trust and highlight the importance of showing commitment to the current suppliers.

Purchaser's position reflecting the behavioral orientation

With regard to the importance of purchaser position for boundary-spanning behavior, the individuals using a comprehensive style tend to have a practical and very natural view of their position and its meaning for their behavior in supplier relationships (a *natural authority* role). The purchasers with the competitive/hierarchical orientation seem to have adopted a role that highlights the importance of

playing the buyer role. In this role, they see themselves as purchasing professionals with a responsibility to buy cheaply. This is also a role they interpret their employer expects them to fulfill. On the contrary, those purchasers adopting a relational style seem to *look beyond the role* by actually denying the importance of their role as a representative of a customer firm. The purchasers with the neutral orientation present an even more interesting interpretation of their role, in that they tend to act in a *filtering mediator role*, when they try on occasion to protect the suppliers from the harshest criticism of other representatives of their own organization. In adopting such a role, they differ notably from other purchasers, and especially from those favoring a competitive/hierarchical orientation.

Company purchasing policies reflecting the behavioral orientation

The purchasers with a competitive/hierarchical orientation view the company purchasing policy as legitimizing the strong use of the market mechanism in their interaction with suppliers (the *use-of-the-market-mechanism* policy). This kind of thinking is also characteristic of the purchasers adopting a comprehensive orientation, but they seem to be more broadly instrumental in their thinking as they do not highlight the importance of the price mechanisms as openly as the previous group of actors. Once again, the views presented by the purchasers with a relational orientation differ strongly from the views of the competitive/hierarchical group in particular. The former tend to underplay the importance of the use of the price mechanism and highlight the long-term and joint-development activities with the suppliers (a *development-oriented* policy). Even when seeking a price reduction is unavoidable, they seek cooperative solutions rather than doggedly pursuing price cuts. The purchasers with a neutral orientation also highlight the importance of the ease of supplier interaction (an *easy-living-with-suppliers* policy). This may be achieved by ensuring a good fit between the customer and the supplier.

Viewing the supplier role reflecting the behavioral orientation

Purchasers with different behavioral orientations view suppliers differently. The competitive/hierarchically-oriented and the relationally-oriented groups of purchasers are at opposite ends of the spectrum. While competitive/hierarchically-oriented purchasers see suppliers as replaceable agents (the *replaceable-supplier* view), the group of relationally-oriented purchasers view them as cooperative assets (the *supplier-as-a-cooperative asset* view). Among the group of comprehensively-oriented purchasers, the view of the supplier is more pragmatic, as it takes into account various situations with different types of suppliers (the *pragmatic* supplier view). The individuals with a neutral orientation tend to see supplier representatives as personal friends. At least they highlight the importance of personal relationships with the representatives of supplier firms.

Table 3. Comparing the various background factors of purchasers' boundary-spanning orientations

Behavioral orientation	Interpreted nature of the determinants of behavior	Exemplar interview extract
	<i>Person related reasons:</i> Fairness-above-all attitude	<p>"I aim that suppliers can never say that we have mistreated them, that honesty and fairness are important in working" (C1)</p> <p>"I aim to have long-term relationships with suppliers...I do not change them every year because of some small thing if everything works" (C3)</p> <p>"It is very natural way (comprehensive style) of working to me" (C2)</p>
	<i>Position-related reasons:</i> Natural authority role	<p>"In some situations, I have taken advantage of my position...and then it has certainly come to (supplier's) top managements knowledge what I require" (C1)</p> <p>"I do not highlight my position in discussions (with suppliers), that it is a more tactical issue, and we use someone from our business unit in these discussions and we get some extra boost from that..." (C2)</p> <p>"I have a certain authority (as a purchasing manager) on these products" (C3)</p>
Comprehensive	<i>Firm-related reasons:</i> Instrumental policy	<p>"We have certain goals...[which influence] the way we communicate with suppliers and act" (C3)</p> <p>"Our purchasing personnel have noticed that you may get short-term wins, but it is important to think about processes and develop practices and that is the only way" (C1)</p> <p>"Our company is a big global company and we have a big procurement unit... this emerges in those discussions (with suppliers) quite strongly" (C2)</p>
	<i>Supplier-related reasons:</i> Pragmatic supplier view	<p>"With some suppliers you can be a sparring partner... if one notices that it is the potential supplier in question...you can even help them to grow and develop their activities and through that get benefits for yourself. With these smaller suppliers you just put the right price and start ordering and only if some problems emerge would you contact them." (C1)</p> <p>"If the supplier thinks that they are the only one...in these situations we can express that there are also other offers... suppliers know our company and the opportunities that our company can offer to them and the volumes and what it might denote to become our supplier" (C2)</p>
	<i>Person related reasons:</i> A dog-trainer attitude	<p>"It might be that I get so angry that I will no longer order from them (supplier)... At least I stop ordering for a while and teach them that one does not mess with me" (CH1)</p> <p>"I say things as they are and I assume that suppliers act in that way" (CH2)</p> <p>"I aim to be really straightforward and honest" (CH3)</p>
Competitive / hierarchical	<i>Position-related reasons:</i> Playing the buyer role	<p>"It is kind of my job" (CH1)</p> <p>"There is a job description according to which I am assumed to work" (CH2)</p> <p>"It is a professional skill to buy at the cheapest possible price" (CH3)</p>
	<i>Firm-related reasons:</i> Use the market mechanism policy	<p>"Our customers request bidding to the last minute, so we kind of have to..." (CH1)</p> <p>"Usually we request 3-5 offers via email and then we pick a couple of them and then we say to those that if you want this deal your price needs to be at this level" (CH2)</p> <p>"We use large volumes of these products, so we kind of have the authority and power to invite tenders" (CH3)</p>
	<i>Supplier-related reasons:</i> Replaceable-supplier view	<p>"We know our suppliers from before and we know how they react to different issues" (CH3)</p> <p>"I say to them that if you do this at that price, then I can give you that other deal" (CH1)</p> <p>"It is not threatening but like we just try to handle this matter..." (CH2)</p> <p>"...sometimes it is necessary to call a spade a spade and go on the spot and put one's foot down" (CH2)</p>

Table 4. Comparing the varying background factors of purchasers' behavioral orientations (cont.)

Behavioral orientation	Interpreted nature of the determinants of behavior	Exemplar interview extract
	<p><i>Person related reasons:</i> Let's solve the problem together attitude</p>	<p>"I believe that this (relational style) produces the best outcome in the long run" (R1) "Because of that (relational way of working) suppliers are also more open about their internal issues and ideas" (R2) "I believe that it (personal characteristics) has a huge influence (on behavior)" (R3)</p>
	<p><i>Position-related reasons:</i> Looking beyond the role</p>	<p>"I do not think that position has any impact" (R3) "Of course, a buyer has a kind of power...but the supplier is not forced to accept it (a position)...but I do not think that it has any significant impact" (R1) "It is necessary to be able to adapt to different styles in my position because we have to deal with different suppliers and different situations" (R2)</p>
Relational	<p><i>Firm-related reasons:</i> Development-oriented policy</p>	<p>"Not only the price matters, we consider the long-term development potential together, and suppliers are selected according to that" (R1) "We have many long-term partners. They matter to us and it is good that they exist. I think that in this way we succeed, not with short-term relationships" (R1) "If our sales department requires that purchasing prices must be cut, then we explore the possibilities together with the supplier." (R2)</p>
	<p><i>Supplier-related reasons:</i> Supplier-as-a-cooperative asset view</p>	<p>"Of course, a supplier needs to be willing to develop... Suppliers are selected based on their ability to develop things further and to deliver the required quality" (R1) "It is easier to collaborate with some suppliers than with others" (R2) "The supplier's own behavior and its viewpoint affects the form of the collaboration" (R3)</p>
	<p><i>Person related reasons:</i> Evading personal conflicts attitude</p>	<p>"I think that even issues are fighting, persons are not allowed to fight" (LF2) "I commit to them (supplier) and promise them that every time I do business with them, I am committed to that. I do not do use written contracts that much" (LF2) "I kind of always work in a same way" (LF3)</p>
Neutral	<p><i>Position-related reasons:</i> A filtering mediator role</p>	<p>"... you represent the company and we have these principles..." (LF3) "I often see myself as a mediator...I do not pass the feedback (to a supplier) in that form that it comes to me from management or production...One needs to be able to filter...even if one's own feelings are similar at that time, because negative feedback causes challenges..." (LF2)</p>
	<p><i>Firm-related reasons:</i> Easy-living-with-suppliers policy</p>	<p>"We have chosen suppliers based on their supplying on time, and with the required quality, and doing business with them is easy" (LF1) "We do what we have decided upon together and no one plays solos" (LF2) "We do not want a supplier to be dependent on us, and prefer that it has multiple customers" (LF3)</p>
	<p><i>Supplier-related reasons:</i> Suppliers as trusted friends view</p>	<p>"That personal relationship with the contact person is always on my mind...small agreements are made like 'let's not get into that'" (LF1) "It is not any specific area (supplier selection) that we would have invested in" (LF3) "From the beginning, it is important to create trusting relationships" (LF3)</p>

The above analysis of the interviews with 12 purchasers with different measured orientations of boundary-spanning behavior deepened the understanding of the premises of the persuasive tactics used. The analysis paints a picture characterizing four differently oriented types of purchasers:

- **Comprehensively-oriented purchasers** highlight the importance of fairness as a personal attitude when working with suppliers. They also see their position as entailing a natural authority role, which is there in the background and not necessarily actively employed. They interpret the company purchasing policy in an instrumental way, as having various means to be used in varying situations. This is accompanied by a pragmatic supplier view highlighting the use of various persuasive means when necessary.
- **Purchasers adopting a competitive/hierarchical** style have an attitude that reflects their need to focus on the obedience of suppliers. They also interpret their role as buyers as being based on buying cheaply, and they use the market mechanism as much as possible to achieve results for their employer. The use of competition in the supplier market is also viewed as the company policy, and thus as a natural way of working.
- **Relationally-oriented purchasers** highlight the power of cooperation and a long-term orientation in supplier relationships. They look beyond the typical purchaser role and highlight more development-oriented supplier relationships where suppliers are viewed as cooperative assets.
- **Purchasers with a neutral style** tend to avoid open confrontation with suppliers and might even act as a form of filter between their own and the suppliers' organization. They talk about company policy highlighting a need to make cooperation with suppliers as easy as possible. Once a supplier is chosen and once the rules have been agreed, everything should run smoothly. They are open to personal friendships with supplier representatives.

4 DISCUSSION

4.1 Research implications

In this study, we have suggested buyer boundary-spanning behavior manifests in three basic dimensions derived from the multiple governance approach. These behavioral orientations are considered to be mutually non-exclusive. In a similar vein, the simultaneous presence of adversarial and collaborative behavior is acknowledged in supply chain literature (e.g., Cox, Sanderson & Watson, 2000). Our view is also in line with Heide and Wathne's (2006) proposition emphasizing the coexistence of calculative and heuristic orientations. They also argued that the existing categorization of relationship roles might be too simplistic, and single dimensions may not fully capture the true nature of relationship interactions. Accordingly, our results provide support to their arguments, and show that boundary-spanning behavior can simultaneously involve different types of interaction tactics. According to Heide and Wathne (2006) the main motivation of the *business person* is utility maximization by the logic of consequences, and a *friend* is driven by the logic of *appropriateness*. This study viewed interaction as three-dimensional and the empirical study resulted in four different boundary-spanning behavior styles: *comprehensive*, *competitive/hierarchical*, *relational*, and *neutral*. The neutral and relational styles have similarities with the role of a friend, in that both are based on relational norms. The competitive/hierarchical and comprehensive styles have some

similarities with the business person role, in that they both target utility maximization of the individual’s own company.

Study 2 delivered an in-depth understanding of why individual buyers adopt different boundary-spanning behavior styles. Our findings indicate that the motives behind the buyers’ behavior are related to their self-image and current position, firm-specific factors, and also situational factors mostly associated with supplier firms and their representatives. Prior research recognizes personality (Choi, 2002; Zhang et al., 2011), organization (Ruyter et al., 2009), formally assigned role (position), job description (J. D. Johnson & Chang, 2000; Perrone et al., 2003; Zhang et al., 2011), and situation (Prior, 2015) as affecting boundary-spanning behavior. Our results provide evidence confirming the relationship between these factors and buyers’ boundary-spanning behavior, however, there is considerable variety in how buyer-specific attitudes, the buyer role, as well as buying policy interpretations and opinions of suppliers manifest themselves in the three basic styles found.

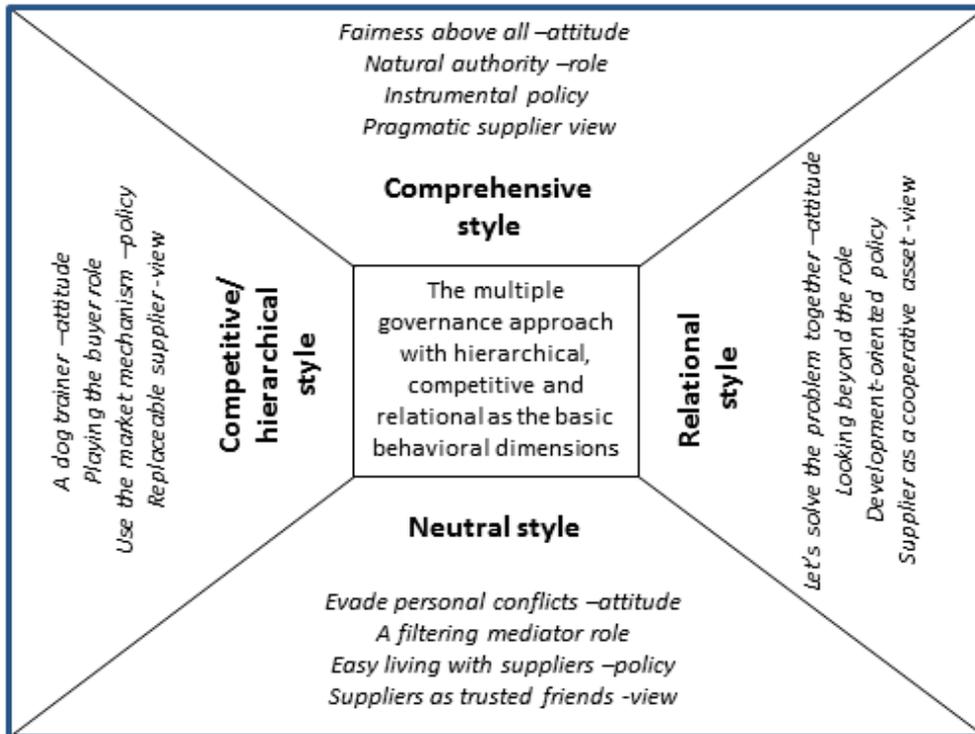


Figure 3. Buyers’ boundary-spanning styles based on the multiple governance approach

Our research contributes to the knowledge on inter-organizational interaction, and particularly on buyers' boundary-spanning behavior, in three ways. First, by introducing the multiple governance approach as a framework for buyers' behavioral orientation we highlight the crucial role of individual action in network management and connect the inter-organizational governance literature to the discussion on boundary-spanning behavior. Moreover, the multiple governance approach revealed the presence of a neutral style of boundary-spanning behavior. Second, the approach chosen resulted in a buyer categorization with varying behavioral configurations. The four behavioral styles described above form two axes for behavioral orientations (Figure 3). The comprehensive and neutral styles form the vertical axis, which differentiates between the magnitude of using all the means for persuasion tactics. Where the neutral style represents the zero-point behavior with a rather weak rhetoric in interaction, the comprehensive style actively deploys all the means available in the persuasive arsenal. On the horizontal axis, the competitive/hierarchical style and the relational style represent the ends of the continuum. This differentiation highlights the separation of relational orientation from competitive/hierarchical orientation. That is to say, certain industrial buyers tend to avoid competitive/hierarchical tactics if they have adopted strong relational orientation, and vice versa. Our third contribution connects boundary-spanning behavior to the prevailing understanding of the determinants of purchasing behavior (Choi, 2002; Marrone, 2010; Ruyter et al., 2009; Zhang et al., 2011). According to our results individual buyers differ from each other in their attitudes, role and buying policy interpretations, and views about suppliers depending on which group they belong to. Our study revealed the existence of a neutral buyer position with a propensity to avoid conflicting situations with suppliers and even to protect them from the harshest criticism from other actors in the buyer organization. The use of social capital in terms of relational orientation is rather passive for buyers adopting a neutral position, whereas buyers with a relational orientation develop and use social capital in order to build long-term open relationships. They thus have an active orientation in terms of the use of social capital. The latter finding is in line with the general understanding of social capital distinguishing between *possessing* social capital and *using* social capital (Kwon & Adler, 2014).

4.2 Managerial implications

Our research has several managerial implications. Given that our study reports that four different boundary-spanning behavior styles exist, decision makers should look to judge what conditions are favorable to them. That involves considering to what extent it makes sense to use a comprehensive, competitive/hierarchical, relational, and neutral style. That can be an important choice because it forms the basis for inter-organizational interaction. Although the best choice may vary, our initial findings suggest that the neutral style may perhaps not be a preferred alternative, and perhaps management should be wary of encouraging such behavior among boundary spanners. We find a risk that such boundary spanners adopt a quite passive role, which might bring its own risks. Moreover, regardless of which style is being used, managers should discuss the potential consequences of replacing the conditions governing how their organization is linked to others. Finally, it is clear theory rationales suggesting that an incorrect choice of style can trigger mismatches and structural problems. Changing and replacing boundary spanners might facilitate a structural realignment and an upswing in the inter-organizational interaction.

4.3 Limitations and further research

While the study offers some interesting insights regarding the available boundary-spanning behavior styles and influential factors behind the styles, it also suffers from limitations. First, the ability to generalize the findings is limited, particularly because of the relatively small sample drawn from a single industry. The generalizability of the results would be strengthened with a large sample and the extension of the study to other industries. In addition, a more international sample would benefit the generalizability of the findings.

Second, the survey is based on self-assessment, and the results could be somewhat different if supplier representatives had been evaluated by purchasers. Future studies could benefit by adopting a more dyadic approach and studying boundary-spanning behavior by asking supplier representatives to assess purchasers' behavior.

Third, the findings of the qualitative study rely on an analysis of 12 interviews, which limits the generalizability of the findings beyond this group. To address this issue, future studies could adopt a quantitative approach concentrating on the antecedents of a certain type of boundary-spanning behavior.

5 CONCLUDING REMARKS

The results of the current study demonstrate that the boundary-spanning styles employed by industrial buyers differ when they are analyzed by a measure drawn from the multiple governance approach. The measure thus seems to be valid and contributive in relation to the wider body of knowledge on network management and especially in the literature on inter-organizational interaction. Addressing individual buyers as boundary spanners is important because inter-organizational relationships are ultimately shaped by the activity and behavior of individual boundary actors. This study also confirms the relevance of the factors of inter-organizational interaction found previously, and succeeds in untangling the type-specific nuances of what underpins the boundary-spanning behavior of individual buyers.

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Coopetition strategy as interrelated praxis and practices on multiple levels



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ABSTRACT

Existing research often considers coopetition as something occurring between organizations on a meso level, that is, a relational or company level. This study explores coopetition strategy in the form of activities from a multilevel perspective. The focus is on coopetition praxis and practices and how these are interrelated on the micro, meso and macro levels. In order to improve our understanding of coopetition activities, we use the strategy-as-practice approach and integrate it with competition research. The empirical part of this study is based on a single qualitative case study of a cooperative relationship between a large multinational company and its supplier. The findings show how praxis on the micro level influences, and is influenced by, practices on the meso and macro levels. Coopetition strategy is shaped over time through the relationship between praxis and practices on different levels. Our study contributes to competition research by focusing on competition strategy as something that is implemented on multiple levels, including the individual (micro) and network (macro) levels alongside the meso level.

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1. Introduction

Scholars have called for more research into the dynamics of coopetition (Kylänen & Rusko, 2011). In 2007, Apple and Google worked together with the first iPhone, and ten months after its market launch, Google introduced Android, thereby introducing competition to the relationship. Another example is the relationship between Samsung Electronics and Sony Corporation (Gnyawali & Park, 2011). Despite fierce rivalry, the companies established a joint venture to develop LCD panels for flat screen televisions, because they were more or less forced to do so for economic and technological reasons. In addition to these cases, small- and medium-sized competitors may cooperate to reach a new market. Moreover, collaborators may become competitors when one company acquires customers and market share from the other (e.g., Tidström & Hagberg-Andersson, 2012). These examples illustrate the common features of cooperative business relationships that often develop from cooperation to competition and are more or less forced upon firms and related to their dependency on each other. To date, most of the research within the business network approach has focused on cooperative vertical business relationships including scarce competition (see e.g., Möller & Törönen, 2003).

Cunningham (2008) encourages business network researchers to focus not only on cooperation, but also on competition. According to Ford and Håkansson (2013) there is scant research within the business network discipline related to competition. They note the lack of a coherent conceptual explanation of the interplay between cooperation and

competition in business networks. The simultaneous existence of cooperation and competition; coopetition is here defined as follows: "... a paradoxical relationship between two or more actors simultaneously involved in cooperative and competitive interactions, regardless of whether their relationship is horizontal or vertical" (Bengtsson & Kock, 2014, p. 182).

Research on coopetition has recently attracted more attention from business network scholars. There are studies focused on identifying different levels of cooperation and competition (Bengtsson, Eriksson, & Wincent, 2010; Bengtsson & Kock, 1999), on the value and performance related to coopetition (Ritala & Tidström, 2014), business models of coopetition (Ritala, Golnam, & Wegmann, 2014) and on the dynamics of cooperation and competition (Dahl, 2014; Tidström & Hagberg-Andersson, 2012). There are also studies related to how to manage tensions and conflicts in coopetition (Fernandez, Le Roy, & Gnyawali, 2014; Raza-Ullah, Bengtsson, & Kock, 2014; Tidström, 2014).

Most of the existing studies view coopetition as a deliberate strategy, but some recognize that coopetition is both deliberate and emergent (Dahl, Kock, & Lundgren, 2016; Mariani, 2007), which means that a deliberate coopetition strategy on the firm level may be influenced by emergent coopetition on other levels. Moreover research on coopetition often focuses on an organizational or relational level, by studying coopetition either within or between companies. There is generally scarce research on coopetition at an individual level. Bengtsson and Kock (2014) call for a multilevel perspective on coopetition—one including individual, organizational, and network levels of analysis.

A useful approach to identifying coopetition at the individual level is the strategy-as-practice perspective (e.g., Jarzabkowski, 2005), according

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to which strategy is something that is implemented in practice, rather than something that a company has. Strategy-as-practice can be described as "...a concern with what people do in relation to strategy and how this is influenced by and influences their organizational and institutional context" (Johnson, Langley, Melin, & Whittington, 2007, p. 7). According to this approach, strategic activity occurs on different levels and strategic practice on a micro level is influenced by and influences strategic practice on macro level. Strategy is related to practitioners, praxis and practices and all these are related on different levels (Seidl & Whittington, 2014; Whittington, 2006). The practitioners are the strategists doing strategic activities, and praxis and practices are related to what strategists do. According to Dahl et al. (2016), the practice approach facilitates an understanding of cooptation by including strategic actors and their activities on multiple levels. Moreover, activities on different levels may influence each other and shape cooptation over time.

The aim of this study is to improve our understanding of cooptation strategy in the form of dynamic interrelated activities on multiple levels. The objective is to identify such cooptation strategy activities and analyze how they are interrelated from a dynamic perspective. The empirical part of the paper is based on a single qualitative case study of a cooperative relationship between a large multinational company and its supplier. The focus is on the cooperative activities (praxis and practice) occurring in and between the focal firms, and how these are interrelated over time on the individual, company, relational, and network levels.

The first section of the paper presents the background to the study and its aims, and the following section presents the theoretical reference framework. The second section consists of a description of the existing cooptation literature related to "doing" cooptation strategy in practice on multiple levels, an introduction to the strategy-as-practice approach alongside the interaction of practices on different levels, and of the connection between cooptation strategy and the practice perspective. The methodology is presented in the third section. The fourth section outlines the findings of the study, and is followed by a discussion in section five. The conclusions of the article, including theoretical and managerial implications and suggestions for future studies, are described in the final section.

2. Cooptation strategy as practice

2.1. Cooptation from a dynamic and multilevel perspective

Most cooptation research focuses on horizontal relationships, that is, cooperation between competitors (e.g. Dahl et al., 2016; Gnyawali & Park, 2011). There is a call for more research on vertical cooptation, and specifically on the simultaneous cooperation and competition between a buyer and a seller (e.g. Lacoste, 2012; Soppe, Lechner, & Dowling, 2014). Previous studies of vertical cooptation have focused on cooptation strategy (Kim, Kim, Pae, & Yip, 2013), balancing cooperation and competition in buyer-supplier relationships (Eriksson, 2008), key accounts combining cooperation and competition in supplier relationships (Lacoste, 2012), cooptation in entrepreneurial firms (Soppe et al., 2014), and cooptation effects on sales growth in small, young firms (Lechner, Soppe, & Dowling, 2016). However, business relationships are not static but dynamic, and therefore a cooperative relationship between a buyer and a seller could develop into cooptation over time. This transition can for example occur through opportunistic activities (Tidström & Hagberg-Andersson, 2012). Although Ford and Håkansson (2006) stress the importance of studying business relationships over time, other research points out that studies of time in vertical cooptation research are scarce (e.g. Lacoste, 2012; Lechner et al., 2016; Soppe et al., 2014). An exception is the study by Eriksson (2008) focusing on how actions taken at different stages of a buying process affect the balance of cooptation in a customer-supplier relationship.

Addressing the dynamics of cooptation in a conceptual paper, Dahl (2014) showed that they relate to the interplay between cooperative and competitive parts of relationships. Tidström and Hagberg-Andersson (2012) argued that in order to understand cooptative business relationships we need to consider how they change over time. Events occurring in business relationships may be related to each other in the past, present, and future and together they can influence the development of the relationship (Hedaa & Törnroos, 2008; Medlin, 2004). According to Tidström and Hagberg-Andersson (2012) there is a need for more empirical research into how business relationships evolve over time.

Bengtsson et al. (2010) argued that the process of cooptation over time is related to levels of cooperation and competition. The same work (p. 200) defines cooptation as "... a process based upon simultaneous and mutual cooperative and competitive interactions between two or more actors at any level of analysis (whether individual, organizational, or other entities)." From a multilevel perspective, cooptation strategy can be related to individual, organizational, inter-organizational and network levels (e.g., Tidström, 2008). These levels are similar to the micro, meso, and macro levels of cooptation (Dagnino & Padula, 2002).

The macro level is here related to the network level, which comprises the market, industry and actors external to the focal business relationship. Clarke-Hill, Li, and Davies (2003) argue that a change in a business relationship can be seen as the result of the interaction between cooperation and competition, and that this change can be intensified by external events. The nature of cooperation and competition in a business relationship may consequently change because of changes in the external environment (e.g., Mattsson & Tidström, 2015). For example, a study by Padula and Dagnino (2007) showed that the more changing and unstable the environmental conditions, the greater the intrusion of competition will be in a cooperative business relationship.

Most cooptation research focuses on the meso level, meaning the relational and organizational level (e.g., Dagnino & Padula, 2002). On a relational level, cooptation is related to simultaneous cooperation and competition between organizations. Cooptation on an organizational level is again related to simultaneous cooperation and competition between units of the same organization. A majority of the cooptation studies on the meso level focus on a relational or an inter-company level (e.g., Bengtsson & Kock, 1999). With the exception of the work of Tsai (2002), there is little research on cooptation within organizations. From a meso-perspective, cooptation is often seen as a deliberate strategy occurring between or within companies. This view contrasts with that asserting cooptation can be emergent (e.g., Mariani, 2007), a status that can, for example, be related to the activities of individuals involved in cooptation (e.g., Kylänen & Rusko, 2011).

Cooptation from the perspective of individuals can be different from the perspective of cooptation strategy on a company level (e.g., Bengtsson et al., 2010). There are studies focusing on various perspectives on individual-level cooptation. Some studies (e.g. Baruch & Lin, 2012; Lin, Wang, Tsai, & Hsu, 2010) have focused on performance related to cooptation from the perspective of cooperation and competition between members of a team. Many studies focus on the managerial perspective on cooptation; for example, Chen, Xie, and Chang (2011) examined the cooperative and competitive orientation of Chinese managers. Geraudel and Salvétat (2014) studied network centrality and the personality of managers, and the effects on the propensity to cooperate and compete, and stressed the importance of recognizing the individual and inter-individual perspective in understanding cooptation. However, Dahl et al. (2016) argue that not only managers should be seen as individual level actors, but also middle-managers and other individuals. Dahl et al. (2016) examined the activities of individual actors by applying a strategy-as-practice perspective. Also Kylänen and Rusko (2011) applied the strategy-as-practice perspective in a study of unintentional cooptation in the tourism industry. The findings of this study showed that the

activities of individual actors are sometimes strategically important to the company, albeit the effect might be unintentional.

According to Bengtsson et al. (2010) and Bengtsson and Kock (2014), cooptation on one level may influence cooptation on another. To some extent recent cooptation research recognizes a multilevel approach. On a conceptual level, the research of Tidström (2008) and Dahl et al. (2016) addressed cooptation from a multilevel perspective by distinguishing between cooptation on individual-, company-, relational-, and external levels. However, these studies did not empirically investigate cooptation on multiple levels. Raza-Ullah et al. (2014) use only illustrative case examples in their study of tension related to the paradox of cooperation and competition inherent in cooptation, from the perspective of individual, organizational, and inter-organizational levels. From a multilevel perspective, Tidström and Hagberg-Andersson (2012) investigated cooptation empirically in a study of the critical events in business relationships evolving from cooperation to competition. The findings of that study showed that critical events occur at different levels, namely the organizational, relational, and network levels. The findings also showed that a business relationship develops from cooperation to competition through knowledge sharing followed by sales-related activities and opportunism. These events all occur on a meso level—either an organizational or a relational one. The Tidström and Hagberg-Andersson (2012) study did not incorporate an individual-level perspective.

A multiple level approach, including an individual level, is evident in a conceptual paper by Dahl et al. (2016), which studied cooptation strategy as an activity from a strategy-as-practice perspective. The work focused on both deliberate and emergent features of the strategy, and how strategic activities are enfolded on individual, organizational, inter-organizational, and institutional levels in cooptation involving competitors. The findings of the theoretical analysis of Dahl et al. showed that strategy as a deliberate practice is related to rationality, prediction, and formality activities among others. As an emergent practice, strategic activities are formed gradually or in an ad hoc manner through social influence, flexibility, and learning occurring on multiple levels of the organization. Strategy practice may also simultaneously be both deliberate and emergent, in the form of a reactive or contextually-derived practice. As a reactive practice, strategic activities in the organization are devised through changes at the inter-organizational level. As a contextually-derived practice, inter-organizational level strategic practices change because of changes on an external level. The study by Dahl et al. (2016) has several merits regarding a multilevel perspective on cooptation from a practice perspective. First, the importance of individual-level activities is stressed. Second, activities on different levels are seen as interrelated. Third, the study distinguishes between emergent and deliberate practices. Despite these merits, the study is conceptual, and outlines some propositions for future empirical investigation. Moreover, the study does not recognize the complexity of how activities on different levels are interrelated and shape cooptation strategy over time.

When analyzing existing research on cooptation as a dynamic and multilevel phenomenon, it is apparent that there are studies related to cooptation as a dynamic activity and those approaching cooptation from a multilevel perspective. However, we are not aware of any study that empirically investigates the dynamics of cooptation strategy on multiple integrated levels at the macro, meso, and micro levels of analysis. In particular, apart from that of Dahl et al. (2016), there is a lack of studies focusing on individual-level activities related to cooptation strategy. According to the business network perspective (Ford & Håkansson, 2013), managers are not “network takers”, but “network makers”, which also refers to a practice- and activity-related view of business networks. Research on cooptation at the level of actual practitioners and their social practices in particular is scarce and merits further investigation (Bengtsson & Kock, 2014; Hutter, Hautz, Füller, Mueller, & Matzler, 2011).

2.2. Strategizing through interrelated practitioners, praxis, and practices

Strategy research has evolved from a focus on planning in the 1960s to a process perspective in the 1980s. A practice perspective on strategy evolved in the 1990s. It is influenced by the process perspective, but brings the individual into focus, and thereby introduces a new direction in strategic thinking; one where the focus shifted from the core competence of companies to the practical competence of individuals as strategists (Whittington, 1996). Traditionally, strategy research focused on strategy as something that an organization has. However, the practice perspective considers strategy as something that individuals do (Jarzabkowski, 2004; Jarzabkowski, Balogun, & Seidl, 2007; Whittington, 2006). The strategy-as-practice perspective is focused on the work, talk, activities, and competencies of individuals as strategists (Chia & Mackay, 2007) and can be divided into three domains: practitioners, praxis and practices (Whittington, 2006). It is within these domains that strategizing, or the doing of strategy occurs (Jarzabkowski et al., 2007).

Strategy practitioners are the strategists who do the practices by making, shaping, and executing strategies. Strategy practitioners are not exclusively senior managers, but might be middle-managers within the organization, or external advisers (Whittington, 2006). Practitioners can even be lower-level employees within the organization (Jarzabkowski et al., 2007). Moreover, practitioners can be internal aggregate practitioners referring to a group of organizational internal individuals (Jarzabkowski & Spee, 2009). The doings of the practitioners constitute strategy praxis.

Praxis is about all activities related to the formulation and implementation of strategy. Praxis is related to meetings, talk, and presentations (Whittington, 2006). Praxes typically exist within focused episodes of strategy-making (Vaara & Whittington, 2012), which indicates that they occur over a limited time. Moreover, praxis can be a strategic decision or a non-decision (Vaara & Whittington, 2012), and can be “... an artful and improvisatory performance” (Whittington, 2006, p. 620). This can be contrasted with the meaning of practice as institutionalized in social structures that persist through time (Jarzabkowski, 2004). Strategy practices are related to shared routines of behavior including traditions, tools, norms and procedures for thinking, acting, and using “things” (Seidl & Whittington, 2014; Vaara & Whittington, 2012; Whittington, 2006). The distinction between practices and praxis can also be traced to social theory (Reckwitz, 2002), where practice is something that guides activity, and praxis is the activity itself. Practice is consequently less something that a practitioner employs, and more something that is constitutive of acting (Jarzabkowski & Spee, 2009), thus illustrating how practice, praxis, and practitioners are interrelated.

Practitioners “shape strategic activity through who they are, how they act and what practices they draw upon in that action” (Jarzabkowski et al., 2007, p. 10), and together practitioners, praxis, and practices constitute domains of strategizing (Jarzabkowski et al., 2007). When carrying out strategy praxis, strategy practitioners are influenced by the strategic practices of their organization. It is therefore possible to say that micro praxis is related to macro practices (Seidl & Whittington, 2014). Practices may for example empower practitioners or alternatively constrain them (Vaara & Whittington, 2012).

The interrelatedness between practitioners, praxis and practice is not constant, but dynamic and something that develops over time (see e.g., Jarzabkowski et al., 2007; Vaara, Kleymann, & Seristö, 2004). The flow of micro activities has consequences for the direction of an organization (Jarzabkowski et al., 2007) simultaneously, as activities within an organization are related to what occurs in society or a wider context (Whittington, 2006). Strategy-as-practice consequently occurs on different levels (Vaara & Whittington, 2012); and it is both related to activities within an organization and to external organizations (Whittington, 2006) and, moreover, practices on different levels are related (Jarzabkowski & Spee, 2009). Whittington (2006) criticizes strategy-as-practice studies that focus on only one level of analysis. He

stresses the need to study practices on multiple levels. Furthermore, research carried out from a strategy-as-practice perspective must focus on strategy as situated, and as a flow of interrelated activities occurring over time.

2.3. Coopetition from a strategy-as-practice perspective

Although coopetition research within the business network approach and research within the strategy-as-practice approach have different backgrounds, they still have similarities, which make it logical to combine them. Both coopetition research and the strategy-as-practice approach have their roots in the criticism of treating business phenomena as one-dimensional (e.g. Ford & Håkansson, 2013; Jarzabkowski, 2005). Coopetition research includes competition as a natural element related to cooperation and the strategy-as-practice approach includes the individual's role in business strategy.

Within both research streams there have been calls to focus on multiple levels of analysis and the interrelated nature of the levels. Within the business network approach, companies are seen as interrelated within a network where the activities of one company influence and are influenced by other actors (Håkansson & Snehota, 1989). The relationship between focal firms and their environment is also recognized by the coopetition scholars (e.g., Dagnino & Padula, 2002). Furthermore, research adopting the strategy-as-practice perspective has stated that individual activities should be seen in relation to the surrounding context (Whittington, 2006). In accordance with both perspectives, the activities in an organization are consequently related to the environment within which the organization operates.

Another aspect connecting coopetition research and the strategy-as-practice approach is the focus on individuals. Coopetition research has recently called for more studies on individuals (e.g., Bengtsson & Kock, 2014). Individuals and their doings are the main focus of the strategy-as-practice approach, and therefore coopetition research could naturally benefit from this approach.

Coopetition in business relationships develops over time and activities occurring at one point in time influence and are influenced by activities at other points in time (e.g., Tidström & Hagberg-Andersson, 2012). The notion of time is also apparent in the strategy-as-practice approach where praxis and the flow of activities are considered dynamic (Jarzabkowski et al., 2007). Moreover, the strategy-as-practice approach stems from a processual perspective on strategy, which also acknowledges the relevance of time.

Because of the above mentioned similarities in the two approaches, they naturally complement each other and constitute a relevant frame of reference for increasing our understanding of coopetition strategy. This approach has recently also been adopted by Dahl et al. (2016), who argue that the understanding of coopetition is enhanced through focusing on a practice perspective scrutinizing the actions of strategic actors on multiple levels. By applying elements of the strategy-as-practice approach, coopetition strategy research can be strengthened and advance toward a real understanding of the interrelatedness over time of cooperative activities ranging from micro to macro levels.

To sum up, the theoretical frame of the study is situated between coopetition and strategy-as-practice. Here the focus lies on macro, meso, and micro level activities and how the activities are interrelated over time. The following sections analyze that focus empirically.

3. Methodology

3.1. Research approach

According to Halinen and Törnroos (2005) a case study approach is very often used when studying business networks. It is the most common research approach both within coopetition research (e.g. Fernandez et al., 2014; Tidström, 2014) and strategy-as-practice research (Jarzabkowski & Spee, 2009) and has been recommended as an

appropriate choice of research approach by scholars within both of these fields (e.g. Halinen & Törnroos, 2005; Jarzabkowski & Spee, 2009). Case study research is considered appropriate when it is important to recognize the context within which the phenomenon exists (Halinen & Törnroos, 2005), as is the situation when studying business relationships and networks.

Our research is based on a single case study. Relying on a single case is justified by critical realist ontology (Easton, 2010; Ryan, Tähtinen, Vanharanta, & Mainela, 2012), which is applied in this study. According to Easton (2010), the use of a single case study is justified for theory development when there is scarce prior theory about the researched phenomenon. As prior research about the topic of this study is scarce, a single case study can be considered as appropriate. Critical realism asserts it is possible to explore tendencies of causality (Easton, 2010; Ryan et al., 2012), something the current research undertakes in investigating the interrelatedness between practices on different levels. A critical realist ontology also provides opportunities to study a unique or special case (Ryan et al., 2012; Siggelkow, 2007), which is also done in this empirical study. Moreover, we use a qualitative approach to capture the nature of the studied phenomenon, which is complex and dynamic, and involves interactions between individuals (Patton, 2002).

The single case of this study was purposefully selected as a unique case exemplifying a long-term business relationship that has developed over time and been based on both cooperation and competition. The case fits very well with the research scope of the study, as it is possible to identify cooperation and competition on different levels and to analyze how these have developed over time. The case consists of a relationship between two companies within the manufacturing industry: Tredoc and Sentrec. Tredoc is a large multinational company and has multiple suppliers of components, parts, or separate products that are attached to its own products, which are sold on to its customers. Sentrec is also a multinational company; operating worldwide with their own products that are used as components or parts of bigger solutions. One of Sentrec's products is S-gteco, which is a crucial add-on of Tredoc's products, PS-1.

3.2. Data collection and analysis

The research methods applied were interviews and reviewing documents. Research access was provided by Tredoc, and because of the current sensitive nature of its relationship with Sentrec, it was not possible for the researchers to interview staff at Sentrec. The inclusion of informants from both companies would have been favorable from a business network perspective. However, by including the perceptions of several informants together and deriving information from many different documents, it was still possible to acquire an understanding of the researched phenomenon from a business-to-business perspective.

In total nine interviews were conducted with Tredoc staff members; eight of those were personal interviews and one was conducted by phone owing to geographical distance. The informants were selected based on a snowball sampling method, which is a purposeful technique designed to find informants possessing rich information. In practice the technique relies on informants telling the researcher about other informants who could be of interest to the research in question (Janesick, 2000; Patton, 1987). Ultimately all individuals working at Tredoc who were directly involved in the collaboration with Sentrec were interviewed. The informants were a director (1 interview), category managers (2 interviews), strategic purchasers (5 interviews), and an engineer (1 interview). Interviewing people holding different positions in the organization who had all been in direct contact with Sentrec made it possible to gather information from the micro, meso, and macro level perspectives. The average length of the interviews was 50 min and the length varied between 30 and 85 min. All interviews were recorded and transcribed. Seven of the interviews were conducted in Finnish and two in Swedish. With the exception of two interviews, two researchers were present for the interviews, which increased the

trustworthiness of the interview material as both interviewers raised clarifying questions and later discussed the nature of the interview to acquire a shared and complete understanding of what was said. The interviews were focused on the informant's account of the relationship between Tredoc and Sentrec, and the focus was on the relationship between the companies—its details and how it had developed over time, and on how the interaction takes place in practice—as well as on cooperation and competition on different levels.

In addition to the interviews, documents also supplied information. The documents used were minutes of company meetings, including both internal meetings at Tredoc and meetings between Tredoc and Sentrec, presentation slides (from both types of meeting), other documents (excel spreadsheets, to-do lists), and the web pages of the firms. The documents increased the trustworthiness of the study, as it was possible to confirm what was conveyed in the interviews.

Content analysis was used in the analysis of the empirical material. The rich qualitative material was analyzed in a thematic way, and the analysis proceeded progressively from broad categories to key themes (Miles & Huberman, 1994). NVivo10 was used as a tool for the analysis. The analysis started with the interview transcripts and the researchers coding the material in chronological order to get a picture of the activities related to cooperation. Thereafter we identified praxis and practices on the micro, meso and macro levels. The micro level consists of individuals as practitioners and teams as internal aggregate practitioners. The meso level comprises the relational- and organizational level and the macro level relates to the network within which the organizations operate. This division of levels is consistent with that described in Jarzabkowski and Spee (2009). The third stage of analysis identifies how practices and praxis were related to each other on different levels.

3.3. Empirical setting

Many previous studies on cooperation have focused on the technology industry (e.g. Fernandez et al., 2014; Gnyawali & Park, 2011) or particularly high-tech industries (Lindström & Polska, 2016; Luo, Slotegraaf, & Pan, 2006; Zakrzewska-Bielawska, 2014). There are also studies of opera houses (Mariani, 2007), consumer related businesses (Ritala et al., 2014), the chemical industry (Tsai, 2002), and the automobile industry (Wilhelm, 2011). Cooperation is still quite rarely studied in traditional manufacturing industries (Czakon & Rogalski, 2014). However, the competition in traditional industries is now fierce because of globalization. Manufacturing companies own technologies that are their core business and also constitute their competitive advantage. However, it is crucial for manufacturing companies to focus on their core business and use suppliers in less crucial parts of their business. Often, this kind of strategy leads to a situation where the supplier becomes a competitor of the customer company. In light of this observation, our case study focuses on a traditional, multinational manufacturing company Tredoc and its relationship with a supplier called Sentrec.

In 2004, Tredoc identified a new business opportunity related to its product called PS-1 and it needed a supplier for S-gteco, a crucial addition of PS-1. Sentrec was identified from the list of qualified suppliers of Tredoc's business and was asked to start supplying its product S-gteco for Tredoc's PS-1. Tredoc has exclusive rights to operate in certain markets and through Tredoc, Sentrec gained access to those markets.

In 2007, Tredoc and another company established a joint venture, Vintret, in one of the exclusive markets and Vintret got the exclusive rights to operate there. Vintret buys PS-1s from Tredoc, which meant that Sentrec obtained easy access to another exclusive market. Demand was increasing rapidly and Tredoc tried to develop a product that could replace S-gteco, but it did not succeed because of quality issues with its in-house alternative.

In 2009, the growth of the PS-1 business was continuing apace and in Tredoc a team was established to maintain and handle it. At that time the PS-1 team noticed that S-gteco was quite big and needed some extra security elements, and therefore the team started to develop

an improved version of it. The first version of Tredoc's substitute to S-gteco, T-gteco, was launched in 2010. It was cheaper to manufacture and more compact than S-gteco. Since the launch of T-gteco, Tredoc and Sentrec have competed and they have developed and launched improved versions of their products one after another. In 2014, Tredoc developed T-gteco2, which competed with S-gteco, and at the same time Sentrec developed S-gteco2 which was similar to T-gteco. In 2016, Sentrec is still Tredoc's supplier, but the cooperation between the companies is expected to decline in the future. Next the findings of the study are presented and analyzed.

4. Findings

4.1. Interrelated practices and praxis shape cooperation over time

Based on an analysis of the empirical material, it was possible to distinguish four time periods. Each period is characterized by certain activities and practices on different levels shaping the cooperation between the involved companies. The following section presents the findings of the analysis.

4.1.1. Pre-cooperation phase

The first phase of the interaction between Tredoc and Sentrec can be called the pre-cooperation phase, and spans 2004–2008. This phase is characterized by organizational and relational praxis. On a relational level, the companies had a history of cooperation, as Sentrec had been an important supplier to one of Tredoc's divisions since 1996. Therefore, it was natural for Tredoc to approach Sentrec in 2006 when there was an increasing demand for Tredoc's PS-1. On an organizational level, Sentrec fulfilled all the necessary quality requirements and had qualifications. Moreover, Sentrec was more or less Tredoc's only possible supplier for the particular type of product, S-gteco, an important component of PS-1.

During this time the relationship between Sentrec and Tredoc was harmonious and according to one of the informants was characterized by rapid responses and a good level of dialogue. With regard to strategy praxis, the interaction was mostly based on written orders from Tredoc to Sentrec, which were handled by fax and sometimes by phone.

...it is important that the dialog works and communication works well...

...the communication was mainly by e-mail; it is the normal way we act.

During the pre-cooperation phase, another division of Tredoc was undertaking a development process on a product that could replace Sentrec's S-gteco. In practice the S-gteco was placed alongside the preliminary version of T-gteco and Tredoc actually copied S-gteco.

...It was person X who had already earlier done an own product, which was a copy of Sentrec's one, but with different components...

A reason for this first seed of competition was that Tredoc's organizational practice was to make strategic changes to meet the needs of the prevailing business environment. This is clearly shown in the following quotes:

...Tredoc traditionally dares to throw itself into new worlds...and creates success through doing that...

...This was the right decision, because business increased and continues to go well

However, the preliminary version of T-gteco was not good enough to be sold, and therefore Tredoc continued buying S-gteco as a component of its PS-1.

During this phase, the relationship between the firms could be described as cooperative and the interaction was initiated based on network-level demand. Relational and organizational strategy praxis was dominant, whereas the role of the individual strategy practitioner was limited. The tools used for interaction were mostly based on written information flowing in one direction. However, the development of a competing product at Tredoc relates to cooperative activity, and this escalated in the next phase, which was dominated by strategy practitioners and team praxis.

4.1.2. The silent competition phase

The second phase of interaction between Tredoc and Sentrec can be described as one of silent competition, and occurred between 2009 and 2011. The beginning of this period is characterized by Tredoc's development of a competing product, T-gteco, through the activities and praxis of individual practitioners. The individuals working with the product enjoyed the work tasks, and through their independent and joint activities, both a new product and a new way of working were developed. The individuals involved in the product development process were highly committed to their activities, even though the person responsible for the relationship with Sentrec was again changed. The extracts below illustrate the importance of the practitioners and their individual praxis to the development of a competing product.

And at that time a lot was dependent on the person in question, who took care of things, but I like such things, and it was probably why I was chosen to be the project manager...

It was great fun to be involved in creating, not only a new product, but also a totally new way of working...

It was x's (a person) baby, our own product...

T-gteco was developed so Tredoc could offer a cheaper and better product for the customer. It was also Tredoc's way of working (in line with its strategy) to develop its own alternative for products it used when the intellectual property rights are owned by a supplier. It is consequently possible to say that both individual-level praxis and organizational practice influenced the development of a competing product. However, it was not only the praxis by practitioners that facilitated the development of a competing product, but also the praxis of the team. The product was developed through the interaction between individuals.

...it was rather interesting also this...symbiosis how one succeeds in developing such a product...this synergy between different individuals, it is unbelievable how one is brainstorming through everything.

The activities of the team, in relation to its opportunities and performance were related to organizational practice and the lack of routines, control and support. The team was informally set up by committed individuals who created their own way of working.

...I would not say that there has been any facilitation or support by management in any way. Instead we have supported each other in order to do all this...

...It was rather easy with this team to create the way of working from the beginning, in such a way that we got this winner (product), and everybody had their straight line where they wanted to go... from total chaos to a five-, ten- year strategy was rather easy, because it was such a young organization. There were no routines yet or someone kind of stuck with some certain routines. Everything was still open and when it was easy, a young team had great energy to devote to completing the work.

At the same time as practitioners at Tredoc were developing a product to compete with Sentrec's product, Sentrec was bought by a larger company. This development was an influencing element on the network level. According to an informant this led to reduced service quality and decreased delivery reliability. The companies mainly communicated through e-mails during this period.

...One must remember that it (Sentrec) was owned by an American exchange-listed company, so when you start to negotiate prices, it is easy, but when you start to talk about a frame agreement, it was pretty tough...

In 2010, on a network level, demand for PS-1 increased considerably and Tredoc was able to sell the first PS-1 with its own T-gteco. Sentrec was not informed about Tredoc's product development and the firm found out about T-gteco from a press release published on Tredoc's website, a channel that was standard organizational practice for Tredoc.

...it took some time for them to notice that we had something else (T-gteco). But they had by chance seen a picture from a project (PS-1 with T-gteco) on our website and they figured out what it was right away.

...they asked if this was something that they (Sentrec) could do for us. Yes, I knew that we would eventually use our own design (T-gteco) as much as possible.

...they mentioned at some point that they had seen that (T-gteco), and asked if it would be something that they (Sentrec) could do for us. So, we panicked a bit, because it (T-gteco) was not supposed to be public information. But of course Tredoc always wants to show what we can do.

According to the informants, communication deteriorated between the companies after this, which again, was negative for the customer because it led to longer delivery times. However, according to one of the informants, it was more or less standard practice at Tredoc to blame suppliers for poor communication. The informant said that if there is a delay in delivery, for example, purchasers at Tredoc tended to send a couple of e-mails to the supplier and then blame it for the poor communication without personally contacting the supplier by phone for example.

However, the poor communication can in this case be considered a relational practice, as Tredoc did not inform Sentrec about the development of a competing product. According to the informants, the strategy of the Tredoc purchasing group was to inform Sentrec about the upcoming competing product, but in reality, no information was passed on.

When analyzing the findings from this period it becomes apparent that although the development of a competing product in this particular case seems to accord with organizational practice, it was the praxis of individuals as practitioners as well as their praxis in teams that was influential. The activity by individuals and the team were facilitated by organizational practice related to the fact that there were no routines and a great deal of freedom. On a relational level, the strategic practice of mutually poor communication dominates. The strategic activities of the team continue in the next phase that is characterized by active competition.

4.1.3. The active competition phase

The third period, here called the active competition phase, in the relationship between Tredoc and Sentrec spanned 2012–2013. On a network level it is characterized by a remarkable increase in demand, which led to a situation where production lagged behind sales. As far as relational-level practice is concerned, there were still communication problems between the companies, meaning that Tredoc did not communicate purchasing forecasts and Sentrec was late delivering. Moreover, Tredoc decided that Sentrec's prices were too high. These difficulties on a relational level influenced the need for increased contact

between the companies. The praxis shifted from e-mails to face-to-face meetings. Before meetings on a relational level, the internal team praxis at Tredoc was to meet in order to set an agenda and strategy for the meeting with Sentrec.

We always sit down the day before and go through our targets, and what issues each division wants to handle at the meeting, so the meetings are planned beforehand. And we have noticed that this brings good results, and that is the reason why we have done it.

That is why it went so well also with Sentrec, because we really had to internally plan beforehand how we would proceed... how we would press Sentrec on prices, get the communication work and the technical requirements through... First you have to know what you want yourself...

The above excerpts make it apparent that these internal team meetings also had a positive influence on a relational-level practice. At the end of 2012, after twice meeting face-to-face, communication from Sentrec to Tredoc was better. According to an informant, communication by e-mail or phone with Sentrec was difficult, but when meeting face-to-face it was much better because then the representatives from Sentrec were more communicative and willing to cooperate. However, communication from Tredoc to Sentrec was still somewhat poor, as Tredoc did not inform Sentrec that it was actively continuing to develop new competing products. Moreover, on an organizational level, Tredoc started questioning Sentrec as a supplier, and again, the person responsible for the relationship with Sentrec changed.

When analyzing the findings of this period it is possible to say that although remarkable activities took place on an organizational level related to the development and sale of competing products, these practices do not seem to dominate. However, it was the praxis of the team concerning meetings that influenced relational practice. Activities on a team level also dominate in the next and current phase of the relationship between the companies.

4.1.4. The forced coopetition phase

The last period of analysis is from 2014 to the present and into the future. This period is characterized by organizational practices influencing relational practice. The organizational practice at Tredoc is here characterized by more routines and systematic strategic thinking on the team level.

...those guys think far away in the future...we went from a reactive to kind of a systematic strategic thinking. An evolution has happened there during the last couple of years.

On an organizational level, Tredoc saw considerably increased sales of its own products, T-gteco and T-gteco2. Simultaneously, Sentrec presented a competing product, S-gteco2, at a trade fair. Tredoc people visited Sentrec's booth at the fair and seeing S-gteco2 commented on how similar it was to T-gteco. Consequently, at the trade fair, Tredoc organized a meeting with Sentrec, at which Sentrec presented S-gteco2 and Tredoc asked its price. However, Sentrec did not believe that Tredoc would be a potential customer for S-gteco2 and declined to offer a price.

They (Sentrec) also kept a low profile, because it was the first time that we saw it (S-gteco2) at the trade fair. I was not at all aware that they had developed this kind of new product for their portfolio.

...kind of half as a joke at the meeting we asked if they could give us an offer on these (S-gteco2), but no...they did not agree for some reason...

Based on these excerpts, related to organizational-level praxis, it is apparent that there were intentional competitive activities going on in Sentrec. At the same time, on a relational level there were delays in

deliveries from Sentrec to Tredoc, which in turn had a negative impact on the end customer at a network level. Sentrec attributed the delays to the fact that the company had introduced a new enterprise resource planning system, which implies that organizational activities harmed relational activities. Because of the delivery delays and the dependency Tredoc was closely monitoring Sentrec through relational-level praxis of regular e-meetings.

As far as the future is concerned, the data make it clear that Tredoc will eventually replace Sentrec's product S-gteco with its own (T-gteco and T-gteco2). It is apparent from the interviews that the praxis of the individuals and the team are influential here, both concerning the way of working and the quality of the product.

...I believe that it is just what (person x) is implementing now, or that (person x) together with the team somehow have been able to speed it up... We have succeeded with our own product and in a couple of years we will probably go fully with our own products.

However, Tredoc is still dependent on Sentrec because former customers want a product incorporating S-gteco. It is therefore possible to say that relational-level coopetition practice is influenced by macro level activities. This implies that no matter the praxis of the individuals and the team, and the practices of the company, on a network level, a customer can exert a considerable influence over inter-company coopetition. That is why this period can be described as the forced coopetition phase. The findings of the study are summarized in Fig. 1 where practice is illustrated in grayed boxes and praxis in the unshaded boxes.

The figure illustrates the different phases of coopetition and the strategic activity occurring on different levels. It is apparent from the figure that coopetition strategy simultaneously occurs on different levels over time. As the relationship developed from cooperation toward competition the nature and influence of the strategic activities on different levels also changed. In the more cooperative phases, higher level activities influenced lower-level activities, while in the following more competitive phases, lower-level activities influenced higher level activities. The findings indicate the importance of micro level practitioners and their strategic activities. It can be also seen that over time the praxis and practice shifted from keeping a distance (e-mails, phone, fax) to more intensive forms (meetings, e-meetings, internal meetings beforehand). Below, the most important findings will be discussed in light of the existing literature on coopetition and strategy as practice.

5. Discussion

The findings of our study are to some extent similar to existing research on coopetition and strategy-as-practice. However, our findings also show new and interesting aspects of coopetition from a strategy-as-practice perspective. In this section we will elaborate on and discuss our findings in relation to existing research.

The focus and findings of this study bear some similarities to those of Dahl et al. (2016). The findings of both studies show that coopective activities are found on different interrelated levels. Moreover, both studies indicate that coopetition activities may be emergent, deliberate, or both. However, the findings of our study add several contributions to those of Dahl et al. (2016). First, the study by Dahl et al. (2016) is theoretical, whereas the findings of our study build on an empirical study. Second, we focus on vertical coopetition, whereas Dahl et al. (2016) concentrate on horizontal coopetition. Third, our study includes the perspective of time and dynamics in relation to strategic activities on multiple levels. Fourth, the findings of our study indicate that there can be both deliberate and emergent coopective activities on the same level at the same time; for example, regarding communicative activities. Last, but not least, our findings show that coopective activities may simultaneously be influenced by practices and activities on several levels, indicating a more complex interrelationship between coopective activities than

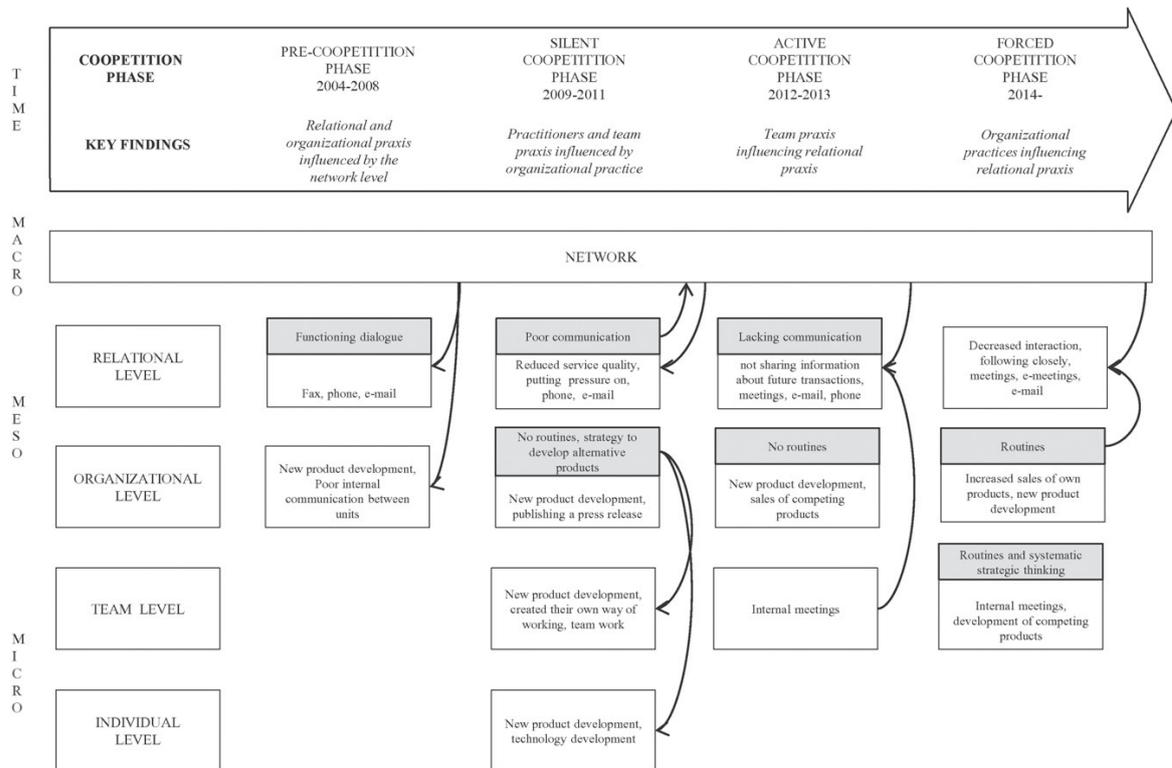


Fig. 1. Competition strategy shaped by interrelated activity on multiple levels.

was presented by Dahl et al. (2016). For example, Dahl et al. (2016) argued that inter-organizational level strategic practices change because of changes on an external level. The findings of our study indicate it is possible to say that inter-organizational level strategic practices may also change as a result of changes on the organizational, team, and individual levels.

There are some similarities between our study and the study by Tidström and Hagberg-Andersson (2012). Both studies recognize time, and focus on business relationships evolving from cooperation to competition on multiple levels of analysis. However, when compared to those of Tidström and Hagberg-Andersson (2012), the findings of the current study offer new insights related to the importance of team- and individual-level activities on cooperation dynamics. Our findings indicate that individual- and team-level activities influence cooperation on a relational level. Moreover, the findings show that organizational-level practice influences team-level practice, which in turn influences cooperation on a relational level. In contrast to Tidström and Hagberg-Andersson (2012), we focus on activities rather than on events. Moreover, we distinguish between praxis and practice, in order to acquire a more detailed understanding of cooperative activities. From a dynamic perspective, the findings of our study also differ from the findings of Tidström and Hagberg-Andersson (2012), in that the latter identified knowledge sharing followed by sales activities as critical events. Neither of these events illustrating the importance of individual activities as a part of the dynamics of competition strategy were identified in our case.

However, our findings are different from most existing research on cooperation on an individual level, as we do not specifically focus on managers or on cooperation between individuals, but on the praxis of strategy practitioners in relation to praxis and practice on the organizational and relational levels. Therefore, our study offers a new perspective on the activity of individuals in cooperation.

Individuals are often associated with emergent cooperation (e.g. Dahl et al., 2016; Mariani, 2007). The findings of this study are somewhat different as they indicate that cooperation from a practice perspective can be deliberate from the individual-level perspective and emergent from the relational perspective. The findings prompt questions about the division of cooperation strategy on different levels into the emergent and the deliberate, and how these are related over time. Although the company strategy can be deliberate, emergent activities on the individual or team level may exert more influence on inter-company cooperation than any deliberate company strategy.

According to our findings, competition strategy is over time related to activities on the macro, meso, and micro levels. The findings indicate that from the perspective of time, competition strategy is first identified as relational and organizational practice influenced by the network level (customer demand). Thereafter, no routines in the form of organizational practice influence practitioner and team praxis (e.g., new product development and team work), that again influence relational praxis (e.g., poor communication). In the last phase, team- and organizational-level practice (internal meetings, increased sales of competing products) are routinized and influence relational praxis (sales and purchasing, meetings). The findings of the current research consequently reveal the importance of recognizing both praxis and practice as activities of competition strategy, as these are related on (and between) different levels of analysis, and also influence the nature of a cooperative business relationship. Furthermore, the findings indicate a certain pattern of development of cooperative strategy over time. From a time-perspective, competition strategy is shown here to evolve from lower-level (micro and meso) praxis influenced by higher level practice (macro and meso) to higher level praxis (meso) influenced by lower-level praxis and practice (micro).

When comparing our findings with strategy-as-practice research, the findings are in line with Rouleau's (2005) study showing a link

between the activities of practitioners and organizational praxis. This study shows the link to be two dimensional, meaning that individual praxis both influences and is influenced by praxis and practice on higher levels. The findings are similar those of Seidl and Whittington (2014), who argue that individual praxis is influenced by practices on a more macro level, such as the organizational level. Moreover, the findings can be related to Jarzabkowski and Spee (2009), who argue that activities by aggregate practitioners shape and are shaped by organizational praxis. The findings are also in line with Whittington (1996), who argues that different roles of the strategy practitioners matter and the roles of those involved in doing strategy are all different.

The findings of the study are in line with those of Jarzabkowski (2003), who views strategic practices both from the perspective of continuity and from that of change. According to the findings, both strategy praxis and practice can be temporary and neither necessarily has to be long-term and rooted. The reason is that they are related and simultaneously occur on different levels, and a change on one level may lead to changes on other levels. The findings show some practices on an organizational level—lack of routines and rapid changes of employees—influencing team and relational praxis. A similar finding is found in Chia and Holt (2006), who show that activities available to practitioners are shaped by embedded cultural and historical practices.

The findings suggest praxis becomes more evident in co-competition than practice. Practice is apparent on the relational and organizational levels, and they are related to team and individual-level praxis with a strong influence on the co-competition between the companies. Moreover, it becomes apparent from the findings that non-activities, that is, praxis or practice related to not doing something, may be strategically relevant in co-competition situations. In the case reported here, this is particularly related to not sharing information. As far as doing is concerned, the findings indicate that influential co-competitive activities are related to new product development on both the micro and meso levels and to meeting praxis, which is not mentioned as a strategic activity in previous research on co-competition.

6. Conclusions

The findings of the study show that co-competition develops over time as a consequence of interrelated strategic practices and praxis on multiple levels. The activities undertaken by individuals and teams are extremely influential in terms of shaping co-competition strategy on several levels.

There is scant empirical research on co-competition in traditional manufacturing industries; a situation this study goes some way toward remedying. From a theoretical perspective, this study contributes both to co-competition research and research on strategy as practice. The use of the strategy-as-practice approach to co-competition research is a contribution in that it brings the doing of strategy to research on co-competition. Moreover, this study illustrates the role of the individual involved in co-competition and shows how the praxis of individuals is related to co-competition strategy on other levels. As far as strategy-as-practice research is concerned, the findings of the study show the need to distinguish between relational and organizational practice as well as individual and team praxis. This study adds an inter-firm co-competitive context to strategy-as-practice research that has traditionally focused on the intra-firm context.

The findings of our study have several managerial implications. First, the findings show the importance of recognizing co-competitive activities on different levels. From a managerial perspective the findings of the study show that activities undertaken by individuals and teams within the company can influence co-competitive activities between companies. This indicates the need to recognize the potential differences between what has been decided on co-competition on an organizational or relational level, and what is actually done in practice by individuals. The findings also indicate that an open and flexible organizational structure without routines can trigger individual praxis that can influence the co-competitive

practice of the organization on a relational level. The findings show that internal teams involved in inter-company co-competition can create and influence routines related to co-competition at both the team and organizational levels. Moreover, the findings indicate how a business relationship can develop from being cooperative to become competitive through the development of competing products on multiple levels. Communication difficulties in co-competition seem to occur simultaneously with the development of competing products.

A limitation of the study is that the empirical material relies on the perceptions of informants from only one of the companies involved in the case. A possible route for future research would therefore be to involve informants from the other company involved in the co-competitive relationship. Future research should continue investigating the doing of strategy on different levels and how activities occurring on different levels are related in time. Particular attention should be paid to the individual and team levels, as co-competition there seems to have considerable implications for company-level co-competition activities. Another avenue of future research would be to improve our knowledge of co-competition as practice from the perspective of a net or group of companies engaged in co-competition. Future studies on co-competition strategy could also focus on the artifacts of strategy, as has been done in recent studies on strategy as practice (e.g., Jarzabkowski, Spee, & Smets, 2013).

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A multilevel perspective on organizational buying behavior in cooperation—an exploratory case study



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ABSTRACT

This article offers a new and interesting perspective on organizational buying behavior by focusing on the simultaneous existence of both cooperation and competition, that is, coopetition. Coopetition may bring undesired knowledge leaks, opportunism, and weakened competitive advantage, and it is therefore important to understand how coopetition develops over time through interrelated activities on multiple levels. The article aims to improve our understanding of the development of organizational buying behavior through adopting a multilevel perspective on coopetition. The empirical study is based on exploratory case study research involving a single case from the manufacturing sector featuring a large multinational buyer and its supplier. The findings of the study show that organizational buying behavior in coopetition develops through interrelated activities on the individual, the organizational, and the relational level. Over time, dominating activities evolve from being ambivalent on an individual level to become authoritative on a company level and finally to being opportunistic on a relational level. Theoretically, this study contributes to organizational buying behavior literature by examining coopetition from a multilevel perspective. From a managerial perspective, the findings establish the importance of recognizing individual-, and organizational-level activities.

1. Introduction

Organizational buying behaviors are not static; they change over time. Behavioral aspects of supply management interest scholars (e.g. Kaufmann et al., 2014; Kaufmann, Wagner and Carter, 2017), who argue that buying decision models are not always based on rational behavior (Kaufmann et al., 2017). Moreover, there has recently been a call for further research on the interplay of multiple levels in organizational buying (Kaufmann et al., 2017) and also on understanding the influence of different situations on buying processes (Wiersema, 2013). Even though buying patterns have evolved, the available knowledge and models are incapable of capturing the dynamics of changing and emerging markets that lead to complex buying situations (Aarikka-Stenroos and Makkonen, 2014; Wiersema, 2013). Organizational buying behavior (OBB) is all about purchasing, which accounts for a major part of the costs incurred by companies. Therefore, it is important for companies to know how OBB functions in today's complex business world. The complexity of OBB arises because there are often many individuals, goals, rules, and traditions involved (e.g., Aarikka-Stenroos and Makkonen, 2014; Bachkirov et al., 2016; Johnsen et al., 2016). Much of the OBB research that we lean on today was conducted between 1960 and 2000, and it is therefore important to update it to

ensure it fits the current business reality.

Since its inception in the 1960s, most research on OBB has viewed the phenomenon from a process perspective (Aarikka-Stenroos and Makkonen, 2014; Lewin and Johnston, 1996; Makkonen et al., 2012; Verville and Halingten, 2003). Another common feature of OBB research is a multilevel perspective (Makkonen et al., 2012; Möller, 1985; Webster and Wind, 1972), meaning the research relates to both the macro and micro levels. This implies that OBB is formed from interrelated activities on multiple levels: the individual, organizational, relational, and industry level (e.g., Makkonen et al., 2012). Individual-level activities happen by or between individuals, whereas organizational-level activities occur within an organization. Relational activities occur in relationships or interactions between organizations, whereas industry or network level activities take place beyond a focal relationship between organizations. Although prior research recognizes a multilevel perspective, there is scant research into how activities on different levels connect over time. Moreover, studies on OBB focus on the buying situation (e.g., Aarikka-Stenroos and Makkonen, 2014), without accounting for the nature of the business relationship, an omission that reveals a gap in our knowledge related to business relationships that encompass both cooperation and competition.

The simultaneous existence of cooperation and competition, that is,

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coopetition, in business relationships has been studied within the business network approach (e.g., Bengtsson and Kock, 1999). Most coopetition research focuses on cooperation between competitors, and there is little research on vertical coopetition, meaning coopetition between companies acting as buyers and sellers in relation to each other (Soppe et al., 2014). There have however been calls for more research on vertical coopetition, and specifically examples on the simultaneous cooperation and competition between a buyer and a seller (e.g., Lacoste, 2012; Soppe et al., 2014). Vertical coopetition is critical because the cooperation element often relates to interactions where one company (a buyer) buys products or services from another company (a supplier), a scenario in which leaks of important information followed by opportunistic activity constitute a central risk. Competition often enters the relationship through opportunistic activities (Tidström and Hagberg-Andersson, 2012). If companies are to avoid undesired information leaks, weakened competitive advantage, or the dissolution of buyer–seller relationships, they must understand and manage vertical coopetition.

Vertical coopetition is not static, but is dynamic and develops over time. Existing research on the dynamics of cooperative relationships concentrates on horizontal relationships, and there have been calls for more research related to time in vertical coopetition (e.g., Lacoste, 2012; Lechner et al., 2016; Soppe et al., 2014). Bengtsson et al. (2010) argue that coopetition over time is connected with levels of cooperation and competition. The same authors (p. 200) define coopetition as “a process based upon simultaneous and mutual cooperative and competitive interactions between two or more actors at any level of analysis (whether individual, organizational, or other entities).” Prior studies of coopetition from a multilevel perspective focus on horizontal coopetition, to the detriment of a multilevel perspective on vertical coopetition. Those trying to manage vertical coopetition, need to know how cooperation and competition simultaneously occur at different levels and how they are related.

There are several research gaps around OBB and vertical coopetition, and the aim of this study is to improve our understanding of the development of OBB from a multilevel perspective in a cooperative business relationship. The research question is as follows: How does OBB develop over time on multiple levels in vertical cooperative business relationships? To answer this question, we construct a tentative theoretical framework based on existing research on OBB and competition. The framework outlines the multilevel activities comprising OBB in cooperative business relationships. This framework forms a basis for the exploratory qualitative case study on a single case from the manufacturing sector involving a large multinational buyer and its supplier. The novelty of this study lies in the combination of OBB and competition and it contributes to both research fields. The study contributes to recent OBB studies (e.g., Barclay and Bunn, 2006; Makkonen et al., 2012) by showing how cooperative and competitive activities interrelate over time. Moreover, the findings contribute to research on vertical coopetition (e.g., Lacoste, 2012) by showing how coopetition develops over time through activities on multiple levels. From a managerial perspective, this study illustrates the importance of recognizing simultaneous cooperative and competitive activities on both the relational and other levels.

2. Literature review

2.1. A multilevel perspective on organizational buying behavior

Organizational buying behavior is a decision-making process influenced by a variety of factors (Kaufmann et al., 2017; Lewin and Johnston, 1996; Makkonen et al., 2012; Munnukka and Järvi, 2008; Möller, 1985; Sheth, 1973; Webster and Wind, 1972). The view of OBB has shifted from it being a linear progression starting with identifying a need and ending with a purchase decision (e.g., Bunn, 1993) to a non-systematic and dynamic process (e.g., Barclay and Bunn, 2006; Lewin

and Johnston, 1996; Makkonen et al., 2012; Sheth, 1973). However, the traditional frameworks relating to OBB (see Robinson et al., 1967; Sheth, 1973; Webster and Wind, 1972) are still applied in twenty-first-century studies (e.g., Barclay and Bunn, 2006; Lichtenthal and Shani, 2000; Moon and Tikoo, 2002; Verville and Haltingen, 2003). Such frameworks can be accused of failing to capture the complexity of modern buying behavior (Aarikka-Stenroos and Makkonen, 2014). Moreover, the challenge facing modern research on OBB is to balance the views of buying as an intrafirm-oriented process and as an event embedded in the context of relationships and networks (Aarikka-Stenroos and Makkonen, 2014).

Research on OBB has recognized the influence of the environment, organization, and of individual characteristics since its inception (see Lewin and Johnston, 1996; Robinson et al., 1967; Sheth, 1996; Webster and Wind, 1972). However, earlier studies primarily focused on the phases or stages of the buying process (e.g., Eriksson, 2008; Robinson et al., 1967), and the multilevel nature of the phenomenon was not exposed until the appearance of later OBB studies (e.g., Makkonen et al., 2012). Makkonen et al. (2012) found that structural elements and situational events influence a buying process, but so too do the individuals in charge of organizational buying. However, Makkonen et al. (2012) were not able to capture the interplay and influential relationships between different levels and activities on those levels, because their research focused more on how those different levels affected the buying process itself. Moreover, the study in question was based on a small company, and therefore the findings are perhaps not applicable to large companies in traditional manufacturing industries. As prior OBB research recognizes, organizational buying is a complex and multilevel process. However, previous research has not been able to capture how the interplay between activities on different levels forms OBB. OBB is accordingly defined here as a process that includes interrelated activities and interaction on multiple levels embedded in various enduring structures and situational events.

Barclay and Bunn, p 187) (2006) stated that buying activities refer to “the explicit actions carried out in the course of the decision process.” However, several prior OBB studies (e.g., Barclay and Bunn, 2006; Moon and Tikoo, 2002) limit buying activities to the four listed in Bunn's (1993) taxonomic framework: information searching, use of analysis techniques, proactive focus, and procedural control. Further, Makkonen et al. (2012) conceptualized the buying process as a set of intertwining activities and goals, but they refer to means or techniques when discussing activities. Our position is that buying activities include means and refer to explicit actions taken during the buying process. However, we argue that just as the buying process is dynamic and non-systematic, buying activities are also dynamic and cannot be limited to any particular phase of the buying process.

Previous OBB studies have largely focused on buying situations and their characteristics (e.g., Aarikka-Stenroos and Makkonen, 2014; Barclay and Bunn, 2006) rather than focusing on how the type of relationship influences OBB. Eriksson (2008) studies how actions in different stages of the buying process affect the balance between cooperation and competition (i.e., coopetition) in buyer–supplier relationships, and concluded that the balance is important. However, prior OBB research has shown that activities undertaken on multiple levels to meet organizational needs actually form the organizational buying process (e.g., Aarikka-Stenroos and Makkonen, 2014; Makkonen et al., 2012). Therefore, it is important to focus on the activities on different levels that form OBB, and to explore how coopetition emerges within and through those activities.

2.2. Coopetition research

The simultaneous existence of cooperation and competition is recognized in coopetition research (Bengtsson and Kock, 1999). Coopetition is defined as: “a paradoxical relationship between two or more actors simultaneously involved in cooperative and competitive interac-

tions, regardless of whether their relationship is horizontal or vertical” (Bengtsson and Kock, 2014, p. 182). The inbuilt tension between cooperation and competition makes cooperation difficult and important to manage. Soppe et al. (2014) and Tidström (2008) argue that most cooperation studies (e.g., Fernandez et al., 2014; Ritala et al., 2012) have focused on horizontal relationships, that is, cooperation between competitors, and offered examples including strategic alliances and joint ventures (Das and Teng, 2000). Cooperation research examining the relationship between a buyer and a seller (i.e., vertical cooperation) is scarce.

Dowling et al. (1996) distinguish two types of vertical cooperation: the first occurs when a competitor is a supplier to a firm and at the same time cooperating with it; and the second occurs when a competitor is a customer of the firm and simultaneously cooperating with it. An example of vertical cooperation would be a buyer purchasing products from a supplier that simultaneously sells its own products to the same customers as the buyer sells to. Vertical cooperation is challenging, because there is a continuous risk of information leaks, and of opportunism, of loss of competitive advantage, and even of termination of the relationship (e.g., Osarenkhoe, 2010). Much of the existing research on vertical cooperation discusses how to manage such relationships. There are studies related to cooperation strategy (Kim et al., 2013), balancing cooperation and competition in buyer–supplier relationships (Eriksson, 2008), key accounts combining cooperation and competition in relationships with suppliers (Lacoste, 2012). Moreover, several studies focus on small firms; cooperation in entrepreneurial firms (Soppe et al., 2014), and competition in relation to sales growth among young and small firms (Lechner et al., 2016). Prior research on vertical cooperation views the interaction on a relational, or inter-firm level, and apart from the work of Eriksson (2008), most research on vertical cooperation does not recognize time and dynamics.

Among the above-mentioned studies, Eriksson (2008) applies a process perspective to investigate how actions taken at different stages of a buying process affect the balance of cooperation in a customer–supplier relationship. Recent research on horizontal cooperation has also acknowledged the importance of a process perspective. Dahl (2014) applies a process perspective to discern how cooperation interactions change over time as a result of competitors’ learning experiences and changes in the external environment. Tidström and Hagberg-Andersson (2012) study critical events in time and space when cooperation turns into competition in cooperative business relationships. Prior research underscores the importance of recognizing cooperation as a process to understand how activities over time relate to each other and how the development of cooperative business relationships could be managed. Prior studies also show that the development of cooperation should be analyzed on multiple levels (e.g., Dahl, 2014; Tidström and Hagberg-Andersson, 2012; Tidström and Rajala, 2016). Cooperative activities are related but the activity might vary on different levels. Bengtsson and Kock (2014) have recently called for research adopting a multilevel perspective on cooperation.

2.3. Theoretical framework

This section presents a tentative theoretical framework influenced by prior research on OBB and cooperation. The literature review above identifies gaps in OBB research that could be narrowed by applying cooperation research and vice versa. It is also clear that OBB and cooperation research share certain aspects, and could therefore be integrated to enhance our understanding of OBB in vertical cooperation. First, both perspectives recognize the need to study the interactions over time from a process perspective (Dahl, 2014; Makkonen et al., 2012). Second, recent research on both perspectives shows the relevance of considering different levels of analysis, and how activities between levels are interrelated. Finally, the latest research in both fields encourages the examination of the activities of individuals on the grounds that they are influential (Dahl et al., 2016; Makkonen et al.,

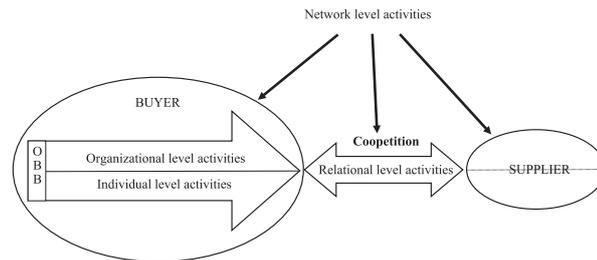


Fig. 1. Theoretical framework of OBB in cooperation.

2012; Tidström and Rajala, 2016). These premises give rise to the tentative theoretical framework of this study (see Fig. 1).

It is clear from the figure that the current focus is on the buying behavior of a firm. That buying behavior emerges over time through interrelated activities taking place on multiple levels; those being the individual, organizational, relational, and network levels. These level categories are derived from cooperation OBB research and mirror the levels presented in OBB research. Prior OBB research terms these levels environmental influences, organizational influences, and individual characteristics (see e.g., Lewin and Johnston, 1996; Webster and Wind, 1972). Moreover, Makkonen et al. (2012) divide the levels into structural elements and situational events, which includes the macro-environment, industry/network, the organizational and individual actor levels. Here network level activities refer to the activities of end-customers, industry level influences, and the effects of markets. Relational-level activities occur within a specific buyer–supplier relationship. Organizational-level activities refer to activities within the buying organization, and individual-level activities relate to activities of the individuals involved in buying. This tentative theoretical framework guides the presentation of the empirical part of this study in the following section.

3. Methodology

3.1. Research approach

The absence of a solid theory combining OBB and cooperation forces a reliance on a tentative framework, and an inductive research approach. Moreover, the aim and research question are exploratory in nature and target theory development rather than theory testing. Exploratory research is often connected with case study research (Dubois and Araujo, 2007). Case study research was considered the most appropriate research strategy for the present study as it enables researchers to acquire an in-depth understanding of a topic that is multifaceted and context-dependent, which is the case when studying business networks (Halinen and Törnroos, 2005). Dooley (2016) points out that case study research is also the most common research strategy used to investigate purchasing and supply management when incorporating semi-structured or unstructured qualitative material. The case study approach has been widely adopted, particularly in OBB research (e.g., Aarikka-Stenroos and Jaakkola, 2012; Barclay and Bunn, 2006; Makkonen et al., 2012) and is also the most common research approach within cooperation research (e.g., Fernandez et al., 2014; Tidström, 2014). Our research is based on a single case study, an approach justifiable for theory development when there is scant prior theory available relating to the research phenomenon (Easton, 2010; Eisenhardt, 1989). The use of a single case study fosters an in-depth understanding of the phenomenon. That is because all the activities within a business relationship can be studied from several angles using multiple research methods, so delivering rich information on cooperative and competitive activities.

The single case was chosen based on purposeful sampling, which means selecting a rich case from the perspective of the aim of the study

(Patton, 1990). Purposive sampling is about “maximizing information instead of facilitating generalization” (Lincoln and Guba, 1985, p. 202). The empirical case was selected to exemplify a long-term business relationship between a buyer and a seller, that has developed over time, and been based on both cooperation and competition. The case focuses on a relationship between two companies in the manufacturing sector: Alpha and Beta. Alpha is a large multinational company and has multiple suppliers of components, or of separate products that are attached to its own products and solutions that are sold on to its customers. Beta is also a multinational company, operating globally with its own products that are used as components in larger solutions. One of Beta's products is a crucial add-on to Alpha's product. In our case, Alpha represents the buyer and Beta the supplier. We use a qualitative approach to scrutinize Alpha's buying behavior because it captures the nature of the studied phenomenon, which is complex, dynamic, and involves interactions between individuals (Patton, 2002). The exploratory nature of research made it important to interview a broad spectrum of individuals on their role in the company (Dubois and Araujo, 2007).

3.2. Empirical setting

It is typical for manufacturing companies to focus on their core business and use suppliers in less crucial parts of that business. This kind of strategy can lead to a situation where the supplier becomes a competitor of its customer company. In light of this observation, our case study focuses on a traditional, multinational manufacturing company Alpha and its relationship with a supplier called Beta.

In 2004, Alpha identified a new business opportunity related to its product PS-1, but needed a supplier for a crucial component of the product. At that time, Beta was already a supplier to one of the business units of Alpha and the firm had established it could meet the required quality standards. Beta had a suitable product for the PS-1, and Alpha and Beta started collaborating. In 2009, the PS-1 business was growing fast and benefiting both firms (30% of Beta's revenue came from the business with Alpha) and Alpha dedicated a team specifically to manage the development of the PS-1 product. The new PS-1 team decided that Beta's product was bulky and needed some extra security elements, and accordingly the team started to develop an improved version of it. Alpha launched its first substitute for Beta's product in 2010. It was cheaper to manufacture and more compact than Beta's version. Although the PS-1 team tried to conduct its business with its own product in a quiet way, another unit within Alpha published a press release about the innovation. Since that event, Alpha and Beta have competed and developed and launched improved versions of their products one after another. Even as the two firms compete, Alpha still sells PS-1 incorporating Beta's product, and therefore the two firms are still cooperating.

3.3. Data collection

The research methods applied were interviews and the review of documents. In total, 10 interviews were conducted. The informants were selected based on a snowball sampling method, where informants nominate other people who could contribute to the research (Janesick, 2000; Patton, 1987). It is a purposeful technique designed to find informants who can offer rich information, and has been validated in the context of a buying organization (Wilson, 1996; Wilson and Lilien, 1992). All individuals working at Alpha who were directly involved in the cooperation with Beta were interviewed. The process provided sufficient theoretical saturation, in that no new information emerged from the last interviews. The informants from Alpha specifically mentioned one key person from Beta who was responsible for the business relationship between the companies, so we interviewed that person too. The imbalance in the number of informants from the companies is justified by the focus of the study which is a buying

Table 1
Summary of interviews.

Company	Title	Interview length (min)	Transcript length (pages)
Alpha	Category manager	83	27
Alpha	Category manager	85	32
Alpha	Development Engineer	47	17
Alpha	Director	43	15
Alpha	Strategic purchaser	53	20
Alpha	Strategic purchaser	29	10
Alpha	Strategic purchaser	40	15
Alpha	Strategic purchaser	25	11
Alpha	Strategic purchaser	39	31
Beta	Key account manager	56	11
	Total	500	189

organization's behavior. Interviewing the person from Beta supported the information acquired from interviewing Alpha personnel and therefore increased the trustworthiness of the empirical material. Eight of the ten interviews were conducted by two researchers. The approach meant both interviewers discussed the detail of the interview to acquire a shared and complete understanding of what was said, which also increased the trustworthiness of the interview material. All interviews were recorded and transcribed and are detailed in Table 1.

The interviews were unstructured but addressed the cooperative and competitive relationship between Alpha and Beta, in the context of Alpha's buying activities and how they had developed over time. At the beginning of each interview, the informant was asked to describe the relationship between Alpha and Beta in detail and how it had developed. When necessary the researchers then asked clarifying questions. The questions asked related to how the buyer interacted with the supplier, what kinds of competing products were developed, how the individuals were involved, and what activities were undertaken to maintain the relationship.

In addition to the interviews, researchers gathered information from documentary sources including minutes of meetings, presentation slides, e-mails, and both firms' websites. These sources were used to verify the timing of the events and activities described by the informants. Further, the documents accessed provided useful information on the nature of the relationship. The documentary material was analyzed in a similar way to the interview transcripts.

3.4. Data analysis

We applied content analysis to the empirical material. The analysis was inspired by the technique used by Corley and Gioia (2004) who explored a change process in an organization from an exploratory and qualitative perspective. In the current study, first order categories were developed into second order categories, which were then combined into aggregate dimensions. The coding started with the interview transcripts and documents. First, excerpts related to the buyer's behavior were organized chronologically. The excerpts addressed the buyers' activities that directly or indirectly affected the cooperative relationship with the supplier. Next, the excerpts were organized into first order themes based on their level of occurrence, that is, network level themes, relational-level themes, organizational level themes and individual-level themes. Then the first order themes were coded into second order themes reflecting the nature of the OBB. The second order themes were coded into dominating and influential themes depending on how they related to other second order themes within the particular aggregate dimension. The researchers next identified influential themes reflecting the interviewees' descriptions of chains of events that affected or enabled dominating themes. Those dominating themes were identified from the transcripts and other documents based on the nature of the activities described. Thus, dominating themes are the most character-

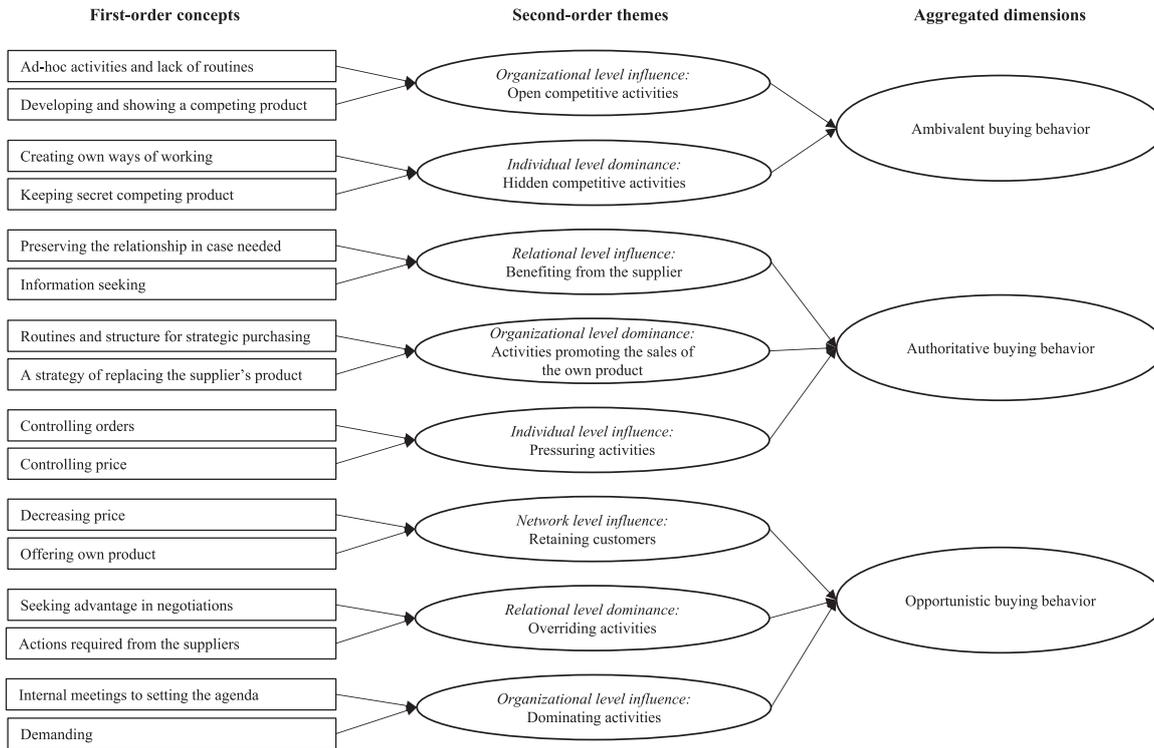


Fig. 2. Data structure.

istic of the particular aggregate dimension of OBB. An example of the coding from the first period starts with the excerpts “We (the PS-1 team) panicked, because it (the new product) was not meant to be public knowledge...” and “...there was a picture of this project (the new product) on our websites, unfortunately...” Both relate to the individual level. The first order theme derived from the excerpts was *creating own way of working* and *keeping secret competing product*. The second order theme was coded as *hidden competitive activities*, which moreover represents a dominating activity, because it was influenced by activities on an organizational level. Combined with a second order theme at the organizational level, the *hidden competitive activities* theme constitutes the aggregate dimension of *ambivalent buying behavior*. The rich qualitative material was consequently analyzed in a thematic way, and the analysis proceeded progressively from broad categories to key themes (Miles and Huberman, 1994). NVivo10 software was used to facilitate the analysis. A summary of the data structure is illustrated in Fig. 2.

The data structure constitutes the findings of the study, which are elaborated upon in the following sections.

4. Findings

We found three types of buying behavior: ambivalent, authoritative, and opportunistic. The following sections analyze these buying behaviors in detail, based on the categorizations of second order themes and first order concepts derived from the excerpts. Thereafter, the findings are synthesized and summarized.

4.1. Ambivalent buying behavior

The first phase occurred from 2009 to 2011 and is characterized as *ambivalent buying behavior*. On an organizational level, this behavior relates to open competitive activities, which in turn can reflect first, an

ad-hoc way of working and lack of routines, and second, the development and release of a competitive product. In Alpha, there was a lack of routines governing operations and processes, because both the PS-1 team and the PS-1 business were new. One informant described the course of action as the organization daring to throw itself into new worlds and create success through learning from trial and error. The interviews also reveal that Alpha had no desire to be dependent on one supplier, and wanted to develop its own products. That preference applied to all key components where a supplier owned the intellectual property rights (IPRs). The informants described how Alpha owning the IPRs would make it easier to modify a design in the future.

The organizational-level activities described above influenced the activities on an individual level. In 2009, a new team was set up to run the PS-1 business. The lack of routines on an organizational level meant the individuals within the team created their own way of working. The team was driven by its desire to develop the PS-1 business, and it decided the best way to do that was to develop a cheaper and better product than Beta's offering (albeit one that was complementary). Alpha's PS-1 team did not inform Beta about the new product, ensuring that its competitive activity remained hidden. One of the informants acknowledged the almost paradoxical situation of the PS-1 team progressing with its own product as Alpha simultaneously bought the original from Beta.

On an organizational level, some units within Alpha were keen to publicize information about the PS-1, whereas the team actually developing the PS-1 preferred not to. The information on the revised PS-1 was shared with the public through a press release. Beta heard of the modified PS-1 when that press release appeared on Alpha's websites.

...there was a picture of this project (the new product) on our websites, unfortunately... (Development engineer, Alpha)
 ...we (the PS-1 team) panicked, because it (the new product) was not meant to be public knowledge... (Category manager, Alpha)

...but of course Alpha wants to show what we can do. (Category manager, Alpha)

To sum up, the ambivalent buying behavior in this phase is characterized by an imbalance in the activity on the organizational and individual levels. The organizational-level activity influenced the options for competitive activities on an individual level, and competition was more open on the organizational than on the individual level. The ambivalent buying behavior originates at the individual level, as it was there the competitive activity took place clandestinely, albeit supported by organizational-level activities. The ambivalent buying behavior in this phase influenced the authoritative buying behavior that emerged in the next.

4.2. Authoritative buying behavior

The following phase spanned the period 2012–2014 and is characterized by authoritative buying behavior. In this phase, the relationship was based on both cooperation and open competition. Each firm was aware of the other's competing product even as they cooperated. On an organizational level, Alpha modified its procurement policy moving from a centralized form to one built around business lines. The thinking was that the latter form could improve strategizing and decision making, and it also naturally reduced the impact of individual-level activities that had dominated the previous phase of ambivalent behavior. In 2013, after a price reduction, Alpha's management drew up a plan to maintain the relationship with Beta. However, the empirical material reveals that the sales success of Alpha's competing PS-1 product prompted the team to develop a second-generation product to complete its product portfolio. The rollout in 2014 marked the switch to an obvious strategy to replace Beta's product with Alpha's own. However, there was still some dependence between the companies that forced them to interact, largely so as not to upset customers. These organizational-level activities influenced activities on both the relational and individual levels.

On a relational level, the supplier tried to reinforce cooperation by offering to develop a product that was similar to Alpha's competing product, but Alpha rejected the offer. One of the informants confirmed that Alpha preferred to sell its own product, while still seeing value in preserving the relationship with Beta to hedge against the potential of sales of its own product being disappointing.

...I just said to them (Beta) that we haven't sold that many of those (PS-1 s with Alpha's own product). We do not see that you... Of course you can develop whatever you want to... but for us you don't need to develop... (Category manager, Alpha)

...I asked why did not you contact us after so many years of a good relationship? We could support you... But there were no contact and no answer ... (Key account manager, Beta)

The above excerpt shows how the buyer on a relational level expressed a lack of interest in the supplier's offer to modify its component, while simultaneously underplaying the importance of its own product. However, the supplier had secretly developed a competitive product. The buyer learned of that product at a trade fair, where the supplier was presenting the product to the industry. The buyer's staff at the trade fair requested information on the product from the supplier, but no information was forthcoming.

...and I asked, that can we get a price for this? Yes, he said, just tell me how many you need and after that you will get the price... (Category manager, Alpha)

...kind of half as a joke at the meeting we asked if they could give us an offer on these (Beta's new design), but no...they did not agree for some reason... (Strategic purchaser, Alpha)

The informants from Alpha subsequently made it clear in the interviews that their aim was to obtain the price of Beta's product,

not because they wanted to buy it from Beta, but to see how Beta's product functioned and to create a competitive advantage for Alpha's own product. Alpha was not displaying its own product at the trade fair, suggesting the firm wanted to withhold detailed product information. The buying behavior on a relational level relates to benefiting from the supplier by preserving a relationship only in case it is needed, and trying to obtain important product-related knowledge.

There were also individual-level activities related to the authoritative buying behavior. At the beginning of 2012, on an individual level, an internal meeting was held in Alpha to set the requirements for the supplier. The meeting was arranged by purchasing professionals and attended by all the project members who had contact with Beta. The authoritative buying behavior of Alpha is strongly reflected in extracts from this internal meeting memo:

Person X will assist to keep the pressure on the supplier to confirm all orders.

Person Z and Person W will compile a list of projects missing order confirmations so that Person X can assist in pushing Beta until all orders are up to date

The demands were presented to Beta at another meeting. Beta agreed to implement the modifications, as it simultaneously increased the price of the product. The PS-1 team members at Alpha thought the price too high, and another internal meeting was arranged and tasks assigned.

Person X and Person Y will research the costs of the components and make a "should cost model" of Beta's product

The outcome was a cost breakdown structure that was subsequently presented to Beta along with a demand the supplier reduced its price. The individual-level activities can be described as pressurizing and were intended to control orders and pricing.

The authoritative buying behavior in this phase was influenced by the ambivalent buying behavior in the preceding phase, as the competitive activities on an individual level presented opportunities for the competitive activity on an organizational level that dominated this period. The sales growth of Alpha's own product was connected to both relational- and individual-level activity characterized by the use of power and dominance in the relationship with the supplier. The organizational level dominance lessened the power of individuals and influenced individual-level activity. The organizational-level authoritative behavior prompted opportunistic behavior on a relational level in the next phase.

4.3. Opportunistic buying behavior

The last phase is characterized by opportunistic buying behavior, which started in 2015 and continues to the present day. On a network level, Alpha's customers' buying behavior was influential. Alpha's most important customers wanted to reduce cost and signaled their intention to deal directly with Beta. Alpha wanted to prevent this and started to offer its own product at a cheaper price to the customer.

...We have considered a pricing strategy where we start to offer our own product to our important customer. And that way we aim to get about a 20% margin, it's smaller than we get from using Beta's ones, but still quite good... (Strategic purchaser, Alpha)

...they (the customer) would get our product about 10% cheaper than Beta's one... So that they would not start asking for it directly from Beta... (Strategic purchaser, Alpha)

We want to highlight the possibility to utilize Alpha's product instead...and we have attached our updated information package for this solution and it presents several benefits that can be achieved if selecting Alpha's products, and we are willing to support you actively in your efforts toward the [customer] in this issue. (E-mail from Alpha to the customer)

These excerpts illustrate how the opportunistic behavior of the buyer manifests at a network level with regard to its customers. Activities were focused both on promoting sales of the firm's own product by reducing its price. During this period, Alpha succeeded in increasing sales of those PS-1 s incorporating its own product. The opportunistic buying behavior is also related to dominating activities at the organizational level. The dominating activities stem from internal company meetings setting an agenda for meetings with the supplier. The nature of these meetings is illustrated by the following quote:

...what do we want from them in the future, do they have anything to offer us and what actions would they need to take... what would they need to improve? (Strategic purchaser, Alpha)
... it was not a good and open relationship anymore... (Key account manager, Beta)

Clearly, on an organizational level, the buyer prepared and stated its demands to the supplier. This activity influenced the relational level and led to the buyer acting to undermine the importance of the supplier. An informant described how Alpha deployed representatives from different units in meetings with Beta to gain an advantage in the negotiations. However, the attempts to leverage power through the meetings were not entirely successful because the supplier did not always participate. The respondents reported how Beta's personnel did not appear at scheduled video meetings, causing Alpha to cancel all meetings between early 2015 and 2016.

...we were upset because they did not appear at the scheduled e-meetings and we cancelled them all... (Strategic purchaser, Alpha)

This quote clearly shows that Alpha continued to pursue a strategy of power in the cooperative relationship with its supplier. However, at the beginning of 2016, Alpha took the initiative and arranged a face-to-face meeting with Beta to address communication issues over deliveries and spare parts orders. At this meeting, Alpha presented what it termed its supplier performance expectations to Beta and reviewed the delivery and communication issues. The minutes of the meeting include a note:

Beta worst performer during the last month, 5th worst running 12 months →improvement promised and expected for upcoming months

This note clearly indicates the nature of the OBB on a relational level. By the overriding activities the buyer is attempting to distance itself from the supplier, which can also be understood as opportunistic behavior.

The opportunistic buying behavior in this period was influenced by the preceding phase of authoritative buying behavior. In that phase, the focus on an organizational level was on the sales of the buyer's own product. This later influenced the opportunities for opportunistic behavior on a relational level. In focusing on finding fault with the supplier and setting requirements, while sales of its own competitive product grew on a network level, Alpha's buying behavior is opportunistic. This behavior also served to increase the distance between the buyer and the supplier.

A summary of the findings of the empirical study is available in Fig. 3.

The figure illustrates how OBB in cooperation develops over time through interrelated activities on multiple levels. Below, the findings are elaborated upon and discussed in light of prior research.

5. Discussion and implications

The findings illustrate that the different buying behavior activities over time are connected and that one type of behavior influences, and is influenced by, other types of behavior. The buying behavior studied evolved from ambivalent behavior on an individual level, through authoritative behavior on the organizational level, to opportunistic behavior on a relational level. The ambivalent behavior relates to

hidden competitive activities, which later made authoritative buying behavior possible. This behavior was reinforced through successful development and sales of the buyer's own product. In the following and current phase, the buying behavior becomes opportunistic, as the buyer actively promotes the sales of its own product and strategically aims to reduce its interaction with the supplier.

The findings show that OBB is shaped by interrelated activities on multiple levels over time. Prior OBB research has acknowledged the multilevel nature of OBB, but has not been able to capture the interplay between activities on different levels (e.g., Lewin and Johnston, 1996; Makkonen et al., 2012). Our study extends the findings of Makkonen et al. (2012) by showing how the buyer–supplier relationship between industrial multinationals is influenced by activities on several levels. Our findings shed light on the complex nature of OBB by showing how it is formed by interrelated activities on multiple levels. Moreover, our findings show that as the buyer–supplier relationship develops from the cooperative to the competitive, the nature of activities changes. In a more cooperative phase, individual-level activities dominate OBB. When competition enters the buyer–supplier relationship, the importance of organizational-level activities becomes clear. However, in a more cooperative phase, individuals have a greater influence over the shape of the OBB and the overall direction of the relevant business area. Further, we found that the interplay of activities on multiple levels enables the development of the buyer–supplier relationship from a cooperative to a competitive form.

As far as activities are concerned, the findings of this study add a new perspective to prior OBB research, where activities are seen as deliberate actions in a decision process (Barclay and Bunn, 2006) or where the focus lies on how structural elements and situational events influence buying activities (Makkonen et al., 2012). The current study contributes by focusing on the content and nature of activities occurring in different periods. Previous OBB research has viewed organizational buying either in the form of stages of a buying process (e.g., Bunn, 1993) or as a dynamic non-systematic process (e.g., Barclay and Bunn, 2006; Makkonen et al., 2012). Our findings support those advocating the latter formulation, and moreover, show that buying activities are dynamic and cannot be restricted to the four buying activities of Bunn (1993) framework. The findings advance prior OBB research by adding a new perspective on the nature and content of activities.

The findings also contribute to OBB research by introducing the topic of cooperation. Previous OBB research has focused on cooperative relationships (see e.g., Wilson, 1996) or discrete transactions from the perspective of a buying firm (e.g., Bunn, 1993; Moon and Tikoo, 2002). The current research examines a cooperative buyer–supplier relationship and shows that competitive activities on various levels shape the development of OBB over time. Moreover, the findings show that cooperative and competitive activities are interrelated, and illustrate how the nature of the activities changes as the relationship develops. The findings of this study therefore also contribute to prior research on vertical competition by presenting a new angle on opportunistic behavior in vertical competition. The case study illustrates how opportunism developed over time through cooperative and competitive activity undertaken on multiple levels. The current research also adds the large firm context to prior research on vertical competition (Soppe et al., 2014). The findings of this study therefore extend OBB research by illustrating the dynamics of simultaneous cooperative and competitive activities, and how they are interrelated.

5.1. Managerial implications

From a managerial perspective, the current study reveals the importance in supply chain management of focusing on individual- and organizational-level activities, rather than only on activity at the relational level. Working under an authoritative style of buying behavior need not hinder the supplier from developing competitive products. A change in the nature of the buyer–supplier relationship

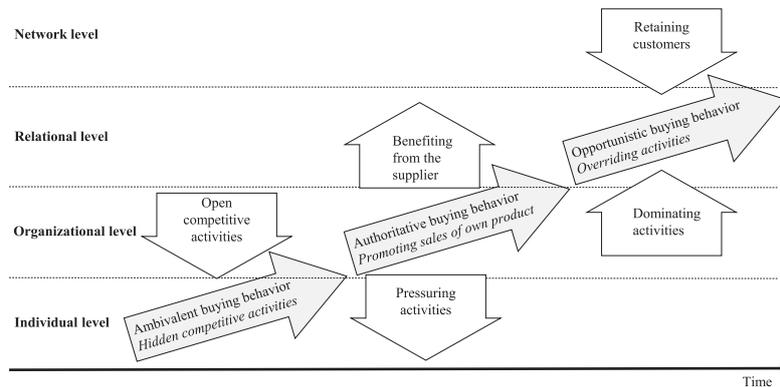


Fig. 3. OBB as interrelated activities on multiple levels.

offers options to modify the OBB and to behave in an authoritative or opportunistic way. However, our results show that these OBB modes can negatively affect the relationship. From the perspective of vertical cooptation, it is important to be alert to opportunism, and be aware that once established it can be hard to control. It is important to have an internal company strategy before approaching the supplier. The emergence of competitive activity adversely affects the buyer–supplier relationship, because it signals the pursuit of self-interest rather than mutual benefit. Our findings indicate that when competition intensifies, buying activity also becomes oriented primarily to the needs of the buyer.

5.2. Limitations and suggestions for future research

A limitation affecting this study is that its empirical element focuses on only one relationship, that between a large manufacturer and a large buyer in the manufacturing sector. Future research might extend the understanding of OBB in cooptation by exploring the phenomenon from the perspective of small firms in different industry sectors. Moreover, the empirical case of this study concerned cooperative OBB that changed from being cooperative to become more competitive. Consequently, future research on cooperative OBB evolving from competition to cooperation would be welcome. Another limitation of this study is that it does not focus on the management of cooptation in OBB, which would be an interesting avenue for future research. An important question is: How should the process of OBB in cooptative business relationships be coordinated and managed? The question relates to performance, something that is beyond the purview of the current study, and an opportunity for OBB research would therefore be to explore cooperative and competitive activities in OBB and how they relate to company performance.

6. Conclusions

The current article aims to improve the understanding of the development of OBB from a multilevel perspective in a cooptative business relationship. The empirical part of the study is based on a cooptative relationship between a multinational buyer and seller in the manufacturing sector. The findings of our study show that OBB develops over time through interrelated cooptative activities on multiple levels. Competitive activities on an individual level influence authoritative behavior on the organizational level, which in turn influences opportunistic behavior on the relational level. From a time perspective, we can state that dominating activities evolve through lower level activities to higher level activities. These dominating activities over time relate to activities on other levels. The findings of this study contribute to existing OBB research by enhancing understanding of the nature of activities in cooptative buyer–seller relation-

ships, showing how activities on multiple levels are interrelated during a certain time phase, and how OBB develops over time through interrelated and multilevel activities.

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UNMASKING CONFLICT IN VERTICAL COOPETITION

Anni Rajala & Annika Tidström

Abstract

Coopetition, or the simultaneous existence of cooperation and competition, has recently attracted a lot of interest from an academic and practical perspective. Most research focuses on horizontal coopetition, or cooperation between competitors, and there is scant research on vertical coopetition between buyers and sellers. There is also a call for research about conflicts in coopetition. The purpose of this study is to improve our understanding of conflict in vertical coopetition from a multilevel perspective. The focus lies on types and management of conflict. The empirical part is based on an explorative qualitative single case study of a cooperative buyer–supplier relationship in the manufacturing sector. The findings reveal functional, process, and task conflict and also dysfunctional relationship conflict. The styles of managing conflict vary across levels, and a collaborative style on a relational level may lead to a dysfunctional conflict, whereas a competitive style may lead to a functional conflict.

Keywords: conflict, vertical coopetition, a multilevel perspective, case study

1 INTRODUCTION

The simultaneous existence of cooperation and competition, that is, coopetition, has recently attracted considerable interest both in practice and research (e.g., Bengtsson & Kock, 2014; Bouncken, Fredrich, Ritala, & Kraus, 2017). Most coopetition research focuses on horizontal relationships, and there is little academic research on vertical coopetition (Lacoste, 2012). According to Soppe et al. (2014, p. 561) vertical coopetition should be researched separately from horizontal coopetition, in order to identify the “specific and exciting aspects”. Vertical coopetition is defined as “on-going exchange relationships of goods and/or services between firms that are simultaneously involved in both cooperative and competitive business activities with one other” (Soppe et al., 2014, p. 552). Existing research about vertical coopetition is focused on the

perspective of one single firm, usually the buyer. Lacoste (2012) calls for research that also considers vertical cooptation from the perspective of the supplier.

The paradox nature of cooperation and competition means that cooptative business relationships naturally prompt conflicts (e.g., Gnyawali, Madhavan, He, & Bengtsson, 2016; Le Roy & Fernandez, 2015). The managing of conflicts is important for successful interorganizational relationships (Gounaris, Chatzipanagiotou, Boukis, & Perks, 2016; Lynch, O'Toole, & Biemans, 2014) and cooptation (Le Roy & Fernandez, 2015) and therefore conflicts in business relationships has lately received a lot of research interest (see e.g., Gounaris et al., 2016; Tang, Fu, & Xie, 2017). In cooptation research, some studies focus on types of conflict, such as role conflict (Bengtsson & Kock, 2000; Raza-Ullah, Bengtsson, & Kock, 2014), but most studies address the management of conflict in cooptation (e.g., Fernandez, Le Roy, & Gnyawali, 2014; Gnyawali et al., 2016; Raza-Ullah et al., 2014; Tidström, 2014). With the exception of Gurnani et al. (2007) and Lacoste (2012), the existing literature on conflict in cooptation is focused on horizontal cooptation (Fernandez et al., 2014; Tidström, 2014) and there is a lack of research about conflict in vertical cooptation. From the perspective of vertical cooptation, and particularly related to buyer–seller relationships, there is a recent call for research about why conflict arises, how to manage conflict, and how it evolves over time (e.g., Johnsen & Lacoste, 2016). Prior literature related to conflicts has also stressed a need to examine conflict patterns (Lê & Jarzabkowski, 2015). In addition, there is also a call for more research about conflict from the perspective of both the buyer and the seller (Celuch, Bantham, & Kasouf, 2011; Tang et al., 2017), as most existing research focus only on the buyer. Prior research on conflict in buyer-seller relationships has focused on a certain level of analysis, such as the individual level (Celuch et al., 2011), or the inter-firm or network level (Welch & Wilkinson, 2005).

Existing cooptation research tends to view conflict management from the firm- or individual-level, and with the exception of the study by Raza-Ullah et al. (2014), there is a lack of research on how conflicts evolve from a multilevel perspective. There is a call for research on how to manage conflict in cooptation from a multilevel perspective (Gnyawali et al., 2016). Therefore, the purpose of this study is to improve our understanding of conflict and conflict management in vertical cooptation from a multilevel perspective. The research question is to determine what types of conflict occur and how they are managed. The empirical part of the paper is based on an exploratory qualitative single case study of a cooptative buyer–supplier relationship within the manufacturing industry. The paper contributes to prior cooptation research by showing a new perspective on types of functional and dysfunctional conflict in vertical cooptation. The findings also provide new and interesting insights into the management and outcomes of conflicts, and into how they occur on multiple levels and influence the direction of the buyer-seller relationship.

2 THEORETICAL BACKGROUND

Based on prior research (Finch, Zhang, & Geiger, 2013) conflict is defined as a situation or event arising from incompatible perceptions of the actors concerning the benefits and goals of the relationship. Traditionally, literature on buyer–seller relationships considers conflict as a ‘dark side’ of the relationships (Johnsen & Lacoste, 2016). A conflict can, however, have consequences that are largely positive (Dwyer, Schurr, & Oh, 1987; Lê & Jarzabkowski, 2015; Menon, Bharadwaj, & Howell, 1996; Tang et al., 2017). Some business-to-business researchers view conflict as both negative and positive (Skarmeas, 2006; Vaaland & Håkansson, 2003). Vaaland and Håkansson (2003) describe conflict in a business relationship as a dysfunctional phenomenon: a disease that disrupts. Dysfunctional conflict consists of harmful behavior, such as distorting information with the intention of harming other decision makers, interactions marked by hostility and distrust, or forming barriers (Cheng & Sheu, 2012). The other perspective, that conflict is a functional phenomenon, assesses the cost/benefit of interorganizational conflict and sees that conflict can enhance creativity and innovations (Tang et al., 2017; Vaaland & Håkansson, 2003). Moreover, Skarmeas (2006, p. 568) defined functional conflict as “an evaluative appraisal of the results of recent efforts to manage disagreements” and argued that it refers to situations “where conflict aftermath or outcome results in long-term benefits to both exchange partners”.

Jehn and Mannix (2001) classified conflict into three categories: task conflict, process conflict, and relationship conflict. Task conflict is related to the awareness of differences in viewpoints, and opinions related to a task. Process conflict involves diverging views on how a task will be accomplished. According to a study by Le and Jarzabkowski (2015), process and task conflicts occur simultaneously and are related to each other. Relationship conflict is defined as “the awareness of interpersonal incompatibilities, including affective components such as feeling tension and friction” (Jehn & Mannix, 2001, p. 238). Thus, task and process conflicts are functional and cognitive, while relationship conflicts are dysfunctional and affective (see e.g., Parayitam & Dooley, 2009).

Coopetition consists of an inbuilt tension between cooperation and competition and this tension may create conflicts (Bouncken & Fredrich, 2016; Fernandez et al., 2014; Lê & Jarzabkowski, 2015; Le Roy & Fernandez, 2015). In coopetition literature a conflict is often considered situation-specific (e.g., Tidström, 2014) and it can for example be related to explicit or implicit differences in the strategies and goals of the actors (Fernandez et al., 2014). In cooperative business relationships, several conflicts may be silent, for example hidden priorities, divergent economic interests, and different strategies and approaches (e.g., Gnyawali et al., 2016). Moreover, coopetition literature often views conflicts through a role conflict lens (Bengtsson & Kock, 2000; Raza-Ullah et al., 2014). Role conflicts stem from the tension between cooperative and competitive orientations and can be found at the organizational or individual levels. In addition to roles, the sharing of knowledge and other resources may create an opportunistic situation, where one of the

parties exploits the other party's interest (Fernandez & Chiambaretto, 2016; Osarenkhoe, 2010). Cooperation can impede a firm's operations by enabling the competitor first to obtain sight of, and then to imitate, the firm's core competences (Lado, Boyd, & Hanlon, 1997).

Coopetition research show that conflict is multidimensional and can occur on different levels (Dorn, Schweiger, & Albers, 2016; Fernandez et al., 2014; Tidström, 2014) such as the interorganizational, intraorganizational, and the inter-individual levels. Recently, especially the need to focus on coopetition on the individual-level has been emphasized (Lundgren-Henriksson & Kock, 2016; Sanou, Le Roy, & Gnyawali, 2016). However, it has been proven that activities on different levels are related in coopetition, and therefore it is important to apply a multilevel perspective (Rajala & Tidström, 2017).

Conflict management is argued to be a critical task for coopetitive organizations, for example, to achieve performance improvements (Raza-Ullah et al., 2014; Seran, Pellegrin-Boucher, & Gurau, 2014). Most coopetition research focuses on two opposing principles for managing coopetition: separation and integration (e.g., Fernandez & Chiambaretto, 2016). The separation/integration logic is also used in relation to the management of tension between cooperation and competition in coopetition. Separation is based on the idea of separating cooperation and competition inside the company (Bengtsson & Kock, 2000; Seran et al., 2014). Integration is based on the idea that individuals need to develop a coopetitive mindset and integrate cooperation and competition so as to implement a successful coopetitive strategy (Seran et al., 2014). Scholars arguing that integration offers a solution to managing coopetition criticize separation logic on the grounds that it itself can be a source of tension (Seran et al., 2014). Fernandez et al. (2014) and Seran et al. (2014) suggest that combining separation and integration principles would foster more effective management of coopetitive tensions. According to Le Roy and Fernandez (2015) separation should be applied to an organizational level and integration to an individual level, which indicates the importance of relating different managing techniques to different levels.

There are also studies focusing on specific styles of managing conflict situations in business relationships. These studies are inspired by the conflict management model originated by Thomas and Kilmann (1974). The model consists of five conflict handling styles: competition, collaboration, compromise, avoidance, and accommodation. These conflict management styles have been applied or recognized in business network research, such as that concerning retail networks (Bradford, Stringfellow, & Weitz, 2004) and horizontal coopetition (Tidström, 2008, 2014; Welch & Wilkinson, 2005). The findings of Tidström (2014) show that tension in horizontal competition is often managed by using the styles of competition and avoidance, and that a collaborative style seldom was used. These styles of conflict management have not been investigated in prior research on vertical coopetition.

3 METHOD

3.1 Research approach

A single case study was considered the most appropriate research approach for this study because it focuses on a new research subject (Easton, 2010; Eisenhardt, 1989). The study also aims to richly describe the existence of a phenomenon (Siggelkow, 2007), and to explore it on multiple levels of analysis (Yin, 1984). Moreover, case study research is considered appropriate when it is important to recognize the context within which a phenomenon exists (Dyer & Wilkins, 1991), which is especially relevant when studying business relationships, and accordingly a case study approach is very often used when studying business networks. A qualitative approach is considered appropriate to capture the nature of the studied phenomenon, which is complex and dynamic, and involves interaction between multiple levels of analysis (Patton, 2002).

The single case of this study was purposefully selected as a case exemplifying a long-term business relationship that has developed over time and been based on both cooperation and competition. According to Lincoln and Guba (1985, p. 202) purposive sampling concerns “maximizing information instead of facilitating generalization.” The case consists of a relationship between two companies within the manufacturing sector: Alpha and Beta. Alpha is a large multinational company and has multiple suppliers of components, parts, or separate products that are attached to its own products, which are then sold on to its customers. Beta is also a multinational company; operating worldwide with its own products that are used as components or parts of bigger solutions.

3.2 Data collection and analysis

The research methods applied were interviews and the review of documents. In total 12 interviews were carried out: nine interviews were conducted with Alpha staff members and three interviews were conducted with persons from Beta. The reason for interviewing more staff from Alpha than from Beta is that research access was originally granted by Alpha, and Alpha also had more people involved in the interactions with Beta than vice versa. Ten of the interviews were personal interviews and two were conducted by phone owing to geographical distance. All persons directly involved in the interactions between Alpha and Beta were interviewed. The informants were a director (1 interview), a general manager (1 interview), a business unit manager (1 interview), category managers (2 interviews), a key account manager (1 interview) strategic purchasers (5 interviews), and an engineer (1 interview). Interviewing people holding different positions in the organizations made it possible to gather information from the micro-, meso-, and macro-level perspectives. The informants were selected based on a snowball sampling method, which is a purposeful technique designed to find informants possessing rich information. In practice the technique relies on informants telling the researcher about other informants who could be of interest to the research in question (Janesick, 2000). The average length of the interviews was 50 minutes and the length varied between 30 and 85 minutes. All interviews were recorded and transcribed. With the exception of two interviews, two researchers were present for the interviews,

which increased the trustworthiness of the interview material as both interviewers raised clarifying questions and later discussed the nature of the interview to acquire a shared and complete understanding of what was said. The interviews were focused on the informant's account of the relationship between Alpha and Beta, and how it had developed over time. Our research approach is in line with Lê and Jarzabkowski (2015), who argue that it is important for conflict studies to use research methods that recognizes dynamics.

In addition to the interviews, the researchers acquired information from documents. The documents in question included minutes of company meetings, including both internal meetings at Alpha and meetings between Alpha and Beta, presentation slides (from both types of meeting), e-mails, other documents (excel spreadsheets and to-do lists), and the web pages of the firms. The documents increased the trustworthiness of the study, as it was possible to confirm what was conveyed in the interviews. The documents were analyzed in a similar way to the interview transcripts.

Content analysis was used in the analysis of the empirical material. The analysis was inspired by the technique used by Corley and Gioia (2004) who explored a change process in an organization from an exploratory and qualitative perspective. In accordance with that technique, first-order concepts are developed into second-order themes, which again are combined into aggregate dimensions. The coding started from the interview transcripts and documents. The rich qualitative material was consequently analyzed in a thematic way, and the analysis proceeded progressively from broad concepts to key themes (Miles & Huberman, 1994). NVivo10 was used as a tool for the analysis.

First, interview extracts related to conflicts or conflict management were organized chronologically. Second, the quoted material was organized into first-order concepts based on similarity, chronological interrelatedness, and connection to a certain conflict situation. Here the material was also coded based on the level of occurrence, that is, network level concepts, relational level concepts, organizational level concepts, and individual level concepts. Third, the first-order concepts were coded into second-order themes representing types of conflict, the conflict management and conflict outcome. The second-order themes were coded under aggregated dimensions, which represent characteristics of particular conflicts.

The data structure is presented in Figure 1, which also illustrates the aggregate dimensions and the related second-order themes and first-order concepts. These findings are elaborated on and analyzed after the presentation of the empirical setting.

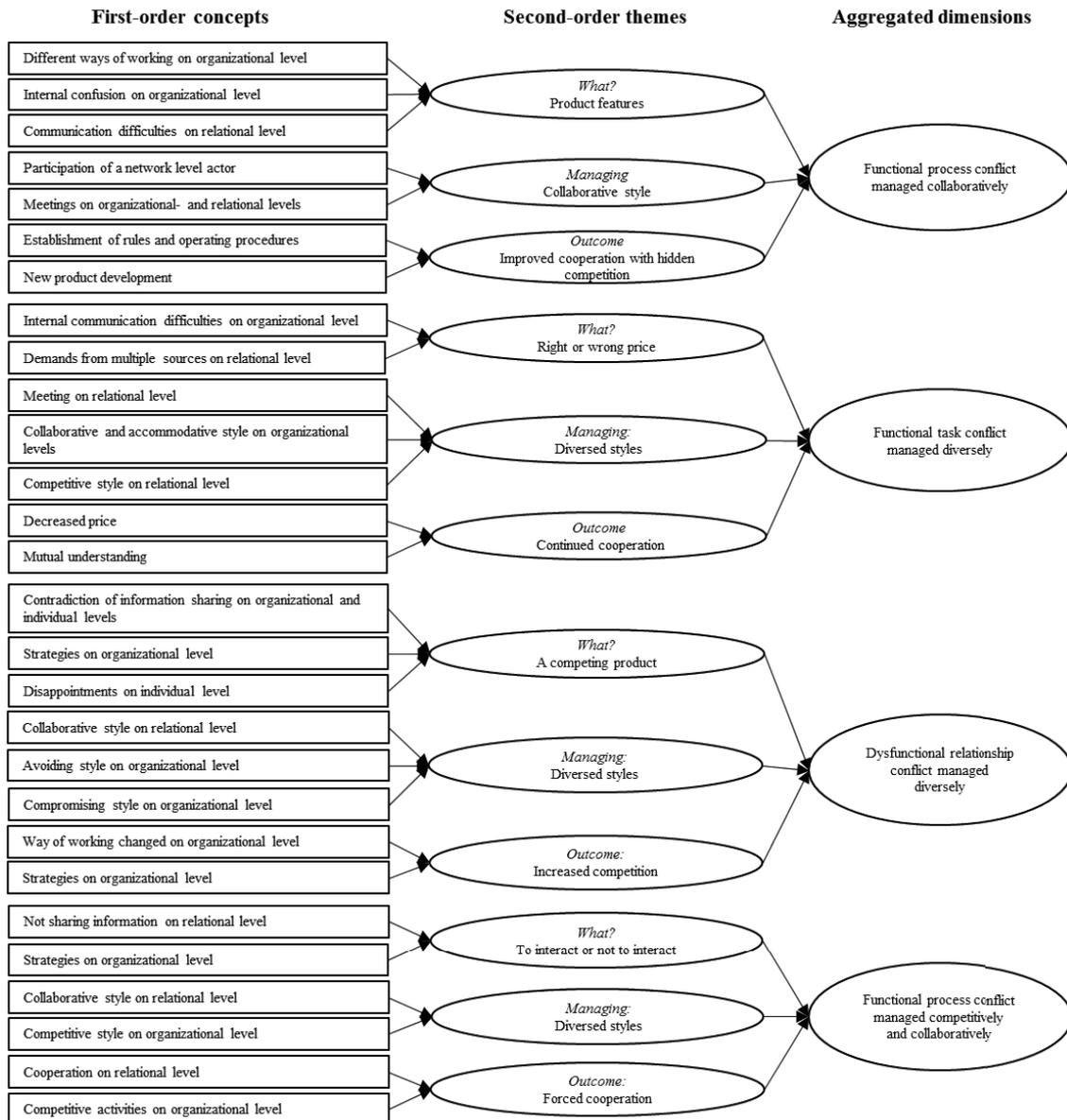


Figure 1. Data structure.

3.3 Empirical setting

Our case study focuses on a traditional multinational manufacturing company, Alpha, and its relationship with a supplier called Beta. The collaboration between the companies started around 1990 and at that time the nature of the relationship was perceived as both beneficial and friendly. One of Alpha’s business units sells a solution, and a crucial part of that solution is supplied by Beta. That crucial part of the solution is not a component, it is a self-contained product and it is

actually the main business of Beta. Alpha is the second biggest customer of Beta and approximately 30 percent of Beta's turnover comes from Alpha.

At first the solution business was a marginal business for Alpha, but it began to grow around 2008. In 2009 the growth of the solution business was continuing apace, and in Alpha a team was established to maintain and handle it. Eventually the solution team started to develop its own more compact substitute for Beta's product. The product was launched in 2010, and since then the relationship between the companies has been cooperative. Both companies have developed products that compete with the products of the other company, while simultaneously acting as buyer and seller in relationship to one another.

In recent years, sales from Beta to Alpha have decreased owing to a deliberate strategy by Alpha to increase the sales of its own product. However, Alpha is still forced to buy from Beta because of the need to supply spare parts for sold products. In 2016, approximately a quarter of the solutions were still sold with Beta's products. It is possible to identify several types of conflict in this cooperative vertical business relationship, and these are elaborated upon more thoroughly in the next section.

4 FINDINGS

4.1 Functional process conflict managed collaboratively

The first conflict is a process conflict related to product features such as design and modifications. At one point, there was an increased demand for Alpha's solutions, and the buyer needed the supplier to modify its product in order to fulfill customer demands. This was complicated by the fact that the companies on an organizational level had different ways of doing business. Alpha was bold and wanted to take over business areas that were still untouched, while Beta was more conservative and quite slow in adopting new things. These organizational level differences naturally influenced conflict on the relational level.

Alpha traditionally dares to throw itself into new worlds...and creates success through doing that... (Alpha)

Alpha is always moving ahead...and a company like Beta...is like conservative, before you change something in the industry it takes 20 years... this is how we were behaving...(Beta)

Moreover, at an organizational level there were problems in Alpha concerning communication between units. Coordinated communication was scarce and many different individuals talked in different ways with the supplier. Moreover, the supplier faced difficulties arising from personnel

changes. Both companies consequently suffered from internal confusion over how to organize and handle the solution business, which lead to communication difficulties on the relational level.

...also in this case, in our organization, in some cases it is more difficult because we do not even internally know what we want... (Alpha)

The reason for this (not answering inquiries for up to 4–5 weeks) according to Beta is that there have been many personnel changes within Beta during the recent months. At the same time, business has been booming and there has been a dramatic increase in inquiries. Beta are actively recruiting additional resources in order to meet customer demands but that it will take some time due to Engineer shortage. (Minutes of meeting)

The supplier was unsure what to deliver, and deliveries were late, and in addition, the supplier was not willing to change its product because of its conservative nature.

...They (Beta) drowned in work and were not able to finish a thing, and we already asked for another thing, because our business growth was exponential... (Alpha)

It (mindset) was like we won't change that, we keep it, this is the model. (Beta)

This relational level conflict also influenced the network level, as there were delays in deliveries to the buyers' customers. This conflict was managed on an organizational and relational level. On an organizational level, the buyer used a collaborative conflict management style by organizing an internal meeting to decide on all product changes that should be carried out by the supplier. Moreover, it was decided internally to have a common communication strategy when interacting with the supplier and to facilitate on-time deliveries by providing forecasts to the supplier.

...if there is something unclear, who should we contact. In such a way that it is clear to the supplier which are the open issues ... (Alpha)

Following attempts to manage the conflict internally on an organizational level, it came to be managed on a relational level, through a collaborative style involving a face-to-face meeting between the actors and a representative of an important customer of the buyer. The step indicates that a network level actor influenced the relational level conflict management. Initially, common rules of communication were agreed including a list of contact people. Moreover, the necessary product changes were presented.

...a new set of short-term rules were established and accepted by Beta. (Minutes of meeting)

The outcome of the conflict was perceived as positive by the buyer, because communication improved after the meeting. Overall, the issues behind this conflict relate to a network level increase in demand, and organizational level differences between the companies, and also internal company confusion. This process conflict was managed by a collaborative style, where meetings were used as the conflict management technique. Moreover, at the time of this particular conflict, the buyer had started to develop its own improved version of Beta's product in order to be able to modify products more easily in the future. Beta was not aware of this competitive activity. However, the product design modifications sparked another conflict, this time over price.

4.2 Functional task conflict managed competitively

The second conflict concerned the price of the modified products delivered from the supplier to the buyer. This conflict was partly caused by the communication difficulties on an organizational level.

...it is natural, when technical people speak directly with a supplier, they want the best and the most reliable that can be found, and they do not question price... (Alpha)

The previous process conflict illustrated there were no clear procedures within the buying organization describing who should be contacted on the supplier side, and by which means. This price-related task conflict was also influenced by the large number of individuals from the buyer side talking with the supplier, and demanding different changes. The supplier increased the price every time a change was made, but the increases were not approved by the buyer, which perceived that the supplier's costs had not increased in line with the increase in price.

...the price had jumped through the roof, for every single small change they charged a terrible sum of money... (Alpha)

In order to manage this conflict on an organizational level, the buyer used a collaborative style by internally investigating the costs of the all components of the particular product and producing a cost breakdown structure. Alpha developing its own competing product facilitated its knowledge of the costs of components. The cost breakdown structure was used as a tool for conflict management at a face-to-face meeting with the supplier. During the meeting, the price-related task conflict was consequently managed by adopting a competitive style at the relational level, as the buyer wanted a lower price and tried to convince the supplier that the price was too high. Meanwhile the supplier employed an accommodating style and adapted to the requests to lower the prices. However, the outcome of the conflict was still positive, as both parties shared the perception that the outcome was correct.

...they even admitted that our view was the correct one, and agreed that the price should be decreased... (Alpha)

The outcome of the conflict was lower-priced products delivered from the supplier to the buyer. During the above-mentioned conflict, the buyer had finished the development of its own product that competed with the supplier's product.

4.3 Dysfunctional relationship conflict managed diversely

The competing product led to a relationship conflict, and more specifically it concerned the buyer's sales of that product. An influential issue behind this conflict was that the buyer had shared the information on their new product in a press-release.

...documents on their home pages...we got the information (about Alpha's product) from the internet and from that time we did not get any orders anymore... (Beta)

The information concerning the competing product not only constitutes an influential issue on a relational level, but also on the organizational and individual levels in the buying organization. On an organizational level, one unit preferred to share information about the product, whereas the unit working closely with the supplier did not. Similar differences in perceptions were found on an individual level between individuals working in the different units. This conflict again reflects internal company communication problems.

...we panicked, it was not supposed to be public knowledge. But of course Alpha wants to show what we can do... (Alpha)

Moreover, before this conflict, the buyer had approached the seller concerning new joint business opportunities. However, pursuing the opportunities would have again required the supplier to modify its product. The conservative strategy of the supplier organization meant it was unwilling to do so.

they were pushing us to change...they saw that we were not responding as they were expecting...they told us, we knew...we knew that they would build that...but some people (at Beta) said that no this will never be a realistic solution...(Beta)

After competition became evident, the supplier wanted to know if the buyer was going to replace the supplier's product with its own competing product. The buyer did not share any information on this matter, even though its strategy was already in place.

...we had plans even at a quite early phase that this (selling Alpha's own product) should be the future... (Alpha)

This conflict is also related to the individual level, as some individuals at Beta were disappointed by the lack of contact from Alpha. Moreover, others were upset about the competing product, which might well be a reflection of the conservative culture and mindset prevailing at Beta at that time. Simultaneously, this conflict was also influenced on an individual level in Alpha, as the individuals felt twofold when buying from Beta and knowing that eventually Beta's product would be replaced by Alpha's own product.

...we knew it in an early phase that our own product is under development, which is completely in contradiction to the fact that we are buying their product... (Alpha)

As far as the management of the conflict is concerned, the companies adopted different management styles. Beta used a compromising style by approaching Alpha with suggestions for cooperation related to the competing product. Further, at an organizational level, Beta decided to develop its own product to ensure it remained competitive on the market, however, some individuals at Beta were not willing to change the existing way of working. Beta managed this by instituting personnel changes to change the way of working within the organization.

...some people really had taken it personally...personal opinions of two people which are not in the company anymore...(Beta)

The buyer used avoidance as a conflict management technique. On an individual level, it was eventually decided internally at Alpha not to discuss the new competing product with Beta. In turn, Beta perceived that Alpha was avoiding discussing the product.

...we asked things about their product, they wanted to change the subject very fast... (Beta)

Although there was a growing distance between the companies, on a relational level a collaborative style to manage conflict was employed. This is evident from the fact that the companies still found a way of continuing their interaction, which had advantages for both. However, as an outcome of this conflict, the nature of the relationship has changed from a cooperative to a competitive form.

4.4 Functional process conflict managed competitively and collaboratively

As the former conflict did not provide a satisfactory outcome for the supplier, it decided to develop a new product to compete with the buyer's product. This is related to the fourth conflict over process and particularly the interaction between the companies. The supplier refused to inform the buyer about the price of the new product, although the buyer would have liked to have known it.

...I asked that can we have a price...Tell us how many you need and then you will get the price, he said (Beta's representative) ... (Alpha)

The supplier would have liked the buyer to increase the sales of its product while the buyer strategically sells more and more of its own products. On an organizational level, individuals at Alpha were worried that the customers would start buying directly from Beta.

...they (customers) try to push prices down and this (customer x) wants to buy directly from Beta, and they have even got the contact information of Beta's sales agent... (Alpha)

Alpha managed this situation by employing a competitive style that involved reducing the price of its product and by presenting its advantages over Beta's product.

...we have been thinking about that kind of pricing strategy that we start to offer our own product to them (customer x) ... and in that way, we try to get 20 percent margins, smaller than we get from Beta's products but still quite good... (Alpha)

The supplier also adopted a competitive style in continuously promoting sales of its own product. Consequently, the conflict management techniques involved promoting competition, because both parties tried to manage the conflict over competing products in such a way that competition came to dominate cooperation. Moreover, the issues behind this conflict relate to decisions that the companies had to make on whether to cooperate or not. However, the buyer was and is still forced to cooperate with the supplier because of a network level demand for products and spare parts delivered by the supplier. Moreover, the supplier was dependent on the turnover it got from the business with the buyer and thus wanted to maintain the relationship. On a relational level, the companies managed the conflict in a collaborative style to remain able to cooperate.

... you have to negotiate; can we do this or can we do that. Or can we supply single parts to you, because we have the knowledge... (Beta)

...they seemed satisfied ...they remained willing to cooperate and seemed quite satisfied, so accordingly we believe that everything is quite ok... (Alpha)

However, in the long run, the relationship between the companies may be terminated.

4.5 Summary of the empirical findings

The findings of the empirical study are illustrated in Table 1. It is apparent from the findings that conflict in vertical cooperation is a multidimensional phenomenon comprising different types of conflict and conflict management styles. Moreover, the findings show that conflicts are related to multiple levels and that management styles vary at different levels. The outcome of a conflict has

implications both for the companies involved and for the nature of the competition. Next, the findings of the empirical study are elucidated upon in more detail.

Table 1. Summary of the findings.

		Conflict 1	Conflict 2	Conflict 3	Conflict 4
Conflict type		Functional Process conflict	Functional Task conflict	Dysfunctional Relationship conflict	Functional Process conflict
Conflict management	<i>Alpha</i>	Collaborative style	Collaborative style	Avoiding style	Competitive style
	<i>Beta</i>	Collaborative style	Accommodative style	Compromising style	Competitive style
	<i>Relational level</i>	Collaborative style	Competitive style	Collaborative style	Collaborative style
Conflict outcome	<i>Alpha</i>	Product development	Lower prices	Strategy to increase sales of own product	Promoting sales of own products
	<i>Beta</i>	New internal procedures	Lower prices	Product development	Promoting sales of own products
	<i>Relational level</i>	Improved cooperation	Continued cooperation	Increased competition	Forced cooperation

During the first conflict, the relationship was cooperative, which also reflects the conflict. Here a functional process conflict related to product features was managed in a collaborative way. However, even though both parties were satisfied with the outcome, the buyer started developing a product that was similar to the supplier's product. Hidden competition had entered the relationship, which again influenced the second conflict. By developing its own product, the buyer was in a stronger position of setting demands on the supplier. The second conflict concerned a task conflict of price that on a relational level was managed in a competitive style. On organizational level, the companies used different management styles: the buyer applied a collaborative, and the supplier a compromising style. Although a competitive management style was used on a relational level, the conflict was still functional, as its outcome was positive for both parties.

The third conflict was a turning point in the buyer–supplier relationship: competition became evident. This relationship conflict concerned a competing product and can be considered dysfunctional. The buyer managed this conflict through avoidance, and the supplier by compromising. However, at a relational level, the conflict was managed by a cooperative style, because both parties needed the relationship to continue. An outcome of the third conflict was the advent of open competition, which also influenced the fourth process conflict related to information sharing. The fourth conflict was a process conflict related to the interaction between the companies. On an organizational level, both buyer and seller applied a competitive conflict management style. However, on a relational level the conflict was managed collaboratively. This conflict can be considered functional, because it led to a desired outcome—continued cooperation.

5 DISCUSSION

One of the most important findings of our empirical study is that conflicts and conflict management in vertical cooperation simultaneously occur on different levels. Moreover, the nature of conflicts and conflict management may be different depending on the level of analysis. With regard to *types of conflict*, the findings of our study show that process, task and relationship conflicts occur in vertical cooperation. This finding is in line with some prior studies (e.g., Jehn & Mannix, 2001; Mele, 2011) on intragroup and intergroup conflict. However, in comparison with existing research on conflict in cooperation our findings reveal several new perspectives. First, cooperation research is often focused on role conflicts occurring on an individual level (e.g., Bengtsson & Kock, 2000; Raza-Ullah et al., 2014), whereas the findings of our study indicate that most conflicts occur on a relational level. Moreover, prior research on conflict in cooperation in horizontal business relationships stress knowledge sharing and opportunism (Fernandez & Chiambaretto, 2016; Tidström, 2014) as typical conflict types. In this study, neither knowledge sharing nor opportunism constituted types of conflict. Instead, in vertical cooperation, the conflicts are related to the processes and tasks occurring within the interaction between the companies. Our findings support prior conflict research by demonstrating the dynamic nature of task, process, and relationship conflicts (e.g., Jehn & Mannix, 2001; Lê & Jarzabkowski, 2015; Mele, 2011). From a time perspective, conflicts in vertical cooperation tend to develop from process to task, before becoming more relational and affective. This implies that our findings differ from Lê and Jarzabkowski (2015), who present a simultaneous existence of task and process conflicts.

As far as *conflict management* is concerned, our findings add new insights to existing cooperation research. As far as the separation and integration technique is concerned (e.g., Le Roy & Fernandez, 2015), it is arguable that it is best suited to managing the natural inbuilt tension of cooperation and competition in cooperation, rather than to managing more situational or event-based conflicts. Moreover, from a multilevel perspective, research on using separation and integration as management techniques, with the exception of the study by Fernandez and Chiambaretto (2016), has largely been limited to the organizational and individual levels, where separation is related to the organizational level and integration to the individual level (e.g., Le Roy & Fernandez, 2015; Seran et al., 2014). However, our findings show that in vertical cooperation, it is difficult to separate cooperation and competition at an organizational level because the same buying unit is handling the cooperative supplier relationship, while also buying components for its own competing product. Therefore, it seems like the separation/integration logic is not suited to conflict management in cooperative buyer–supplier relationships. Our findings instead provide support for the conflict management model presented by Thomas and Kilmann (1974), which has also been applied in prior research on horizontal cooperation (Tidström, 2014). Moreover, similar conflict management styles have been used recently in study related to conflict management in new service development (Gounaris et al., 2016). We found that conflicts were managed mainly on the organizational and relational levels, and that the collaborative, competitive, accommodative,

and avoidance forms of conflict management style were in evidence. This finding differs from that of Tidström (2014), who found competitive and avoiding styles were typical. This is an important finding as it shows that conflict management styles in horizontal and vertical cooperation are different, which can probably be explained by the different nature of the relationships. Moreover, the findings of our study add to prior research on conflict management styles (Thomas & Kilmann, 1974; Tidström, 2014) by showing that a conflict can be managed differently on different levels, and that a competitive style at an organizational level may still be coupled with a collaborative style at a relational level.

In relation to *the outcome and dynamics of conflict* the findings of our study also add to prior research. While previous buyer–seller studies (e.g., Johnsen & Lacoste, 2016) have viewed conflicts as a ‘dark side’ of relationships or something that should be avoided (e.g., Plank, Newell, & Reid, 2006), our findings support the view that conflicts are an inevitable part of business relationships (Duarte & Davies, 2003; Plank et al., 2006). Moreover, our findings support prior cooperation research (e.g., Tidström, 2008) and conflict research (e.g., Mele, 2011; Tang et al., 2017) by showing that conflicts also have positive outcomes. However, as Tang et al. (2017) focused on the effects of conflict frequency on conflict outcomes, our findings emphasize the importance of the multilevel nature of conflicts in business relationships. In line with Tidström (2014), we show that most conflicts are managed diversely on a company level. However, by adding a relational perspective on the outcome of conflict we add new insights, for example by showing that although a conflict was managed in a collaborative way, there were still emergent competitive activities taking place. In relation to this complicated nature of conflict, in comparison with Skarmeas (2006), we show that a functional conflict need not necessarily be related to long-term benefits for both parties. Even when a conflict is being properly managed to the satisfaction of both parties, it can still trigger new product development, and thereby spark another conflict. Our findings are in line with those of Jehn and Mannix (2001) who stated that conflict should be viewed as a dynamic process, and with those of Mele (2011) emphasizing the interconnectedness of conflicts.

6 CONCLUSIONS

The findings of this study contribute to cooperation research by showing new insights related both to vertical cooperation and to conflicts. We fill an important gap in existing cooperation literature by focusing on a multilevel and dynamic perspective on conflict in vertical cooperation. Conflict in vertical cooperation is different from conflict in horizontal cooperation in that it relates to processes and tasks within the relationship rather than to knowledge sharing and opportunism. In comparison with prior research on conflict management in horizontal cooperation, the current research adds a multilevel perspective and shows that conflicts are managed differently at different levels. Even if a conflict at an organizational level is managed by a competitive or avoiding style, on a relational level, a collaborative style may still be used. Our findings contribute to prior

research by showing how a conflict may be functional and positive on a relational level despite being dysfunctional at an organizational level. Moreover, the findings show how one conflict relates to another, even if the outcome of the first conflict is functional.

From a managerial perspective, managers should be aware of the differing strategies and procedures of the interacting companies, as these are often related to the existence of conflict. When a conflict within an organization has been managed in a collaborative way, it might still be managed in a competitive way on a relational level. Although a conflict is considered functional within a company, it may still be dysfunctional as far as the cooperative relationship with the buyer or seller is concerned. Moreover, the findings show that a functional outcome may trigger competitive activities on an organizational level.

Conflicts and conflict management in vertical cooperation is an unexplored area of research and therefore merits further investigation. This study focused on large multinational companies within the manufacturing industry. Therefore, future research should explore conflicts in vertical cooperation within various industries, also involving small and medium-sized firms. The findings of this study indicate that the outcome of a conflict has implications on multiple levels. A fruitful area for further research would be to more thoroughly investigate outcomes of conflict in cooperation by including different levels of analysis such as the individual, organizational, relational, and network levels. Finally, it would be relevant to study the management of conflict in vertical cooperation in terms of how conflicts should be managed in order to improve the performance of firms, and enhance relationships and business networks.

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