

FUNDAÇÃO GETULIO VARGAS  
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CLAUDIO MINERBO

**AN INTEGRATIVE PERSPECTIVE ON VALUE CREATION AND CAPTURE IN  
BUYER-SUPPLIER RELATIONSHIPS**

**SÃO PAULO  
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Tese apresentada à Escola de Administração de  
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Vargas, como requisito para obtenção do título  
de Doutor em Administração de Empresas.

Campo de Conhecimento:  
Gestão de Operações e Sustentabilidade

Orientador: Prof. Dr. Luiz Artur Ledur Brito

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**Banca examinadora:**

---

Prof. Dr. Ely Laureano Paiva  
FGV- EAESP

---

Prof. Dr. Marcos Primo  
Universidade Federal de Pernambuco

---

Prof. Dr. Martin C. Schleper  
University of Sussex Business School

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## RESUMO

Este trabalho investiga a criação e captura de valor sob a ótica cliente-fornecedor. Diversos aspectos da criação de valor nas relações entre empresas foram conceituados em estudos anteriores, como as dimensões de valor, processos e maneiras pelas quais o valor é criado (ou co-criado), e a captura de valor como resultado. No entanto, estes estudos foram conduzidos de forma independente ou sem muita interação, e ainda não está claro como esses aspectos interagem entre si. Esta pesquisa examina como quatro componentes interagem nas relações entre empresas: as dimensões da criação de valor, os processos que viabilizam a criação de valor, como clientes e fornecedores interagem com esses processos, e as diferentes maneiras pelas quais o valor é capturado. O trabalho foi desenvolvido em três etapas, cada uma com objetivos, metodologia e amostras específicos e complementares, e resultou em três artigos correspondendo a cada etapa. Contribuições individuais e coletivas dos artigos são discutidas com base um modelo integrativo, que é generalizável e aplicável a clientes e fornecedores. O valor entre empresas é criado por meio de diferentes dimensões, algumas comuns à maioria dos relacionamentos e outras relevantes em determinadas situações. Diferentes combinações entre estas dimensões e características do relacionamento podem levar a um mesmo resultado de captura de valor, que pode ser por preço ou volume (equifinalidade), enquanto o valor criado através da colaboração não é capturado pelo fornecedor. O potencial de captura de valor das diferentes dimensões é limitado, e depende se elas forem estrategicamente gerenciadas através de escolhas individuais, ou combinadas entre si. A eficiência operacional é a dimensão que mais afeta a captura de valor, desde que atinja um nível de desempenho que seja consistente ao do mercado, e não superior. Benefícios das trocas sociais não são precificados, mas são capturados de forma indireta. Metodologicamente, este estudo empregou métodos raramente encontrados na área de operações para avaliar de relacionamentos complexos, como Análise Comparativa Qualitativa (QCA) e Experimentos. Clientes e fornecedores podem aplicar o modelo interativo e os conceitos propostos neste estudo para melhor entender os diferentes mecanismos e opções disponíveis que possibilitem aumentar o valor de seus relacionamentos.

**Keywords:** criação de valor, captura de valor, relacionamento cliente-fornecedor, QCA, experimento

## **ABSTRACT**

This research investigates value creation and capture from a buyer-supplier perspective. Previous studies conceptualized several aspects of value in business relationships, including the dimensions of value creation, the processes and manners by which value is created (or co-created), and value capture as an outcome. Despite that, research has been conducted independently or without much interaction, and it is still unclear how these aspects interact with each other. This study examines the interplay among four components of business relationships: the dimensions of value creation, processes that enable value creation, buyers and suppliers interactions with these processes, and different manners by which value is captured. The research was developed in three phases, each one with specific and complementary objectives, methodology and sample, and resulted in three articles matching each of these phases. Individual and collective contributions of the papers are provided based on an integrative and generalizable framework developed in this study, applicable for both buyers and suppliers. Value is created by means of different dimensions, some of which common to most relationships and others relevant to certain dyads. Different combinations among value dimensions and relationship characteristics may lead to similar outcomes in value capture through price or volume (equifinality), while the value created by collaborative efforts is not captured by the supplier. Individually, each value dimension's potential to value capture is limited and depend if they are strategically managed as trade-offs or combined. Operational efficiency is a dimension that mostly affects value capture, but is limited to delivering consistent, and not superior performance levels. The benefits of social exchanges is captured indirectly, as it cannot be priced. Methodologically, this study employed methods that have hardly been used to evaluate complex B2B relationships in OM research, such as Qualitative Comparative Analysis (QCA) and Adaptive Choice Based Conjoint experiments (ACBC). From a practical perspective, buyers and suppliers can use the clear, practical and real word framework and insights provided by this study to better understand the different mechanisms and options available to increase the value from their relationships.

**Keywords:** Value creation, value capture, buyer-supplier relationships, QCA, conjoint analysis, ACBC analysis

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## **PART 1: INTRODUCTION**

### **1.1 Preface**

Value creation and value capture are multidisciplinary concepts in the management literature, and have been discussed based on different perspectives, mostly derived from the field of economics (Payne & Holt, 2001). From a broad economic perspective, a firm's value created is distributed among a set of stakeholders, and therefore the payments received by a firm must always equal the payments made by the firm to resource owners (Lieberman, Garcia-Castro, & Balasubramanian, 2017). Within the shareholder's perspective, value is based on selecting business strategies that creates a firm's sustainable competitive advantage, and encompasses other stakeholders such as employees, consumers, and society (Khalifa, 2004). From a consumer perspective, exchange value is the monetary amount realized when the exchange takes place, and is composed by the price a consumer is prepared to pay plus a "consumer surplus", which is a subjective and individual specific concept for "value for money" (Bowman & Ambrosini, 2000). Accordingly, a firm can increase its value by enhancing the "consumer surplus", while maintaining other variables, such as costs, unchanged.

This research investigates value creation and capture from a buyer-supplier perspective, which is a subset of the consumer perspective. Understanding the mechanisms by which value is created and captured by buyers and suppliers is of paramount importance to research and practice for different reasons. Outsourcing manufacturing of goods, provision of services, or functional activities have increased since the 1990s, and today is considered a key strategic component of supply chain strategies that account for 50–90% of a firm's cost of goods sold (Baraldi, Proença, Proença, & de Castro, 2014; Brewer, Wallin, & Ashenbaum, 2014). Moreover, due to the increasing changes in technology, competition, customer demands, or the way businesses operate, strategies to create and deliver value to customers are not as simple as they used to be (Hallikas, Immonen, Pynnönen, & Mikkonen, 2014; X. Zhang & Chen, 2008). Finally, the concept of value in buyer-supplier relationships has a fundamental position in marketing (MKT), purchasing and supply (PSM), logistics and operations management (OM) disciplines (Francis, Fisher, Thomas, & Rowlands, 2014).

Value in buyer-supplier relationships is commonly conceptualized as the result or trade-offs between what customers receive (benefits) and what they give up (sacrifices) to get products or services, taking into consideration the available alternative offerings (Anderson & Narus, 1990; Eggert & Ulaga, 2002; Grönroos, 2011; Lapierre, 2000; Lindgreen & Wynstra, 2005; Vargo & Lusch, 2008). Customer value is a subjective concept that has economic (monetary) and non-economic dimensions (Anderson & Narus, 1990), is determined by the receptor, may be differently weighted by different consumers (Corsaro & Snehota, 2010; Vargo & Lusch, 2004), take different forms during the life of a relationship (Autry & Golicic, 2010), and can be created by both buyers and suppliers. Value capture (or appropriation/claim) is one of the outcomes of relationships, and corresponds to the share of the value created which is held by the buyer and/or the supplier (Bowman & Ambrosini, 2000; Brandenburger & Stuart, 1996; Homburg, Koschate, & Hoyer, 2005; Lindgreen & Wynstra, 2005).

Despite the extensive literature on this area, some challenges and questions that still deserve further investigation on how value is created, communicated and delivered have been recently raised. The definitions of customer value are not straightforward because studies have operationalized value constructs based on single- or multiple-item approaches (Ruiz, Gremler, Washburn, & Carrión, 2008), modeled value as reflective or formative constructs (Baxter, 2009), and lacked of theoretical and definitional rigor in terms and typologies of value-related dimensions (Baxter, 2009; Francis et al., 2014). As a result, the term value creation has often been used incorrectly, scales are less precise, and replication is more difficult. Moreover, although past studies generally support that perceptions about how buyers and suppliers perceive their relationships are different (Ambrose, Marshall, & Lynch, 2010; Aminoff & Tanskanen, 2013; Golicic, 2007; Oosterhuis, Molleman, & Van Der Vaart, 2013), further investigation is still needed to better understand the consequences of such differences to value creation and capture, considering both sides of the relationship (Chen, Su, & Ro, 2016). Finally, most of the literature on value creation and capture remains on a theoretical, conceptual, or at the firm or industry levels (Aarikka-Stenroos & Jaakkola, 2012; Lieberman et al., 2017; Yan & Wagner, 2017), or conducted mainly in physical products such as electronics, industrial manufactured goods and retail (Keränen & Jalkala, 2013), and therefore more empirical evidence is necessary to evolve and increase the validity, credibility, and generalizability of value creation and capture theory.

This thesis responds to some of these questions to advance theory in value creation and capture, and is developed in three steps. It starts by uncovering major themes discussed within the literature, and proposing a generalizable and structured framework, valid for both buyers and suppliers, that explains how value is created and captured. In this framework, value dimensions are conceptualized in the basis of grand theories, and interact in an integrated manner with processes and relationship characteristics to create value. In turn, the value created through such interactions can be captured by buyers and suppliers not only through price, which is the most common form of capturing value discussed in literature (Cheung, Myers, & Mentzer, 2011; Ellegaard, Medlin, & Geersbro, 2014; Grönroos & Helle, 2012; Homburg et al., 2005; Lavie, 2006; S. M. Wagner, Eggert, & Lindemann, 2010; Yan & Wagner, 2017), but also through other two forms, namely volume and results from collaborative efforts.

Then, the study builds on the equifinality principle (Rihoux & Ragin, 2009) to bring evidence of how different configurations among value dimensions and relational factors can lead to similar outcomes of value capture, from both buyers' and suppliers' perspectives. The underlying reason is that value capture cannot be explained based on individual relationships among these elements, but from different configurations among them. For example, while it seems reasonable to accept that a buyer will be willing to allocate more volume to a supplier that has better performance, would this buyer make a similar decision if he had the perception that the supplier does not have the necessary capabilities to support future needs? To the knowledge of the researchers, no studies that integrate all these elements of value creation and capture in such manner were found in the literature.

The third step builds on the previous ones, and takes the buyer's perspective to empirically measure the relative importance of different value dimensions and value capture. The means-end value hierarchy model (Mentzer, Rutner, & Matsuno, 1997) explains that customers perceive and evaluate their use experiences based on an hierarchy of attributes (referred as value dimensions in this study), which range from basic product/service to desired attributes. Moreover, research on value is derived from the economic theory of 'utility', which states that costumers seek to maximize the satisfaction (or benefits) they get from products or services (Payne & Holt, 2001). This final step measures the relative utility of the different value dimensions and their effect on the price a customer is willing to pay.

The contributions of this thesis to OM knowledge on value creation and capture are initially provided by means of three different papers, each one mirroring these steps, and then by discussing the contributions of the three papers in a collective manner. From a theoretical and empirical standpoint, the papers attend recent calls to develop more exhaustive concepts, definitions and typologies of value creation and capture (Eggert, Kleinaltenkamp, & Kashyap, 2019; Ellegaard et al., 2014), and increase the knowledge about how contextual variables identified in previous models interplay and influence value capture (Marchet, Melacini, Perotti, Sassi, & Tappia, 2017). From an empirical perspective, they go beyond exploring the effects of independent variables on dependent variables when studying complex buyer-supplier relationships (Russo, Confente, Gligor, & Cobelli, 2019), and apply methods that have been hardly used in OM research, such as Qualitative Comparative Analysis (QCA) (Greckhamer, Furnari, Fiss, Peer, & Aguilera, 2018; Rihoux & Ragin, 2009), and Adaptive Choice Based Conjoint Analysis (ACBC) (Garver, Williams, Taylor, & Wynne, 2012; Su & Yang, 2017). Moreover, this research details a methodology that combines a qualitative approach based on case studies with a QCA analysis, which will help develop the method in OM research. From a practice perspective, it provides to buyers and suppliers clear, practical and real word understanding of the value capture mechanisms, how business is divided among suppliers, and the options available to increase value capture (Ellegaard et al., 2014; A. H. Liu, Leach, & Bernhardt, 2005), so that they can apply to increase the value from their relationships.

Before presenting and discussing the papers, this chapter provides the background that supports the main arguments of the thesis. It begins with a brief overview of the existing literature on customer value, buyers' and suppliers' perceptions, and value capture. The subsequent subsection brings the research motivation based on the gaps identified in this brief literature review, and is followed by the research question and objectives. This chapter concludes with the structure of this thesis and a brief explanation of the three papers.

## **1.2 An overview of value creation and capture literature**

In this section, five concepts on value of buyer-supplier relationships are introduced. First, it presents a background and current definitions of customer perceived value, their components and typologies. Then, the concepts of relationship value, including value in exchange and value in use, are presented and followed by a discussion on the different perspectives that



buyers and suppliers have on value. This theoretical overview ends with a discussion on value capture and willingness to pay (WTP).

### **1.2.1 Customer perceived value**

Customer-perceived value is "*a customer's perceived preference for, and evaluation of, those product attributes, attribute performances, and consequences that arise from use and that facilitate achieving the customer's goals and purposes in use situations*" (Woodruff, 1997). It is based on the utilitarian use value of a core product, the best value for price, or better operational efficiency based on quality, cost, delivery and speed (Lindgreen & Wynstra, 2005; Sweeney & Soutar, 2001; Terpend, Tyler, Krause, & Handfield, 2008).

In the Industrial Marketing discipline, value is commonly defined based on the trade-offs between the benefits and sacrifices perceived by the customer. The trade-offs can be in terms of the sum of the benefits and costs, monetary terms of the benefits a customer receives in exchange for the price it pays, the net valuation of the perceived benefits and the costs the customer is willing to give up for the needs he is seeking to satisfy, or “what you get” and “what you give” (Anderson & Narus, 1990; Corsaro & Snehota, 2010; Kumar & Reinartz, 2016; Lapierre, 2000; Lefaix-Durand, Kozak, Beauregard, & Poulin, 2009).

Value in the OM discipline has its roots on the marketing approach, and the academic interest in the topic has significantly increased after 2003 (Francis et al., 2014; Ramsay, 2005). Customer perceived value is also applicable to buyer-supplier relationships, since the customer can assess the value created by a supplier, a business partner, or "a given working partnership in comparison with similar relationships" (Anderson & Narus, 1990; Flint, Woodruff, & Fisher Gardial, 2002; Lefaix-Durand et al., 2009).

Assessing customer value is difficult because it is perceptual and actor specific. It is uniquely and phenomenologically determined by the beneficiary of the service, is contextual, and based on the judgment about a product's excellence of the objective price (DeSarbo, Jedidi, & Sinha, 2001; Pinnington, Meehan, & Scanlon, 2016; Vargo & Lusch, 2008). The dimensions (or drivers) of perceived value may be context and actor specific, with different customer

segments or consumers within a same supply chain weighting similar dimensions differently (Corsaro & Snehota, 2010; Sweeney & Soutar, 2001; Vargo & Lusch, 2004).

For those reasons, recent studies provide inconclusive answers on the context of customer value within different actors. For example, Lambert (2012) conducted a dyadic co-creation study in services, and found that 25% of the value attributes were similar for both companies; Hallikas et al. (2014) showed that the perceived value of an infrastructure service provider is dependent on the purchasing strategy of the buyer; and more recently Hwang, Chen, & Lin (2016) identified that the selection criteria of a logistics service provider apply to all circumstances, regardless of the firms' characteristics or special requirements. Scholars suggest that, as a consequence companies understand surprisingly poorly what makes them attractive business partners in specific relationships, and how other parties see them (Aminoff & Tanskanen, 2013), and therefore achieving a mutual understanding of what generates optimal value for the customer is pivotal (Aarikka-Stenroos & Jaakkola, 2012).

### **1.2.2 Components of customer perceived value**

Early research has devoted significant effort to develop typologies for dimensions of customer value (Flint et al., 2002), and a broad range of definitions, terms and typologies have been used to define the constructs. For example, the economic (or monetary) dimensions of value were defined as cost savings, effects on customer's growth, revenue generating capacity and cost levels (Barry & Terry, 2008; Grönroos, 2011; Walter, Ritter, & Gemuden, 2001).

Several definitions for the non-economic dimensions of value have also been developed throughout the years, such as competence, market position and social rewards (Walter et al., 2001), social components, reputation, innovation, and technical capabilities (Lindgreen & Wynstra, 2005), cooperation, integration and global capabilities (Ramsay, 2005; Terpend et al., 2008), effectiveness of the working relationships relative to alternative suppliers (A. H. Liu et al., 2005), or perceived risk (Faroughian, Kalafatis, Ledden, Samouel, & Tsogas, 2012).

However, the lack of definitional rigor used to define value has led to a broad range of definitions and terminologies, with many times different names being used for similar concepts. Access to market, access to new buyers/suppliers or access to new partners

(Aminoff & Tanskanen, 2013; Hald, Córdón, & Vollmann, 2009; Tanskanen & Aminoff, 2015), or cost improvement, cost reduction and cost savings (Aminoff & Tanskanen, 2013; Mentzer et al., 1997; Wallenburg, 2009) are some examples of this issue. For some scholars, applying the same label to focal, but distinct constructs, is common practice in the literature and should be no confusion as long as clear conceptual definitions are provided for the same construct (Diamantopoulos, 2010). Moreover, scholars have also been concerned about the best ways to conceptualize and understand customer value, and how existing approaches and measurement can be adapted to assess customer value in business markets (Baxter, 2009; Francis et al., 2014; Lindgreen, Hingley, Grant, & Morgan, 2012).

### **1.2.3 Relationship value, value in exchange and value-in-use**

Relationship value relates to the outcomes and benefits of interpersonal ties throughout the life of a business relationship with a customer. Hogan (2001 p. 339) introduced the expected relationship value (ERV) concept "*as a probability distribution of the net present value of current and future relationship outcomes*". According to Lindgreen et al., (2012 p. 208), "*more value accrues through relational exchanges than transactional exchanges because exchanges become predictable and reassuring and learning and adaptation in the relationship result in new solutions*".

For example, relational exchanges can be sales function tasks that contribute to value creation in business relationships, such as understanding customer markets and operations, fostering two-way communication, or managing emergent situations (Haas, Snehota, & Corsaro, 2012). Lapierre (2000) identified 13 dimensions of relationship value and grouped them into three scope dimensions (product, service, and relationship benefits), each one with the corresponding benefits and sacrifices. An example of making a relationship more predictable could be interpersonal ties, that are relevant to achieve favorable exchange relationships in emerging markets like China (Y. Huang, Luo, Liu, & Yang, 2016).

Value in exchange is a more transactional attribute, promised by the supplier and expected by the customer at the time of purchase (Lambert & Enz, 2012; Macdonald, Wilson, Martinez, & Toossi, 2011). It refers to an expected promise or potential before the exchange takes place, and can be measured by the monetary exchange for the product that a firm offers (Lusch,

2011). In this context, value is embodied in products and services, and linked to the rational sequence of exchanging solutions for something else (Haas et al., 2012).

Value-in-use results from the application of the product or service, such as cost reductions, reduction of accident rates, or better productivity. It takes place in the customer's use of products or services after the exchange takes place (Macdonald, Kleinaltenkamp, & Wilson, 2016; Macdonald et al., 2011). In this sense, the customer is the value creator, and the supplier's role in the value-generating process is to facilitate the customers' value creation (Grönroos, 2011). Value-in-use can be measured in monetary and non-monetary terms, such as reliability, compatibility with future solutions, time savings, or decreased costs (Aarikka-Stenroos & Jaakkola, 2012). Value-in-use can also comprise experiences (emotional, and memorable interaction that has intrinsic value), relationships (joint, reciprocal, and iterative processes of the relationship), and personalization (uniqueness of the actual or perceived use process) (Ranjan & Read, 2016).

Therefore, understanding the value creation potential of a business relationship is a complex process that involves expectations set by the parties before the delivery of the product or service (value in exchange), after the delivery (value in use), and through the ongoing relationships.

#### **1.2.4 Buyers' and suppliers' perceptions on value**

Two streams of thought about how actors perceive and cope with the value dimensions were identified in the literature, but the results are still inconclusive. For one stream, value can be objectively established and over time becomes homogeneous across relationships (Lapierre, 2000; Ulaga & Chacour, 2001). For example, Barnes, Naudé, & Michell (2007) found that buyers and suppliers often have common views within their relationships and the perceptual gaps between the parties tend to be small. Nyaga, Whipple, & Lynch (2010) found that perceptions of buyers and suppliers of collaborative relationships are relatively consistent, but there are important differences on trust, commitment and performance perceptions.

For another stream, customers and suppliers have different expectations and perceptions of value because it is uniquely and phenomenologically determined (Flint et al., 2002; Vargo & Lusch, 2004), or due to buyers' subjective "definitions" and heterogeneous interpretations of

customer-perceived value (DeSarbo et al., 2001). For example, Ambrose (2010) identified significant differences in the perceptions of behavioral and attitudinal dimensions in relationships and in the drivers of relationship success. Geiger et al. (2012) demonstrated that important differences exist between buyers' and suppliers' approaches to their relationships. Oosterhuis et al. (2013) found that more often buyer and supplier perceptions of certain supply chain attributes seem to diverge. Aminoff & Tanskanen (2013) introduced the notion of congruence to describe the nature and extent of differences in perceptions in the relationships, and found that perceptions of trust were more congruent than perceptions of expected value.

The success and continuation of a relationship depends on how parties perceive the value they are gaining, and perception gaps may negatively influence the attraction, collaboration, reciprocity and performance of a relationship. For example, considering the supplier's point of view existing customers represent a valuable asset to the firm, and retaining customers is more profitable and a major marketing goal than winning new ones (Geiger et al., 2012; Lindgreen & Wynstra, 2005).

Gaps on how buyers and suppliers perceive their relationships have been observed. Perceptions seem to be similar on factors which the parties have similar information or when the level of relational norms is high, but gaps tend to occur when performance is assessed, parties have conflicting goals, or communication is bad (Aminoff & Tanskanen, 2013; Chen et al., 2016; Golicic, 2007; Oosterhuis et al., 2013). Therefore, it is important to explore and understand the perceptions that each party has on the other in the relationship, and the consequence of the perception gaps to the relationships.

### **1.2.5 Value capture and willingness to pay**

One outcome of relationships is value capture (or appropriation / claim). It corresponds to the portion or share of the value created which is held by the buyer and/or the supplier, and is independent of the value creation (Bowman & Ambrosini, 2000; Brandenburger & Stuart, 1996; Homburg et al., 2005; Lindgreen & Wynstra, 2005; Miguel, Brito, Fernandes, Tescari, & Martins, 2014; Tescari & Brito, 2016).

More value can be captured in a relationship by increasing a customer's Willingness to Pay (WTP). WTP is the maximum amount of money a customer is willing to spend for a product or service, is a subjective concept, and depends on the perception of each user concerning the benefits of a product or service (Brito & Miguel, 2017; Homburg et al., 2005). WTP varies between customers and contexts, and can be influenced by several factors, such as innovation, performance of the products or services, and better communication of the value brought through a solution (Lindgreen & Wynstra, 2005; Tuli, Kohli, & Bharadwaj, 2007). WTP can also be determined by the perceived power and dependence asymmetries between the economic actors, where the powerful party tends to appropriate a larger share of the created value through price negotiations, coercive actions, additional services extracted after agreements had been signed, or other opportunistic behaviors (Bowman & Ambrosini, 2000; Ellegaard et al., 2014).

Previous studies support the relationship between customer satisfaction and WTP. For example, it may follow an inverse S-shaped form that is concave for low satisfaction levels, convex for high satisfaction levels, and relatively flat for medium satisfaction levels Homburg (2005). However, discussion on value capture has been mostly theoretical or conceptual, and at the firm or industry levels (Lieberman et al., 2017; Yan & Wagner, 2017), and therefore there is a need to empirically explore in a more micro the different processes of value creation, or how the context of specific relationships influence value capture.

### **1.3 Research motivations**

The previous section provided an overview of the value creation literature and uncovered some theoretical gaps that deserve further investigation (Table 1). The motivations for this research are based on these gaps and are threefold.

The first is to integrate different disciplines, such as OM, MKT and Strategy/management, and advance theoretical knowledge on this area. One of the reasons why these gaps remain is that different streams of research have mostly run independently, without much interaction (Su & Yang, 2017), and there is a scarcity of empirical investigations on value-in-use (Aarikka-Stenroos & Jaakkola, 2012). Even structured or systematic literature reviews do not provide a clear and structured picture on the main topics of value creation and capture because

they tend to be specific to a SCM area or discipline (Ellegaard et al., 2014; Francis et al., 2014; Mortensen, 2012; Soosay & Hyland, 2015; Gianluca Spina, Caniato, Luzzini, & Ronchi, 2013), and therefore do not solve these gaps. This research seeks to bridge these gaps by investigating value creation and capture in a more integrated manner.

**Table 1: Overview and gaps in the value creation and capture literature**

Concept	Theoretical overview	Identified Gaps
Customer perceived value	Value is based on trade-offs between benefits and sacrifices, is perceptual, and actor specific	Assessing customer value is difficult, and answers on customer value within different actors are inconclusive
Components of customer perceived value	Economic (or monetary) and non-economic dimensions of value have been developed throughout the years	The lack of definitional rigor used to define value has led to a broad range and overlapping definitions and terminologies
Relationship value, value in exchange and value in use	Relationship value relates to the value obtained throughout the relationship, value in exchange refers to an expectation before the exchange takes place, and value-in-use takes place when used	Understanding value creation potential is complex because it involves expectations set before, during, or after the relationship initiates
Buyer's and supplier's perceptions on value	Gaps on how buyers and suppliers perceive their relationships have been observed, and negatively influence attraction, performance, and collaboration	Address contradictory streams of thought on homogeneity across relationships; understand the consequences of perception gaps to value capture
Value capture and WTP	Value capture corresponds to the portion or share of the value held by the buyer and/or the supplier, and WTP is the maximum amount of money a customer is willing to spend for a product or service	Discussions have been mostly theoretical, conceptual, or at the firm or industry levels; empirical research is needed to increase validity and generalizability

Personally, the motivation came as an academic and practitioner with more than 25 years of experience in designing, implementing and managing outsourced operations in different industries. Throughout these years, I have witnessed several successful and unsuccessful relationships, but the mechanisms by which this happened and the potential value that was unrealized in such relationships remains unclear to me. For example, how both parties can fully understand the value that can be captured in a relationship, and use this for better win-win negotiations? How the interplay between buyers' and suppliers' interactions and the

perceptions they have of their relationships contribute to the (in)succes of such relationships? Can the same value creating mechanisms be applied to different suppliers or customers in the same supply chain?

From a social perspective, the motivation for this study is to disseminate the theory and insights to practitioners. About half of solution providers at Fortune 1000 firms realize modest benefits, 25% of them actually lose money, and little is still known about how business is divided among suppliers when a firm is multiple sourcing (A. H. Liu et al., 2005; Tuli et al., 2007). Thus, providing to buyers and suppliers possible manners by which they may increase the value they capture in their relationships, it may be possible to enhance their firm's performance and competitive advantage.

#### **1.4 Research question and objectives**

The aim of this study is to address some of the identified gaps and contribute to the knowledge on value creation and capture. Building on the idea that value creation and capture is a complex phenomenon, the following main research question was proposed: *how buyers and suppliers can increase the value they create and capture from their relationships?* Three specific research objectives were defined to answer the main research question:

- R.O.1: Based on the key underlying premise that some answers to the main research question may exist, but not in a synthesized and organized manner, the first objective is to organize the existing body of knowledge on the topic and provide insights that may answer the main question;
- R.O.2: Examine how different dimensions of value creation and relationship factors can be combined to increase the value created and captured in dyadic buyer-supplier relationships;
- R.O.3: Investigate the relative impact of different value dimensions on value capture. For this objective, price was used to measure value capture because customers make inferences about the overall value of a product based on the perceptions of what is given and what is received (Bowman & Ambrosini, 2000).



## 1.5 Structure of the thesis

This thesis is divided into three chapters, and this is the first one. It provided an overview of the literature on value creation and capture, and discussed the main theoretical gaps of the extant literature that supported the main research question and objectives.

The second chapter contains the three papers. Each one is complementary to the main research question and associated to one research objective, with its own specific question, methodology and sample, and will result in an empirical article to be published in leading OM and Marketing international journals.

The first paper is called “*an integrated perspective of value creation and capture*”, and consists of a systematic literature review of 191 articles published in 21 relevant journals in the MKT, OM and Strategy disciplines to propose an integrated framework for value creation and capture. Based on three major themes found in the literature (dimensions and constructs of value creation, value creation mechanisms, and value capture), the proposed framework integrates five different key elements: (i) seventeen dimensions of value creation, defined in light of grand theoretical perspectives; (ii) five relational processes that enable value creation; (iii) two different forms by which buyers and suppliers interact with these processes (one-way or jointly to co-create value); (iv) three different relationship factors that influence value creation and capture; and (v) three different forms of capturing value (by negotiating price at the expense of the relationship partner, shifting volume at the expense of other competing firms, or increasing the value pie through collaborative efforts at no one’s expense).

The second paper called “*Unpacking value creation and capture in buyer-supplier relationships*” is based on an embedded dyadic case study between a firm in the financial payments industry and six specialized suppliers that provide sales, software and logistics services, followed by a qualitative comparative analysis (QCA) on 29 “case situations” that lead to a positive or negative change in value capture. It provides new empirical evidence that value is composed by “core” and “non-core” dimensions applied to relationships, instead of general or supply chain specific dimensions. It also provides theoretical and empirical evidence to proposes a new framework demonstrating how “core” value dimensions (operational performance, relationship quality and capabilities), and relational characteristics

(the change initiated in the buyer's supply strategy and power) can be combined in different manners to increase value capture.

The third paper called "*Value dimensions, willingness to pay and value capture in B2B relationships*" follows the insights from the previous ones to empirically measure the relative impact of different value dimensions on price, which is one form of capturing value. Based on an Adaptive Choice Based Conjoint (ACBC) analysis conducted with 54 purchasing managers from different industry sectors in Brazil, the most common value dimensions found in the first and second studies were prioritized, and their relative impact on price was measured. The results showed that delivering up to market operational efficiency is the main factor that affect price, that buyers are not willing to pay for the quality of relationships in spite of the extant literature emphasis on the value of relationship, and other "core" and "non-core" value dimensions can be managed as trade-offs or cumulative to increase price.

There is a reason for developing the papers in this sequence. The systematic literature review was necessary to organize the theory that is fragmented across different disciplines, and provide the necessary directions to answer the subsequent objectives and questions. For example, the review suggested the existence of core or non-core dimensions of value, or the possibility that different combinations of factors could lead to similar outcomes on value appropriation. The second paper built and empirically tested these concepts. Up to this point, the research organized the theoretical foundations and provided new models that relate the dimensions of value, relationship characteristics and value capture. For that reason, the third paper built on the previous ones to quantify the relative extend to which different value dimensions affect price, which is one of the three forms of value capture.

To conclude the main study, the contributions of each paper to value creation and capture are first discussed individually to provide an overview of how each paper brings incremental knowledge to the previous one. Then, they are discussed in an integrated manner to provide the collective contributions of this thesis. From a theoretical standpoint, it provides an integrated framework on value creation and capture. and reveals that value capture results from different manners by which "core" and "non-core" value dimensions interplay with relationship factors. Methodologically, it provides detailed step-by-step content that may help researchers to apply methods that have hardly been used in OM research, such as QCA

combined with case studies and ACBC experiments. For managers, it provides practical and real-world frameworks that may be used by buyers and suppliers to increase the value they get from their business relationships.

## **PART 2: THE PAPERS**

The papers presented in this section are the most updated version that will be submitted to the respective journals, and for this reason the summary sub-sections may have different formats (some journals require structured abstracts and others don't).

### **2 Paper one**

#### **2.1 Background to Paper One**

This paper is called “*An integrated perspective of value creation and capture*” and provides a structured framework of the current state of how value is created and captured in buyer-supplier relationships. The resulting article was submitted to the International Journal of Physical Distribution and Logistics Management (IJPDL), and the editor invited to respond to the reviewer's comments and resubmit the paper by early January. The version in this document is a working paper that addressed most of the reviewer's comments. I was the sole responsible for conducting all activities involved with this paper, while my supervisor assisted in the final revision before submissions.

#### **2.2 Abstract**

**Purpose** – Existing literature does not provide a clear view on how value is created, deployed and captured because there is a lack of definitional rigor on value-related terms, the literature is fragmented, and value creation and concepts are not always viewed as distinct ones. This study provides a structured comprehensive view of the current state of research, and facilitates theoretical understanding of value in buyer-supplier relationships.

**Design/methodology/approach** – A systematic literature review was conducted on 191 articles published in twenty-one leading journals, focused on Marketing, OM and Strategy disciplines.

**Findings** – An integrated framework is proposed based on the interplay among four components of buyer-supplier relationships: the dimensions of value creation, five processes that enable value creation and how buyers and suppliers interact with them, relationship characteristics such as power, isolating mechanisms and relational norms, and three forms of value capture (price, volume, or collaborative benefits).

**Research limitations/implications** – Although this review is more comprehensive than previous ones, it deals only with journals of a high impact factor, and anchors analysis to only three theories.

**Practical implications** – Provide clear applications that managers can apply into their real-world issues to engage in better “win-win” negotiations, or increase the value they gain from their relationships.

**Originality/value** – Provides a generalizable framework on value creation and capture, introduce new forms of value capture other than price negotiations, suggest new areas and methods for future studies.

## 2.3 Introduction

Value creation and capture are closely related concepts, and consideration of how it is shared between buyers and suppliers is required for profitability management and relational continuity (Georges and Eggert, 2003). Value in business relationships has economic, technical and non-economic dimensions, and is commonly conceptualized as the result or trade-offs between benefices and sacrifices that customers and suppliers perceive (Eggert and Ulaga, 2002; Vargo and Lusch, 2008; Grönroos, 2011).

Understanding how value is created and captured in business-to-business (B2B) relationships is an essential element for a firm’s supply strategy, pricing and competitive advantage (Bowman and Ambrosini, 2000; Nenonen and Storbacka, 2014). However, despite the vast number of studies conducted it is still unclear how value is created, enabled and captured.

First, throughout the years the lack of definitional rigor in its dimensions and processes (or mechanisms) has led to different value-related names, terminologies and typologies (Francis

*et al.*, 2014; Leroi-Werelds *et al.*, 2014), reflecting on unprecise scales and replication issues. For example, availability, delivery performance, flexibility, or product quality are different terms used for one conceptual value dimension related to operational efficiency. Also value actualization (Lambert and Enz, 2012), linking (Marcos-Cuevas *et al.*, 2014) and deployment (Tuli, Kohli and Bharadwaj, 2007) are different names used to define processes that seem to share the same conceptual definition.

Second, although several studies sought to identify processes associated with value creation, it is difficult to obtain a clear and holistic view because the focus of each study is different, and discussions are based on activities, routines or processes at the individual level. For example, Aarikka-Stenroos and Jaakkola (2012) focus was on dyadic problem solving process, and provided a framework comprising activities such as diagnosing needs, designing and producing solutions. Lambert and Enz (2012) focused on cross-functional involvement to propose that value creation encompasses joint crafting of value propositions, value actualization, and value determination. Haas, Snehota and Corsaro (2012) focused on how the sales function contributes to creating value, and identified jointness, balanced initiative, interacted value, and socio-cognitive construction processes.

Third, understanding and distinguishing value creation from value capture is confusing because they are not always viewed as distinct processes (Lepak, Smith and Taylor, 2007). Instead, products/services characteristics, benefits/sacrifices and value capture have sometimes been defined as distinct concepts which are antecedents to each other, and other times as similar or related ones. For example, operational efficiency attributes, such as quality and flexibility were found as antecedent measurements of benefits (Menon, Homburg and Beutin, 2005; Chou, 2014), or as the benefits in themselves (Lapierre, 2000; Corsaro and Snehota, 2010). Purchasing price (or cost) brings similar issues, as it has been defined as an antecedent of customer value (Faroughian *et al.*, 2012), a component of perceived value or a sacrifice (Lapierre, 2000; Ritter and Walter, 2012), or as an outcome of perceived customer value (Čater and Čater, 2009) in the form of value captured by a focal firm.

This research aims to address some of these issues by conducting a systematic literature review covering Marketing (MKT), Operations Management / Supply Chain Management

(OM/SCM) and Strategy. The question of how value is created, enabled, and captured, with the following specific objectives guided the research:

- A) Identify and provide clearer definitions for the dimensions of value creation;
- B) Understand the mechanisms that create value for buyers and suppliers;
- C) Understand how buyers and suppliers capture value in their relationships;
- D) Suggest areas for future research

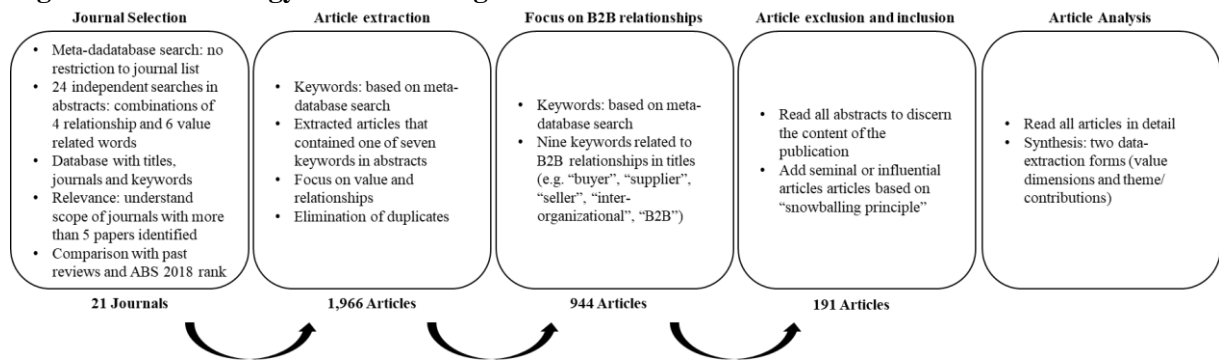
Past literature reviews have focused on specific topics and do not answer these questions. For example, Mortensen (2012) focused on how value, its creation and customer attractiveness are inter-related in buyer-supplier relationships; Lindgreen *et al.* (2012) discussed the concepts of value of goods and services, value of relationships, and co-creation of value; Ellegaard, Medlin, & Geersbro (2014) provided an overview of five streams of research on value appropriation; and Francis *et al.* (2014) investigated the current state of the definitions and conceptions of 'value'. Disciplines coverage was also limited: Mortensen (2012) included journals on OM and Marketing but not strategy; and Francis *et al.* (2014) included journals only on SCM/OM.

An integrated framework for value creation and capture is proposed including value dimensions; value creation processes; value capture mechanisms; and relationship characteristics. Two areas for further empirical investigation are proposed: better understand the relative impact that different value dimensions may have on value capture, explore how different value dimensions and relationship characteristics can be combined to increase value capture.

From a management perspective, this paper provides a practical framework that help buyers and suppliers make their relationship more valuable, and options available to increase value capture (Lambert and Enz, 2012; Ellegaard, Medlin and Geersbro, 2014; Lieberman, Garcia-Castro and Balasubramanian, 2017).

## **2.4 Methodology**

The methodology (Figure 1) was adapted from Tranfield *et al.* (2003) and differs from traditional ones by being more systematic in the selection of publications.

**Figure 1: Methodology for conducting the review**

### 2.4.1 Review protocol: Journal selection and paper inclusion

Initially, the researchers debated if the publications should be included following a meta-database search, such as EBSCO, SCiencedirect or Scopus with no restriction to the journal list (Mortensen, 2012; Soosay & Hyland, 2015), or discipline and journal impact search, such as SNIP or ABS quality guides (Francis, Fisher, Thomas, & Rowlands, 2014; Spina et al., 2013). Because the literature is vast, with more than half a million web hits found of the phrase "value chain" in 2005 (Ramsay, 2005), a meta-database search was selected to consider a more comprehensive view of disciplines and publications.

In order to identify publications within value in B2B relationships, 24 independent searches in abstracts were conducted combining relationship related words ("buyer", "supplier", "seller" and "inter-organizational") with value related words ("value creation", "value capture", "value appropriation", "value in use", "relationship value", "co-creation"). Approximately 90% of papers published in ABS ranked publications were in marketing, operations management (OM) and strategy/management disciplines, and the remainder were in organization/social, technology, finance/economy, or industry specific, such as hospitality or energy. Therefore, the researchers decided to focus only on the three major disciplines.

From sixty-eight identified publications, twenty-five (37%) contained more than five articles, and therefore a more focused approach was applied to select the most relevant. Substantive quality was obtained by understanding the scope of each one, comparing the twenty-five publications with those included in past literature reviews (Mortensen, 2012; Spina *et al.*,

2013; Francis *et al.*, 2014; Soosay and Hyland, 2015), and evaluating their rank in the ABS Academic Journal Guide of 2018.

Twenty-one publications were selected for this study (Table 2), from which eight in OM, seven in MKT and six in management/strategy. Despite an apparent similarity with previous reviews, this method brings significant enhancements: it integrates three major disciplines, while others focused in one or two or not considered management/strategy, it added three additional publications not found in previous studies, and the number of journals is larger.

**Table 2: Journals included in the analysis**

Author	Spina 2013	Mortensen 2012	Soosay 2015	Francis 2014	Meta Search	Selected
Criteria for selection	Rank: SNIP 2010	Database: EBSCO	Database: Scopus	Rank: ABS	ABS 2015	
<b>OM</b>						
Journal of Supply Chain Management - JSCM	✓				3	YES
Supply Chain Management: An Int. Journal - SCMIJ	✓	✓	✓	✓	3	YES
Journal of Purchasing and Supply Management- JPSCM	✓				2	YES
Journal of Operations Management - JOM	✓	✓	✓	✓	4	YES
Int. Journal of Production Economics - IJPE	✓		✓	✓	3	YES
Int. J. of Operations & Production Management - IJOPM	✓	✓	✓	✓	4	YES
Int. Journal of Production Research – IJPR	✓		✓	✓	3	YES
Int. Journal of Physical Distribution & Logistics Management - IJPDLM		✓	✓		2	YES
International Journal of Project Management - IJPM					2	NO
Benchmarking: An International Journal – BIJ					1	NO
Business Process Management Journal – BPMJ					2	NO
<b>Marketing</b>						
Journal of Marketing Research - JMR	✓				4	
Industrial Marketing Management - IMM	✓	✓			3	YES
Journal of Marketing - JM		✓			4	YES
Journal of Business and Industrial Marketing - JBIM		✓			2	YES
Journal of Business Research - JBR		✓			3	YES
Journal of the Academy of Marketing Science – JAMS					4	YES
European Journal of Marketing – EJM					3	YES
Journal of Business-to-Business Marketing – JB2BM					2	YES
Australasian Marketing Journal – AMJ					1	NO
Marketing Intelligence and Planning - MIP					1	NO
<b>Strategy</b>						
Strategic Management Journal - SMJ	✓				4	YES
Academy of Management Review - AMR					4	YES
Journal of Management - JM					4	YES
British Journal of Management – BJM					4	YES
European Management Journal – EMJ					2	YES
Management Decision – MD					2	YES

#### 2.4.2 Article extraction, inclusion and exclusion

Articles were selected following a four-step methodology (Table 3). The first identified articles containing one of the following seven keywords in their abstracts: “relationship value”, “value in use”, “value in exchange”, “VCA model”, “value creation”, “buyer-



supplier”, “buyer-seller”, “value co-creation”, “value capture”, and “perceived value”. These keywords were selected because they were found in more than 80% of studies identified in the meta-database search. Other keywords did not focus on the main question (i.e. value based), or were too wide (i.e. customer, which often refers to final consumer). No restriction was applied on the time period of the publications because this topic is relatively recent. As a result, 1,966 unique articles were identified.

**Table 3: Total of articles and journals included in the study**

Discipline/ Journal	First Step Extraction	Second Step Title Keywords	Third Step		Total Articles	%
			Introduction / Conclusion	Fourth Step "Snowball"		
<b>Marketing</b>	<b>1,129</b>	<b>604</b>	<b>115</b>	<b>12</b>	<b>127</b>	<b>66%</b>
IMM	296	187	46	5	51	
JB2BM	239	114	8	1	9	
JBR	197	92	12	1	13	
JBIM	162	101	19	2	21	
EJM	101	40	9	0	9	
JAMS	63	30	12	0	12	
JMK	47	27	9	3	12	
JMR	24	13	0	0	0	
<b>OM</b>	<b>489</b>	<b>261</b>	<b>31</b>	<b>4</b>	<b>35</b>	<b>18%</b>
JSCM	118	64	5	2	7	
IJPE	72	35	6	0	6	
IJOPM	62	34	2	1	3	
IJPDLM	57	25	6	0	6	
JOM	54	40	4	0	4	
SCMIJ	52	23	3	0	3	
JPSM	37	26	3	0	3	
IJPR	37	14	2	1	3	
<b>Strategy</b>	<b>338</b>	<b>77</b>	<b>20</b>	<b>2</b>	<b>22</b>	<b>12%</b>
SMJ	113	20	6	0	6	
MD	93	21	7	0	7	
EMJ	63	18	3	0	3	
AMR	31	7	0	1	1	
BJM	24	10	4	1	5	
JM	14	1	0	0	0	
<b>Other</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>7</b>	<b>4%</b>
<b>Total</b>	<b>1966</b>	<b>944</b>	<b>168</b>	<b>23</b>	<b>191</b>	<b>100%</b>

The second step narrowed down the unit of analysis to buyer-supplier relationships. Articles were selected if their titles included one of the following nine words: “buyer”, “supplier”, “seller”, “customer”, “dyad”, “inter-organizational”, “business-to-business”, “B2B”, and

“relationships”. Substantive quality was obtained by reading the title of the articles that were not select to validate if they should be excluded, and 944 articles were selected.

All 944 abstracts were read to discern their content and select only the ones that clearly addressed the research question, and 23 additional articles were added based on Miles, Huberman and Saldaña (2014) “snowballing principle”. They included seminal or influential articles published in other journals (Woodruff, 1997; Ulaga and Eggert, 2005; Vargo and Lusch, 2008), or that contained other keywords, such as value to customers (Ulaga and Chacour, 2001), value of relationships (Corsaro and Snehota, 2010), or perceived value (Lapierre, 2000). In the end, 191 articles were extracted and analyzed (Appendix A).

### **2.4.3 Conducting the review**

Two data-extraction forms were used to analyze the articles: one contained the value dimensions found in any empirical, conceptual or literature review, and the other synthesized their contributions, theoretical findings, methodology, point of view (that of the buyer, supplier or both), variables, and grand theory. An interpretative analysis of the objectives and findings was also conducted to identify major themes of the studies.

### **2.4.4 Descriptive Results**

The MKT discipline accounted for 66% of the articles, followed by OM with 18%, and Strategy with 12%. One possible reason is that MKT started to study value in B2B relationships in the 2000s (Lapierre, 2000; Ulaga and Chacour, 2001). Around that time, OM was assessing value in terms of operational efficiency, and after the 2010s it integrated with MKT to investigate value creation through co-operation, capability development and outsourcing arrangements (Francis *et al.*, 2014; Leuschner, Carter and Goldsby, 2014). In Strategy, research seems to focus on economic value of relationships at firm level, such as Customer Value Analysis (DeSarbo, Jedidi and Sinha, 2001; Lieberman, Garcia-Castro and Balasubramanian, 2017).

Studies explicit about their theoretical background increased from 10% (Spina *et al.*, 2013) to more than 40% in this sample. In line with previous reviews (Spina *et al.*, 2013; Soosay and Hyland, 2015), Transaction Cost Economics (TCE), and Resource-based Theory

(RBT) have always been the dominant theories, while Social Exchange Theory (SET) was the third most relevant found. Together, these theories account to 47% of the papers, while the remaining ones are based on more than 20 other theories, such as Equity, Disappointment, Prospect, Means-end, Agency, Behavioral, Complexity, Equity, Game, Organizational Learning, Resource Advantage and Social Network.

An overview on how theory has evolved over time (Table 4) shows that interest in the practice is strong, since 40% of the sample dated from 1997 to 2009, 25% from 2010-2013, and 35% more recent (2014-2019). Earlier studies aimed to understand, define, develop or measure value dimensions and constructs, and peaked around 2009, which seems logical since significant effort was required to build the foundations.

Value creation was initially studied as an unidirectional process by which buyers and suppliers create and deliver value for each other, and after 2014 studies started to address concepts and strategies that buyers and suppliers pursue to increase value capture. Interest in value co-creation increased after the Service-Dominant Logic influential paper of Vargo and Lusch, 2004. Examining and analyzing processes, mechanisms, practices or interactions that led to value creation, as well as literature reviews, have consistently attracted academic interest over time.

**Table 4: Summary of researched themes along the years**

<b>Theme</b>	<b>1997-2009</b>	<b>2010-2013</b>	<b>2014-2019</b>	<b>Total</b>
1. Value dimensions and constructs	43	10	13	66
2. Processes, perceptions and interactions	21	29	27	77
3. Value co-creation	6	5	21	32
4. Literature reviews	7	4	5	16
<b>Total</b>	<b>77</b>	<b>48</b>	<b>66</b>	<b>191</b>

## **2.5 Dimensions and constructs of value creation**

The variety of definitions reported by Francis (2014) was found in 248 different terminologies, confirming the need to provide more clarity, organize and synthesize value dimensions. For example, different names have been used for similar concepts, such as access to market, access to new buyers/suppliers or access to new partners (Hald, Cordón and Vollmann, 2009; Aminoff and Tanskanen, 2013; Tanskanen and Aminoff, 2015).

Grounding value dimensions on grand theories increases clarity and reduces ambiguity because they become based on conceptual definitions to explain interactions in a system, or organize various parts of evolving knowledge (Spina *et al.*, 2013). TCE, RBV and SET build the foundations for this study for different reasons. First, they are the most common theoretical perspectives found in the studies, and therefore results become more generalizable. Second, many other theories are already contained, a part of, or related to these theories. For example, resource advantage shows how organizations bundle or align resources to achieve superior performance or lower costs (Soosay and Hyland, 2015), concepts already considered in RBT and TCE. Network theory that models the manner in which interactions among multiple entities may result in value potentials (Park and Lee, 2018) has a mechanism, and not value dimensions in its foundations.

Clarity on dimensions and definitions was obtained by reading all terminologies and assigning similar ones to a single value dimension and a theory (Appendix B). For example, availability, avoiding downtime, consistency of products, delivery performance, efficiency and flexibility were grounded on TCE and assigned to “operational efficiency”.

Terminologies were condensed into 17 value dimensions (Table 5) applicable to both buyers and suppliers, and are detailed below. Some were not included or grouped in the analysis because they relate to other theories, such as ethics that belongs to the morality theory (Lindfelt and Törnroos, 2006).

### **2.5.1 Value dimensions based on TCE**

TCE (Williamson, 1981) introduces an economic approach to predict exchange governance structures and performance based on transaction costs. These are influenced by safeguards that minimize risks of opportunism, bounded rationality due to environmental and behavioral uncertainty, and the level of asset specificity of the exchange. Different value terms were condensed into five dimensions associated with TCE:

*Operational Efficiency* relates to the basic attributes of quality, reliability, flexibility and productivity.

**Table 5: Value dimensions according to TCE, SET and RBT**

Theory / Main Concept	Value Dimensions	Definition
TCE - Firms conduct an activity internally as long as the transaction costs are lower than conducting the same transaction in the market (Williamson, 1981).	1. Operational efficiency	Operational efficiency attributes (quality, reliability and efficiency)
	2. Asset efficiency	Perceived value obtained from having better control of assets
	3. Financial efficiency	
	3.1. Cost reduction	Perceived cost reductions
	3.2. Price paid	Perceived value for money paid
	3.3. Profit increase	Possibility to increase profits
	3.4. Revenue growth	Increase business within a market or with existing customers
	4. Safeguards	Assurance of volume
	5. Risk management	Taking over or reducing financial, performance or social risks
SET - Actors enter and maintain relationships with the expectation that economic or social value will be exchanged (Cropanzano & Mitchel, 2005).	6. Personal relationship	Quality and effectiveness of interpersonal ties and interactions
	7. Personal benefit	Benefits perceived at individual level
	8. Access to information	Information obtained from sources outside the organization
RBT - Firms that own or have access to idiosyncratic and heterogeneous resources obtain superior competitive advantage and performance ((Barney, 1986)	9. Access to market	Contacts with new potential partners
	10. Capabilities/resources	Access, learn or develop resources/capabilities
	11. Firm reputation	Market signal about a firm's quality, performance and trustworthiness
	12. Innovation	Perceived innovation the partner brings to improve processes
	13. Time reduction	Ability to reduce the lead time to launch new products, implement processes or other improvements
	14. Service support	Provide information at the right time, or provide technical support

*Asset Efficiency* is the perceived value obtained from having better control over an asset, maximizing its use, or avoiding investments. It differs from Operational Efficiency because the level of asset specificity is a separate relevant source of uncertainty and opportunism.

*Financial efficiency* can be defined by four sub-dimensions: *Cost Efficiency* in terms of cost reduction, cost improvement, cost advantages, or lower switching costs; *Price paid*, which refers to the perception that the value for money paid is fair; *Profit increase*, or the perception that the relationship will increase profits; and *revenue growth*, or value from the possibility to increase market share or number of existing customers.

*Safeguards* refer to reducing uncertainty by assuring enough supply volume (buyers) or guaranteeing a certain level of business (suppliers).

*Risk management* refers to the perception that doing business with the other can reduce or mitigate financial, performance or social risks. For a supplier, taking over risk as a service has value because it can be estimated and priced.

### **2.5.2 Value dimensions based on SET**

SET contrasts and complements the economic perspective by covering the social mechanisms of exchanges. Actors enter into and maintain relationships expecting that value will be exchanged, either economically or socially, through improved reputation and prestige (Cropanzano and Mitchel, 2005). It is expected that, as the duration and intensity of interactions among actors increase, bonds of attraction develop embedded relationships that generate trust and commitment, leading to expected behavior and discouraging opportunism and malfeasance, lowering transaction costs (Morgan and Hunt, 1994). Different terminologies were condensed into four dimensions associated with SET.

*Personal Relationship* refers to the quality, ethics and effectiveness of the interpersonal ties and interactions of one partner relative to another. Partners comfortable with the relationship foster communication, reduce opportunistic behavior and favor effective transfer of information and knowledge.

*Access to information*, or scout function, refers to the meaningful information that an exchange partner obtains from other sources outside the organization. Buyers and suppliers recognize that part of their success depends on obtaining valuable information, such as competitors, market or sector. Other terminologies include market information, knowledge sharing, or market intelligence.

*Access to Market* is the perceived advantage obtained from the social capital of firms to expand businesses. For example, buyers and suppliers may help each other to establish contacts with potential exchange partners to increase their sales volume and/or market share. Other terminologies include access to new buyers/suppliers, door-opening or extended network.

*Personal Benefit* refers to the benefits perceived by actors at the individual level, and relate to bringing more simplicity, less time, more control or less pressure to perform a certain job or task.

### **2.5.3 Value dimensions based on RBT**

RBT complements these theories by focusing on heterogeneous resources that firms own, have access, or control to create value. Organizations can be regarded as a bundle of resources, and those that have valuable, rare, costly to imitate and imperfectly substitutable resources and capabilities can sustain a competitive advantage (Barney, 1991). Although the traditional RBT emphasizes the ownership or control of such resources as a necessary condition for appropriating rents, firms have increasingly outsourced valuable and difficult-to-replicate business functions. Different terminologies were condensed into five dimensions associated with RBT.

*Capabilities/resources* refer to learning, developing, transferring or obtaining capabilities from the corresponding partner. Typically, buyers select suppliers based on their specific capabilities to add value, but they may also transfer capabilities to assist suppliers in developing or optimizing their own products or services.

*Reputation* refers to signal information about a firm's quality, knowledge, performance, fairness, honesty and trustworthiness. Reputation helps suppliers to gain access to new markets or clients, or increase the buyer's perception that they can fulfill contracts.

*Innovation* refers to the perception of innovations, know-how, or ideas that the counterpart brings to improve processes, products or services. Suppliers bring innovative ideas or components to develop new products or services. Buyers offer market knowledge so that suppliers create opportunities for new service offerings.

*Time reduction* refers to the ability to reduce lead times or act faster than competitors when developing, launching or improving new prototypes, products or processes.

*Service support* refers to providing the right information at the right time, or supporting outsourced activities to provide benefits. Customers perceive value when suppliers promptly

provide accurate information about its operations, or assist with promotions, training, technical support or specialized facilities.

## **2.6 Value creating mechanisms**

Value does not emerge only through perceptions of value dimensions, but also from the processes that materialize them, interactions that support these processes, and relationship characteristics that influence such interactions. This section brings a consolidated view of these mechanisms, which is summarized in Table 6 at the end of this section.

### **2.6.1 Structured processes and routines of value creation**

Tuli, Kohli, & Bharadwaj (2007) were one of the first to address value creating process in a structured manner, by viewing solutions as a set of five relational processes instead of combinations of goods and services for meeting a customer's needs. This review expands these processes by consolidating previous research according to the five relational processes proposed by Tuli, Kohli, & Bharadwaj (2007).

In *Requirement Definition*, issues, expectations, baselines, goals, and needs are identified. It has been studied as diagnosing needs (Aarikka-Stenroos and Jaakkola, 2012), joint crafting of value propositions (Lambert and Enz, 2012), problem-finding and the acquisition stage (Brandl, 2017) or value potential identification (Keränen and Jalkala, 2013).

*Customization and Integration* aims to specify the optimal value proposition, design, modify, select or develop products, services and operational practices to satisfy the customers' needs, or identify actors and foster communication. Studies investigated this process as materializing (Marcos-Cuevas *et al.*, 2014), designing and producing the solution (Aarikka-Stenroos and Jaakkola, 2012), problem-solving (Brandl, 2017) or jointness (Haas, Snehota and Corsaro, 2012).

*Deployment* relates to the actual delivery of products or services. including installation or trial runs of processes and resources, integration of customer's and supplier's resources, or mobilization of social connections and networks. It has been studied as value actualization (Lambert and Enz, 2012), execution (Brandl, 2017) or linking (Marcos-Cuevas *et al.*, 2014).



*Post-deployment Support* provides product support, collects and verifies performance, and disclose results and perceptions. It also refers to Socio-Cognitive Construction (Haas, Snehota and Corsaro, 2012), Value Determination (Lambert and Enz, 2012), Monitoring and Evaluation (Brandl, 2017), or Performance Evaluation and Systematic Data Management (Keränen and Jalkala, 2013).

*Interacted Value* refers to managing and settling conflicts, or facilitating interaction to manage situations (Haas, Snehota and Corsaro, 2012), and has been investigated at deeper levels as task conflicts and relationship conflict.

## **2.6.2 Buyer-supplier interactions and value creation**

Ballantyne and Varey (2006) emphasized that value creation exchanges require interactions, which are enabled by relating, communicating and knowing activities. The role of interactions was found in a variety of studies, including customer solutions as relational processes (Tuli, Kohli and Bharadwaj, 2007), business relationship value (Biggemann and Buttle, 2012), sales function and key account management (Georges and Eggert, 2003; Haas, Snehota and Corsaro, 2012), dyadic problem solving (Aarikka-Stenroos and Jaakkola, 2012), and cross-functional team involvement (Lambert and Enz, 2012).

Traditionally, the process of value creation was company-centric, where firms and consumers had distinct roles of production and consumption (Prahalad and Ramaswamy, 2004). In this scenario, buyers and suppliers engage in unidirectional interactions to provide solutions on one or more relational processes to satisfy their partners' demands. Examples include the use of suppliers' IT systems to share information across the supply chain (post-deployment process) (Jayaram, Kannan and Tan, 2004), or the role of supplier's key account managers in understanding customer's needs (requirement definition process) and extending communication between departments(interacted value process) (Georges and Eggert, 2003).

Unidirectional interactions can also be from buyers to suppliers. Buyers that establish supplier management programs provide valuable feedback (post-deployment process) and help suppliers to enhance quality (Brandl, 2017). Problem finding (requirement definition) is an example of an unidirectional process that brings value to both parties because it helps clients

to enhance the overall understanding of problems, and suppliers understand their clients' needs (Brandl, 2017).

More recently, the Service-Dominant Logic (SDL) implied that value is defined and co-created with the customer, by the customer and supplier, or by multiple actors in a network (Vargo and Lusch, 2008). From an actor's perspective, SDL suggests that customers move from being external or passive actors receiving value, to participating and becoming partners in the value creation process with suppliers (Zhang and Chen, 2008; Park and Lee, 2018), while suppliers move from customizing products and/or services to satisfy customers' needs towards facilitators of value creation (Aarikka-Stenroos and Jaakkola, 2012; Komulainen, 2014).

A fundamental difference to the traditional view is that buyers and suppliers co-create value by integrating resources and combining capabilities in two different manners: in co-creation there is an integration and use of resources amongst network actors into their own processes (Vargo and Lusch, 2008; Marcos-Cuevas *et al.*, 2014), whereas in co-production there is participation in the development of the core offering or solution itself (Vargo and Lusch, 2008; Komulainen, 2014), such as product design.

Resources are factors owned or controlled by a firm that can be put into productive use and contribute to value creation (Peng, Schroeder and Shah, 2008; Aarikka-Stenroos and Jaakkola, 2012). Lusch (2011) defined intangible resources, such as skills, competences and knowledge and tangible resources as "operand resources". Professional knowledge, competence, procedures, facilities and equipment (Aarikka-Stenroos and Jaakkola, 2012) are examples of supplier resources, while industry expertise and production material are customer resources (Aarikka-Stenroos and Jaakkola, 2012).

Capabilities are a firm's capacity or a mechanism that provides coherence and integration of resources to achieve the desired end, so they result in value creation (Marcos-Cuevas *et al.*, 2014). Compared to resources, capabilities are embedded in the dynamic interaction, more firm-specific, and less transferable (Peng, Schroeder and Shah, 2008). In co-creation, when company resources are combined they facilitate the development of new combinations of

resources and capabilities, which in turn enable both firms to develop more than they could have developed independently (Zhang *et al.*, 2015).

The literature provides examples of how different processes can be combined into capabilities and lead to value creation. On a broad level, Preikschas *et al.* (2017) propose that co-creation involves a sequence of processes from different stages, such as requirement definition (evaluate cost-benefits), customization (create and integrate a multi-disciplinary solution), post-deployment support (monitor overall evaluation of the process) and interacted value (involve partners in working groups to reduce cognitive gaps). More specifically, enabling product innovation capability requires firms to jointly define customer's needs (requirement definition), determine a value proposition (customization), and design products (deployment). Customerization is a capability that combines mass customization and elicitation of individual demands to provide exactly what customers wants (Zhang and Chen, 2008), and involves customers at different co-creating activities, such as understanding customer needs (requirement definition), providing exactly what customers (customization), and optimizing demand fulfillment process (deployment).

### **2.6.3 Relationship characteristics and value capture**

Three relationship characteristics seem to increase or decrease value creation or capture. The first is perceived power and dependence asymmetries (Bowman and Ambrosini, 2000), which are relative to the alternatives that a firm has for obtaining resources or reducing influence upon another (Brito and Miguel, 2017). Interfirm power refers to the ability of a firm to influence the way the other party will act, and dependence occurs when one party depends on scarce resources owned or controlled by another. The powerful party tends to appropriate a larger share of the created value through price negotiations, additional services extracted at no cost after agreements have been signed, or opportunistic behaviors (Ellegaard, Medlin and Geersbro, 2014).

Isolation mechanism against competition is another relationship characteristic that may increase power and dependence. It refers to “any knowledge, physical or legal barrier that may prevent replication of the new value-creating task, product or service by a competitor” (Lepak *et al.*, 2007: p.188), and can be in form of specialized infrastructure, patents, or non-

competition clauses. Firms that own or control capabilities that are valuable, rare, inimitable and non-substitutable also increase power and customer dependence (Lavie, 2006; Ellegaard, Medlin and Geersbro, 2014). For example, while suppliers with more power can negotiate higher prices, buyers that develop capabilities in the current supply base decrease a particular supplier's isolating mechanism, increase competition, and negotiate better.

The quality of relationships is a relational norm that moderates the negative effects of power and dependence, or may increase value capture. Buyers more satisfied with the relationship tend to appropriate value less aggressively or make additional efforts and investments to maintain the relationship (Ellegaard, Medlin and Geersbro, 2014; Yan and Wagner, 2017). Buyers offer stronger incentives to suppliers with higher integrity regardless of their relative efficiency levels, and suppliers invest in building trustworthy reputation with buyers (Obloj and Zemsky, 2015).

Shaping and communicating value propositions is another relational norm because part of the value created is intangible and difficult to measure. This is connected with Value Representation, or *"how the actor translates its own idea of value in something that can be observed by the other actors, and its meaning shared among them"* (Corsaro, 2014 p. 992). Value Representation affects the share of value that a party captures, given that customers perceive value creation as positive only if they appropriate a larger slice of the value pie, regardless of its perceived size (Wagner, Eggert and Lindemann, 2010).

**Table 6: Mechanisms of value creation**

Mechanism	Definition	Components	Examples	Selected references
Structured processes and routines	Processes, methods or practices that enable or affect buyers' or suppliers' ability to provide value	Requirement Definition Customization and Integration Deployment Post-Deployment Support Interacted Value	Identify recognized and unrecognized needs, craft value propositions, develop strategy to solve problem/needs Design, modify or select products to fit customer requirements, specify problem, design the solution Organize processes, implement practices, structures and solutions, integrate customer and supplier resources Use IT systems to share information across the supply-chain, communicate performance measurements Establish more frequent contact with members of the supply-chain, facilitate interactions, manage and settle conflicts	Jayaram, Kannan and Tan, 2004; Tuli, Kohli and Bharadwaj, 2007; Lambert and Enz, 2012; Marcos-Cuevas <i>et al.</i> , 2014
Buyer-supplier interactions	Consumers' and suppliers' roles in value creation	One-way Co-created between actors	Suppliers provide systems to locate inventory shortages, and buyers establish programs enhance supplier services Customers and suppliers become partners in the value creation process, suppliers move from customizing services to facilitate value creation with the buyer	Aarikka-Stenroos & Jaakkola, 2012; Park & Lee, 2018; Petri & Jacob, 2016; Vargo & Lusch, 2008
Relationship characteristics	Characteristics specific to the dyad that may increase or decrease value capture	Power and dependence Isolating mechanisms Relational norms	Ability of a firm to influence the way the other will act, or dependence on resources owned or controlled by another firm Firms that own or control VRIN capabilities increase their power and customer dependence High quality of relationships and good communication increase perceptions of value creation, and lead buyers and suppliers to appropriate value less aggressively or make additional investments to maintain the relationship	Bowman and Ambrosini, 2000; Homburg, Koschate and Hoyer, 2005; Lepak, Smith and Taylor, 2007; Wagner, Eggert and Lindemann, 2010; Ellegaard, Medlin and Geersbro, 2014

## **2.7 Value capture**

Value capture is the portion or share of value held by a focal firm, and is based on the ‘pie sharing’ concept. The relationship between value creation and capture is not straightforward because buyers and suppliers have conflicting goals regarding aspects of their relationship, and the result may or not be at expense of the relationship partner or network. Buyers try to negotiate lowest possible prices, while suppliers try to earn highest possible margins. Achieving this balance is difficult, the patterns of value captured by the different stakeholders are highly heterogeneous, and asymmetries in value appropriation can generate perceptions of inequity, tension and frustration (Corsaro, 2014; Ellegaard, Medlin and Geersbro, 2014; Lieberman, Garcia-Castro and Balasubramanian, 2017).

Three forms of value capture were found in the literature. The first is through obtaining a larger share of the value-pie through price negotiations, at the expense of a specific relationship partner. By increasing price, a supplier can capture more value at the expense of the buyer that releases an equivalent amount of value, while decreasing price has the opposite effect (Bowman and Ambrosini, 2000; Homburg, Koschate and Hoyer, 2005; Lindgreen and Wynstra, 2005).

Another way of increasing value capture is by extracting a slice of the value-pie at expense of competing firms in the supply chain (Ellegaard, Medlin and Geersbro, 2014). For example, buyers can determine differences in how the volume of a certain product or service is split among suppliers based on performance, relative cost, or other dimensions. In times of shortage, suppliers allocate resources to different buyers based on similar criteria. By transferring volume from one partner to another, both buyers and suppliers can increase the value they capture.

A third approach is to increase the size of the value-pie through collaborative efforts at no one’s expense, because new value is created in the network (Wagner, Eggert and Lindemann, 2010; Cheung, Myers and Mentzer, 2011; Ellegaard, Medlin and Geersbro, 2014). For example, buyers and suppliers can engage in a new product development to increase sales, or

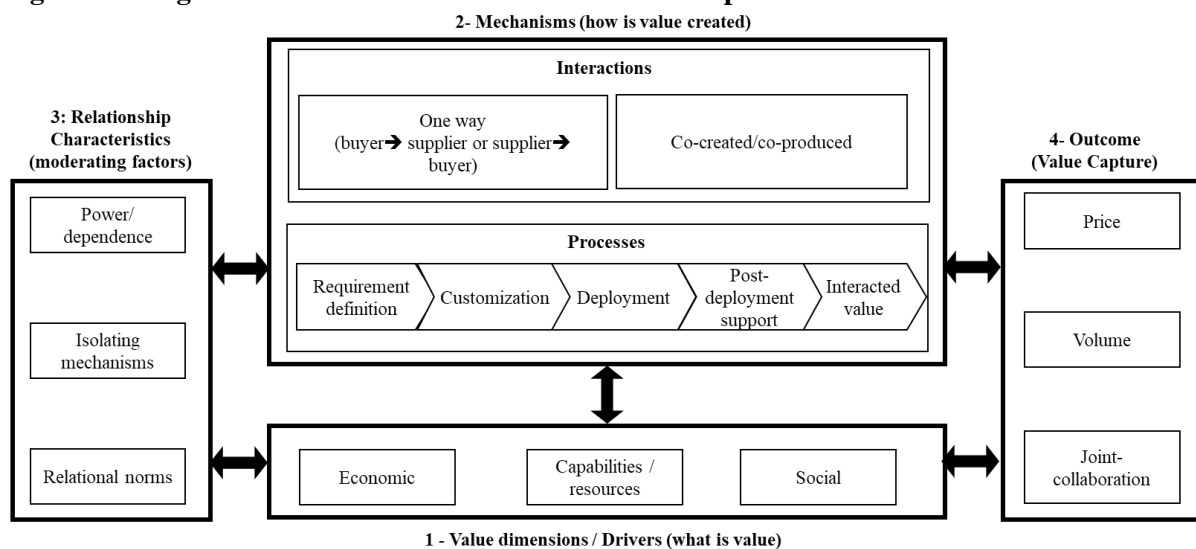
a supplier can offer and charge for new value-added services that reduce the buyer's costs. In both cases, new value is created, and the pie is enlarged.

## 2.8 Theoretical and practical implications

Figure 2 synthetizes these findings in an integrated framework, with four components identified and discussed in the previous sections, and provides several theoretical contributions to the field.

First, it defines value dimensions and constructs based on grand theories, a method that attends Francis *et al.* (2014) recommendation and leads to more precise scales and measurements. Although supporting the framework on only three theories could be considered a limitation, it is generalizable and expandable because it is not based on constructs, but on theoretical lenses. For example, dimensions from other theories, such as equity, agency, or morality can be included under terminologies other than the ones proposed.

**Figure 2: Integrated framework for value creation and capture**



Second, by consolidating several concepts found in the literature, it expands the original set of relational processes originally proposed by Tuli, Kohli, & Bharadwaj (2007), and also suggests that buyers and suppliers create value through unidirectional interactions, or jointly co-create value by becoming partners in the value creation processes.

It also proposes that relationship characteristics, such as power asymmetries (Bowman and Ambrosini, 2000), isolating mechanisms (Lepak, Smith and Taylor, 2007), and relational norms (Corsaro, 2014; Ellegaard, Medlin and Geersbro, 2014) interplay with value dimensions and processes to increase value capture.

As an advancement of the traditional view where value is captured mainly through price negotiation, this paper proposes two additional forms of value capture: shift volume at the expense of competing firms in the supply chain, or increase the size of the value pie through collaborative efforts.

This study brings significant implications for practitioners. It provides a clear, practical and real-world framework that buyers and suppliers may apply to increase the value they gain from their relationships. For example, based on this framework, they can better assess gaps in their relationship characteristics or interaction mechanisms, and define strategies to increase value capture.

Second, the success and continuation of relationships depend on how much buyers and suppliers are aware of the value sought by their counterparts. The research provides a list containing several value dimensions to be explored, and buyers and suppliers can engage in better “win-win” negotiations by better communicating the value each party seeks.

Finally, by being aware that the value sought differs according to the stage of relationships, buyers and suppliers can assess, define and communicate their value propositions in more assertive manners. For example, in mature relationships efforts should focus in post-deployment support or interacted value processes to measure and communicate performance, or manage conflicts.

## **2.9 An agenda for future research**

Two areas for future research are proposed. The first refers to core and non-core value dimensions and value capture. Past studies inferred that the dimensions of value could be determined and prioritized for an industry or supply chain as a whole (Kim, Park and Kim, 1999; Ulaga, 2003), be similar within a supply chain but differently weighted for different



buyers or suppliers (DeSarbo, Jedidi and Sinha, 2001; Tanskanen and Aminoff, 2015), or be significantly different within buyers or suppliers (Corsaro and Snehota, 2010; Nyaga, Whipple and Lynch, 2010). Eggert *et al.* (2018) suggested that some dimensions could be core to most buyer-supplier relationships and others context-specific. For example, because buyers and suppliers seek operational efficiency, it could be a hygiene factor irrespective of the dyad or supply chain, while other dimensions, such as asset efficiency or firm reputation could be valuable in asset-based supply chains. An Adaptive Choice Based Conjoint Analysis (ACBC) could be useful to assess the relative importance of different features, trade-offs, and price sensitivity that influence decisions or choices among these factors (Aguinis and Bradley, 2014).

Future studies could also investigate how different value dimensions and relationship characteristics can be combined to increase value capture. The relationship between value creation and capture has been discussed based on independent elements, such as tradeoffs between quality, volume and price (Flint and Woodruff, 2001; Lindgreen and Wynstra, 2005), power and dependence (Bowman & Ambrosini, 2000), or Purchasing and Supply Chain Management (PSM) practices (Carr and Pearson, 1999). The components proposed in the framework are interconnected, and therefore value may be captured depending on different configurations among them, which is the principle of equifinality (Rihoux and Ragin, 2009). A Qualitative Comparative Analysis (QCA) could reveal which combinations contribute to value capture.

### **3 Paper two**

#### **3.1 Background to Paper two**

The title of this paper is “*Unpacking value creation and capture in buyer-supplier relationships*”, and explores how core value dimensions, combined with different relationship conditions, can lead to similar outcomes with respect to value capture. This paper is close to the final version that will be submitted and was written having the Industrial Marketing Management (IMM) as the target journal for publication because there is already a debate

about value in buyer-supplier relationships. While the paper adopts a marketing perspective, many ideas overlap with the OM literature on value creation and capture.

I was responsible for all the research, and conducted the literature review, designed and learned about the methodology, found the firms for the study, conducted, coded and analyzed the interviews, structured the discussion and wrote the paper. Michael Kleinaltenkamp, professor of business and Services Marketing at Freie Universitaet Berlin, along with my supervisor, provided insights and suggestions from MKT and OM perspectives, revised the final text before submission, and will be co-authors of this paper.

### **3.2 Abstract**

Although the relationship among different dimensions of value creation, dyadic characteristics and value capture are well studied, these elements have been conceptualized independently and without much interaction. Consequently, little is known on how they interplay with each other and influence value capture. This article takes a configurational approach and investigates how different dimensions of value creation and relationship factors affect value capture, from buyers' and sellers' perspectives. The study draws on an embedded case study encompassing relationships of a focal customer in the financial payments industry with six specialized service suppliers, followed by a Qualitative Comparative Analysis of 29 relationship conditions. For both buyers and suppliers, value creation is based on "core" value dimensions and relationship characteristics, such as power and change in buyer's supply strategy. Five different configurations of these constructs represent sufficient conditions to increase value capture, either by negotiating better prices or shifting volume among players in the supply chain (equifinality). Focusing on both buyer and supplier perspectives of the same phenomenon, the study increases knowledge on how contextual variables interact in influencing value capture. Methodologically, it contributes to research in combining QCA with case studies. From a practical perspective, buyers and sellers should be aware of other forms of capturing value apart from price negotiations. The proposed configurations help managers to choose adequate supply strategies, or better allocate resources to develop relationships according to specific situations.

### 3.3 Introduction

In the marketing, operations management (OM) and procurement disciplines, value creation and value capture are seen as central elements for gaining competitive advantage in business-to-business (B2B) markets (Eggert, Kleinaltenkamp, & Kashyap, 2019; Pinnington, Meehan, & Scanlon, 2016). The value that business customers and suppliers obtain has been commonly defined as the result of the benefices they receive from an offering and the sacrifices they need to make for it (e.g., Ulaga, 2003). Thus, value ultimately reflects the extent to which an offer contributes to facilitating or hindering the achievement of business partners' goals (Macdonald, Kleinaltenkamp, & Wilson, 2016, based on Woodruff, 1997), whereas value capture represents the share of the value created which is held by a focal firm (Bowman & Ambrosini, 2000).

The relationship between value creation and capture has been studied over the past decades. Several definitions for value dimensions (or benefits) were proposed, such as quality, reputation and innovation (e.g., Lapierre, 2000; Ritter & Walter, 2012; Ulaga, 2001). In addition, it was also studied how buyers' perceptions of these dimensions may affect the price paid (or sacrifices) (Geiger, Dost, Schönhoff, & Kleinaltenkamp, 2015; Grönroos & Helle, 2010). Moreover, characteristics of respective buyer-seller dyads that may influence this relationship have been investigated, including power and dependence (Ellegaard, Medlin, & Geersbro, 2014; Gulati & Sytch, 2007), attraction (Tanskanen & Aminoff, 2015), purchasing and supply chain management (PSM) practices (Hallikas, Immonen, Pynnönen, & Mikkonen, 2014), or changes of customer value over time (Flint & Woodruff, 2001).

Although the literature shows significant progress towards understanding value creation and capture, various streams of research have been independent from each other (Su & Yang, 2017), letting several gaps still remain. First, within these discussions the relationship between value creation and capture is mainly based on the tradeoff between quality, volume, and price (Flint & Woodruff, 2001; Lindgreen & Wynstra, 2005; Möller, 2006). However, while some studies propose that the value dimensions are fairly similar within a supply chain (Hallikas et al., 2014; Tanskanen & Aminoff, 2015), others suggest that there are significant differences (Brito & Miguel, 2017; Corsaro & Snehota, 2010; Lambert & Enz, 2012) that

might affect the value creation-capture relationship. Second, the most common form of capturing value discussed in literature is the price that a buyer is willing to pay (Grönroos & Helle, 2012; Homburg, Koschate, & Hoyer, 2005; Lavie, 2006; Wagner, Eggert, & Lindemann, 2010; Yan & Wagner, 2017), but other forms such as shifting volume among suppliers (Ellegaard et al., 2014) or engaging in collaborative efforts to increase the total value of the relationship (Cheung, Myers, & Mentzer, 2011; Ellegaard et al., 2014; Wagner et al., 2010) have not been investigated in much detail. Third, discussions on value capture are mostly conceptual or at the firm or industry levels (Lieberman, Garcia-Castro, & Balasubramanian, 2017), while relationship-specific investigations are missing.

As a result, little is known about the interplay among different value dimensions, characteristics of dyadic relationships, and different forms of value capture. Therefore, we argue that existing value capture models have to be expanded to better understand how different actors within a supply chain perceive these elements and how they relate to value capture.

This article uses a “configurational perspective” to understand the combinatory effects of value dimensions and dyadic characteristics as drivers of value capture (Fiss, 2011). To date, traditional correlation-based methods, such as regressions, factor analysis or structural equation modelling, have been dominant to study causal relationships between independent and dependent variables, such as antecedents and outcomes of value capture. However, these methods reach their limits when analyzing complex causalities that affect value capture. For example, while it seems reasonable to accept that a buyer is willing to allocate more volume to a supplier that has a better performance (a benefit), he may reach the same decision if this supplier has the required capabilities to support future needs (another benefit), or if dependency on the supplier is high (a characteristic of the dyad). Obviously, in such constellations of equifinality (Rihoux & Ragin, 2009), i.e. when various configurations of buyer-supplier relationship characteristics may lead to the same outcome, different methods need to be applied to gain deeper insights into the conditions that may cause such results (Schneider & Eggert, 2014).

Based on the assumption that different relationship conditions may lead to similar outcomes with respect to value capture, this study addresses the following research question: *Which configurations among buyer-seller dyadic characteristics drive value capture in business relationships?*

Drawing on transaction cost economics (TCE), resource-based theory (RBT), and social exchange theory (SET), the study investigates how different dimensions of value creation and relationship factors may increase the volume supplied by a supplier or the price paid by a buyer. The methodological approach combines an embedded case study from a focal customer in the financial payments industry and six key specialized service suppliers, with a qualitative comparative analysis (QCA). The study reveals the following insights: (1) For both buyers and suppliers, value creation is based on core dimensions of operational performance (as proposed by TCE), capabilities (as proposed by RBT), and relationship quality (as proposed by SET), while further non-core dimensions are specific to the context of each dyad. (2) Five different configurations among core value dimensions and dyadic characteristics represent sufficient conditions for buyers or suppliers to increase value capture, either by negotiating better prices or shifting volume in the supply chain. (3) Combining insights from various streams of existing research, high levels of operational performance, high levels of capabilities, or a combination of performance, capabilities and relationship quality are sufficient conditions for buyers and suppliers to increase value capture. (4) In the absence of these conditions, value capture depends on a combination of two relationship characteristics, power and change in buyer's supply strategy.

The study provides relevant theoretical and empirical contributions. First, it develops a more granular view of value creation and capture (Eggert et al., 2019; Ellegaard et al., 2014) by refining respective concepts, definitions, and typologies. Second, it reveals that different combinations among core dimensions of value creation and relationship factors drive value capture. These results extend existing knowledge on how contextual variables identified in previous models influence value capture (Marchet, Melacini, Perotti, Sassi, & Tappia, 2017). Further, as the findings are developed on the basis of common grand theories, it can be assumed they can generally be transferred to wider business contexts.

From a methodological perspective, the study answers recent calls to apply QCA in order to study complex B2B relationships (Su & Yang, 2017), and provides a major contribution by combining QCA with a qualitative case study approach, while existing QCA studies are typically based on surveys and secondary data. Finally, by focusing on both buyer and supplier perspectives of the same phenomenon, it significantly advances knowledge on business relationships and answers recent calls to explore dyadic perspectives in greater detail (Spina, Caniato, Luzzini, & Ronchi, 2013). For managers, results offer valuable insights of the mechanisms that drive value capture, how business is divided among buyers and suppliers, and which options are available to increase value capture (Ellegaard et al., 2014; Liu, Leach, & Bernhardt, 2005).

The remainder of the paper is structured as follows: First, the theoretical background develops the conceptual relationship among value creation, different forms of value capture, and relationship characteristics. Next, it details the method and analysis conducted in the case study and QCA, which build the empirical background of the paper. Results and discussion are based on a framework containing various configurations that lead to value capture. The paper concludes with its limitations and directions for future research.

### **3.4 Theoretical background**

#### **3.4.1 Value creation**

The way value is created has been conceptualized from different angles. Woodruff (1997 p. 142) defines customer-perceived value as “a customer’s perceived preference for, and evaluation of, those product attributes, attribute performances, and consequences that arise from use and that facilitate achieving the customer’s goals and purposes in use situations”. Since firms want to make profits or achieve competitive advantage, value in business markets has mainly been conceptualized as a result of benefices (rewards) and sacrifices (costs), that has economic (or monetary), technical and non-economic dimensions (e.g., Anderson & Narus, 1990). This is reflected, for example, in the utilitarian use value of core products, best value for price or better operational efficiency (Lindgreen & Wynstra, 2005; Sweeney & Soutar, 2001; Terpend, Tyler, Krause, & Handfield, 2008).

To receive value from business partners, the parties involved need to engage in exchanges. Consequently, value can also result from the efficiency of the respective exchanges. Analyzing this efficiency builds the core of TCE, which offers an economic approach to predict governance structures and exchange performance (Williamson, 1981). According to this perspective, exchanges are conducted through “transactions”, to which “transaction costs” for their execution can be associated to. In addition, safeguarding costs occur to minimize risks of opportunism from exchange partners. Consequently, firms will conduct an activity internally through hierarchical governance as long as transaction costs are lower than conducting the same transaction in the market (Ambrose, Marshall, & Lynch, 2010; Geiger, Durand, Saab, Kleinaltenkamp, Baxter, & Lee, 2012; Palmatier et al., 2007; Verwaal et al., 2008). In this sense, operational efficiency represents an example of value delivered by suppliers, and refers to the quality, reliability and flexibility of an operation. Other examples include asset efficiency (i.e., the perceived value obtained from having better control of an asset) and financial efficiency (i.e., cost reductions or increase in profits or revenue).

A different perspective takes RBT, which focuses on the heterogeneity of resources that an organization owns, has access to, or controls to achieve competitive advantages. Accordingly, organizations can be regarded as bundles of internal or outsourced resources and capabilities, of which those that are valuable, rare, costly to imitate, and non-substitutable (VRIN) contribute to gaining and sustaining competitive advantage (Barney, 2001; Dierickx & Cool, 1989; Wernerfelt, 1984). For example, customer firms’ reputation may be valuable to suppliers because it can help them to access new markets, while suppliers’ reputation may increase buyers’ perception that it will fulfill contractual agreements. Other examples include innovation (i.e., perception that one partner has of the new ideas that the counterpart brings to the relationship), time reduction (i.e., ability to reduce lead-time when developing new products) and service support (i.e., provide the right information at the right time).

According to SET, actors enter into and maintain relationships with the expectation that value will be exchanged either economically through better efficiency, or socially through reputation and prestige (Blau, 1965; Cropanzano & Mitchel, 2005). As the duration and intensity of interactions between actors increase, bonds of attraction generate trust and commitment, leading to expected behavior and discouraging opportunism and malfeasance,

thus lowering transaction costs (Granovetter, 1985; Morgan & Hunt, 1994). For example, personal relationships are characterized by quality, ethics, and effectiveness of interpersonal ties of one partner to another. They provide value because partners comfortable with personal relationships foster communication, reduce opportunistic behaviors and favor transfer of information and knowledge. Other examples include access to information (i.e., information that an exchange partner obtain from sources outside the organization) and access to market (i.e., perceived advantage obtained from the social capital).

Although exploring value based on assumptions derived from a combination of three dominant theoretical perspectives can be seen critically, the juxtaposition of “such assumptions is often a central ingredient for generating interesting research questions” (Alvesson & Sandberg, 2011: p. 255). From our perspective, these advantages outweigh potential drawbacks that result from mixing insights from various theoretical schools of thought.

### **3.4.2 Value capture**

Value capture is independent of value creation, and represents the portion or share of the value created each focal firm holds (Bowman & Ambrosini, 2000; Lepak, Smith, & Taylor, 2007). The literature has distinguished three manners by which buyers and suppliers capture value in business markets. First, by getting a larger share of the transaction value through price negotiations at the expense of the relationship partner. By increasing price, a supplier firm captures more value at the cost of the buyer firm that releases the equivalent amount of value, while decreasing price has the opposite effect (Bowman & Ambrosini, 2000; Homburg et al., 2005; Lindgreen & Wynstra, 2005).

Second, through volume firms can also capture more value at the expense of other competing firms inside the supply network. For example, buyers commonly shift volume between suppliers depending on price and performance, while in times of capacity shortage suppliers may commit resources to customers that provide better financial efficiency or higher margins (Ellegaard et al., 2014).



A third form of capturing more value is to increase the total value within the relationship through the benefits of collaborative efforts, at no one's expense because new value is created. When buyers and suppliers engage in developing new products, the supplier can offer and charge for a new value-added service, while the buyer benefits from the outcome (Cheung et al., 2011; Ellegaard et al., 2014; Grönroos & Helle, 2012; Wagner et al., 2010).

### **3.4.3 Relationship characteristics**

The way the created value is distributed in buyer-seller relationships depends on certain characteristics of the respective relationships. While power/dependence/attraction are dyadic specific, PSM practices and change relate to the buying firm.

***Power, dependence and attraction:*** Power and dependence go hand in hand (Kähkönen, Lintukangas, & Hallikas, 2015) and have been recognized as a primary source of value capture. Inter-firm power refers to the ability of a firm to influence another firm's actions, either through direct reinforcements or indirect manipulative ways (Brito & Miguel, 2017). Dependence occurs when one party, for achieving a certain goal or outcome, depends on scarce resources owned or controlled by another firm (Golicic, 2007; Palmatier et al., 2007). A powerful party tends to appropriate a larger share of the created value at the expense of the weaker one, for instance through price negotiations when the firm has no alternatives for obtaining the same resources (Ellegaard et al., 2014; Gulati & Sytch, 2007). An asymmetry in power may also impact the value captured through collaborative efforts. For example, coercive actions, additional services extracted after agreements were signed, or other opportunistic behaviors are further forms of capturing value in expense of the other because only one of the parties involved captures the respective value.

A firm's attraction comprises the expected value, perceived trust or perceived dependence on the other party (Hald, Córdón, & Vollmann, 2009), and may also affect the way value is captured. Interfirm attractiveness affects commitment and trust (Mortensen, 2012), creates the ability to manage and optimize value creation in the relationship, and increases willingness to negotiate (Tanskanen & Aminoff, 2015). For example, buyers that owns a famous brand know that the supplier may be willing to charge lower prices because he can use that

reputation to facilitate business with other customers. On the other hand, supplier firms for which the buyer has low attraction, will seek to reduce dependency by allocating less volume or terminate the relationship (Hald et al., 2009).

Consequently, attraction and power have been discussed as opposing mechanisms because a firm that is attractive in the eyes of another also has power within the dyad (Blau, 1965; Mortensen, 2012). Power, dependence and attractiveness represent dyadic characteristics because buyers or sellers are not ‘powerful’ in general, but it is the perceived asymmetry between actors that reduces the influence upon the other and determines value capture (Bowman & Ambrosini, 2000).

***Purchasing and Supply Chain Management (PSM) practices:*** Supplier management refers to identifying, qualifying, selecting, evaluating, developing, and certifying suppliers (Carr & Pearson, 1999). PSM practices are all “activities that [directly or indirectly] relate to the purchasing–supply base interface”. Examples of transactional supplier-facing practices include volume bundling, competitive bidding, and supplier evaluation (Narasimhan & Das, 2001).

PSM activities may have a significant role in determining the total costs associated with a product or service (Hallikas et al., 2014). Internal PSM practices mediate the effect of relational practices and are crucial to achieve effects on buying firm performance (Foerstl, Franke, & Zimmermann, 2016). For example, supplier evaluation based on quantitative rating systems, ongoing communications, and performance reviews are PSM practices commonly used by buyers to decide which suppliers need to be developed, which deserve further business or which do not deserve any of these (Carr & Pearson, 1999). Buyers may also implement purchasing procedures, such as consortiums, to limit the role of interpersonal relationships, or promote cost savings ideas and share knowledge (Giunipero, Handfield, & Eltantawy, 2006).

However, since PSM practices are employed differently by various purchasing firms, their usage leads to different outcomes with respect to value capture. For example, buyers that

employ rating systems to support price negotiations or split volume among suppliers may capture more value than those that don't practice such procedures.

***Change in supply strategy:*** Exchange relationships are dynamic, and the purpose and objectives of each party change while they evolve (Autry & Golobic, 2010). Changes in buyer-seller relationships can be initiated by tensions caused by performance issues, or changes in the external environment (i.e., cost competition), customer's demands (i.e., a new channel strategy), or internal to the firm at individual or organizational levels (i.e., a new manager) (Autry & Golobic, 2010; Flint & Woodruff, 2001; Ulaga & Eggert, 2006).

Such changes give space for new opportunities to capture value. For instance, a buyer firm facing pressures to lower costs due to new competitors may decide to reduce the number of suppliers in order to consolidate operations, reduce administrative costs, or increase its negotiation power. In such a situation, the remaining suppliers may capture more value because they will increase volume or may give away value because they will be forced to reduce price through renegotiations.

If such changes are initiated by the buyer firm, they will not necessarily be perceived equally by all suppliers (Flint & Woodruff, 2001). Hence, a supplier noticing change before others is in better position to adapt its product or service offerings and deliver more value. This will allow, at least partially, capturing more value through better prices, more volume or new collaborative efforts.

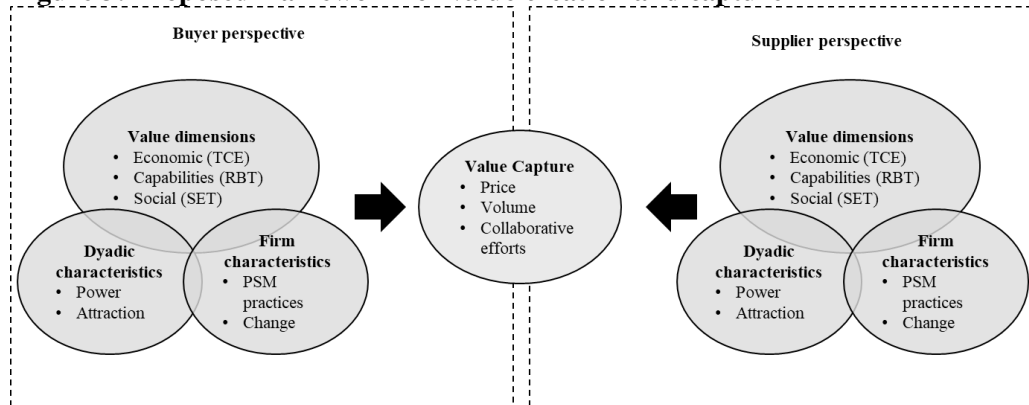
Further, new bid processes are often initiated when a buyer firm changes its strategy. This offers an opportunity for existing suppliers to increase volume with the respective buyer. In such situations, client-specific knowledge suggests that established suppliers are able to adapt their offerings to attend buyers' requirements better than new, potential suppliers (Chatain, 2010). For example, if a firm chooses to provide additional services to its customers and decides to conduct a new bid process to find a supplier for that demand, existing suppliers will be in better position because they are able to participate earlier in this process.

### 3.4.4 Conceptual framework

Based on the preceding theoretical considerations, Figure 3 presents a nomological framework combining buyers' and suppliers' perspectives on value creation and capture. Each side of the framework consists of four interconnected elements: value dimensions, dyadic and firm characteristics, and value capture. These elements may differ for each dyad, and results of their interplay depends on the different configurations they may have.

Thus, the framework implies that value capture is an outcome of various elements on the buyer and supplier side, and cannot only be explained by acknowledging and analyzing only single, individual relationships among the elements. It rather depends on how different configurations among value dimensions and characteristics of individual buyer-supplier dyads may lead to a same outcome, which in this study is value capture. This in line with the principle of “equifinality” that has been developed in systems theory (Bertalanffy, 1968), which proposes that a given end state or outcome can be achieved by different means and paths (Rihoux & Ragin, 2009).

**Figure 3: Proposed framework for value creation and capture**



### 3.5 Methodology and study design

To answer our research question, a two-phase methodology was conducted. Phase I entails identifying value dimensions associated with value creation, and cases by which value is created and captured. As there are hardly any theoretical frameworks that explain the relationship among value creation, value capture and moderating factors, a case study design

was chosen as it offers the possibility of elaborating theory and examining concepts in terms of their meaning and interpretation in specific contexts (Ketokivi & Choi, 2014). Moreover, dyadic studies help conceptualize issues related to inter-organizational relationships, where there are different perspectives (Aminoff & Tanskanen, 2013).

Based on the results of Phase I, a Qualitative Comparative Analysis (QCA) was employed in Phase II to identify causal conditions that lead to value capture. QCA is especially useful in situations which an outcome may result from different combinations of causal conditions, as it assesses multiple solutions leading to the same result ("equifinality", Rihoux & Ragin, 2009). Unlike traditional regression analysis, QCA uses set relations and formal Boolean logic to find commonalities among different cases with the same outcome, and determines which conditions are necessary and sufficient for the outcome (Rihoux & Ragin, 2009). A condition is seen as sufficient if it ensures that the outcome will occur, although it may be only one of many conditions that produce the respective outcome. Moreover, QCA is traditionally considered appropriate for small samples ranging from 10 to 50 cases (Schneider & Eggert, 2014), and it has already been used to evaluate complex supply chain phenomena (Russo, Confente, Gligor, & Cobelli, 2019).

### **3.6 Phase 1: Dyadic case study**

#### **3.6.1 Buyer and supplier sampling**

#### **3.6.2 Buyer and supplier sampling**

Selection of focal companies (buyers and suppliers) was based on purposive and reputational aspects. The sample included different industry sectors, a diversity of relationships, and different levels of complexity (Miles, Huberman, & Saldaña, 2014). The focal firm was relevant and known for leading market practices, the dyadic relationships were strategically important to the firms, and have an open and collaborative relationships (Eisenhardt & Graebner, 2007; Voss, Tsikriktsis, & Frohlich, 2002). One focal firm and six suppliers were selected. This resonates with past supply chain studies in which samples of two to five dyads involving a single focal firm have been analyzed (Mahapatra, Narasimhan, & Barbieri, 2010).

The focal firm (FIN) is a leading Brazilian company in the financial payments sector. This industry is suitable because it is seeking new ways to create customer value due to the dramatic increase in competition (Martelo, Barroso, & Cepeda, 2013) that has eroded margins and profits. Within this context, suppliers play an important role to increase sales, develop new technologies and software associated to the offered products and services, or support the logistics and distribution of the point-of-sale (POS) machines in a wide geographical country as Brazil.

Based on the selection criteria, the head of procurement and the researchers defined three categories to be included in the study, and identified the procurement and operations managers that had overall responsibility and were directly involved in the management and operation of each category on a regular basis, to be interviewed. These managers were contacted to explain the research, and identified the suppliers and prime contact persons at the supplier firms to be contacted first.

Two providers of professionals (programmers) for the Software Factory (SW) were selected. Software factories are responsible for developing and maintaining the systems that support the business. Supplier SW-A is a large Brazilian multinational company that has worked for FIN for the past 12 years and is its largest supplier in terms of headcount. Supplier SW-B is a small private firm that has been working with FIN for five years and has increased its share of business, and is more dependent on the client than SW-A.

Two Independent Sales Organization (ISO) were selected. ISO suppliers are responsible for selling POS machines through their sales force. Supplier ISO-C is a main supplier, has done business with FIN for almost four years, but more recently its share has declined. Supplier ISO-D has been working with FIN for one year, has increased its share of business, and soon may become a key supplier. Both firms are relatively small, privately owned, and heavily dependent on FIN.

Two Logistics Service Providers (LSP) responsible for managing the POSs along the supply chain were selected. They perform key processes in the value chain, including inventory management, last mile delivery, reverse logistics, and first line repair. LSP-E is a Brazilian

firm that originated in technology services and expanded towards logistics. In the last years it was acquired by a logistics company, and then acquired again by an investment fund to become a large company in the sector. LSP-F is a large multinational company that offers a diversified portfolio of logistics services and had significant growth in Brazil through the acquisition of several local players. Although FIN is a key customer to them, their relative dependence is low.

### **3.6.3 Data collection**

Managers at the buyer firm were interviewed first. After these interviews, they sent an email message to their respective suppliers explaining the objective of the research and requesting participation. To ensure cooperation from the firms, the message highlighted that they were supporting academic research conducted by an independent business school. All suppliers responded and agreed to participate. Then, the researcher contacted the prime contacts of the supplier firms to explain in more detail the objective of the research, the confidentiality of the interviews and the interview guideline. These prime contacts also identified other professionals within their firms that could be relevant for the study.

A mirrored interview guideline was developed for buyers and suppliers (Appendix C). It was developed based on the literature and consisted of three main sections: a broad view on value creation in relationships, the value creation strategies in the specific category, and the characteristics of the relationship within each specific dyad.

A total of 17 interviews with 21 participants were conducted, each lasting between 45 to 80 minutes, leading to 18 hours of interviews (Appendix D). The use of multiple informants from buyers and suppliers increased the richness of information of each case study. Interviews were recorded and transcribed into a written document, along with notes taken by the researcher, and then managed with the CAQDAS software AtlasTI.

### **3.6.4 Data coding**

Coding is a critical step to retrieve, organize, synthesize and provide units of meaning to the information obtained during a case study (Saldaña, 2015). Based on the literature, a

provisional list with domain coding variables was developed. All interviews were read in detail and passages coded following the provisional list. During this process the list was revisited and refined until a final code list was assembled (Appendix E).

The list was organized around five families: (i) value capture, containing three different forms of outcome (price, volume and collaborative efforts); (ii) contextual passages of the sample and respondents; (iii) the value dimensions identified in the literature; (iv) contextual information about the firms; and (v) information related to relationship characteristics.

### **3.6.5 The dimensions of value creation**

The value dimensions to be considered in the study were determined by counting how many times (total mentions) they were mentioned in each interview, dyads and in total (These findings can be explained based on the literature. Considering that companies tend to outsource in order to increase efficiency or access new capabilities, and that the quality of relationships reduces transaction costs, there is support to the argument proposed in this paper that these three dimensions can be defined as “core” and should be applicable to most relationships. According to TCE, improved operational performance is a primary expected outcome of buyer–supplier relationships, relationship outcome is a fundamental premise of the SET, and RBT argues that access to heterogeneous resources that are intentionally committed and shared is a fundamental premise of an outsourced activity.

The remaining dimensions were defined as “non-core” because they were mentioned only in specific interviews or dyads. For example, reputation seems to be only valuable to ISO and SW suppliers, but not in logistics, while market information was mentioned a few times in ISO, but not in SW or LSP. Although “non-core” dimensions are recognized in the literature as value creating, they seem to be specific to certain situations.

These findings extend existing theory by bringing the notion of core and non-core dimensions of value, since previous studies have either defined or measured these dimensions according to certain settings (business-to-business, business-to-consumer or both) (Kleinaltenkamp &



Dekanozishvili, 2018). Therefore, the second phase of the study will concentrate on the core value dimensions.

Table 7) From the twelve dimensions found in the study, three were repeatedly identified across all interviews and dyads with each of those being grounded in a specific theory: (1) Operational efficiency relates to TCE and refers to the basic attributes of operational efficiency, quality, reliability, flexibility and efficiency. (2) Personal relationship is grounded in SET, and refers to the quality, ethics, effectiveness of interpersonal ties and interactions (3) Value obtained from capabilities is based on RBT, and refers to learning, developing or obtaining competencies and capabilities with the corresponding partner.

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**Table 7: Value dimensions based on the grand theories**

Theory	Value Dimensions	Definition	Mentions			
Core dimensions			LOG	ISO	SW	Total
TCE	Operational efficiency	Operational efficiency attributes (quality, reliability, flexibility and efficiency)	16	25	25	66
SET	Personal relationship	Quality and effectiveness of interpersonal ties and interactions	20	23	42	85
RBT	Capabilities/resources	Access, learn or develop resources/capabilities	15	32	37	84
Non-core dimensions						
Theory	Value Dimensions	Definition	LOG	ISO	SW	Total
TCE	Asset efficiency	Perceived value obtained from having better control of assets	1	0	0	1
	Financial efficiency	Perceived cost reductions, value for money paid, possibility to increase profits or business within a market	3	15	19	37
	Risk management	Taking over or reducing financial, performance or social risks	0	7	13	20
SET	Access to information	Information obtained from sources outside of the organization	6	0	8	14
RBT	Firm reputation	Market signal about a firm's quality, performance and trustworthiness	1	8	10	19
	Innovation	Perceived innovation that the partner brings to improve processes	11	4	6	21
	Time reduction	Ability to reduce the lead-time to implement new products, processes or other improvements	5	4	6	15

### 3.6.6 Identifying and coding cases that relate to value capture

Following Farrell and Marsh (2016) and Russo et al. (2019), cases were built in four steps. Initially, a qualitative interpretation of all quotes coded as context information and value capture was performed to identify different conditions that relate to the outcome, which is value capture. For example, different buyers mentioned different manners by which they decide to negotiate price, while different suppliers reported that the buyer was seeking price reductions through on general bids. These two conditions were identified as “generic price/volume decisions” because they are applicable to the supply base as a whole.

This resulted in six different conditions that had an impact on the outcome (price, volume or collaborative efforts: (i) “Generic price/volume decisions” refers to the generic decision processes by which buyers or suppliers made decisions on price, volume and collaborative

efforts. (ii) “Specific supplier losing volume” refers to an actual condition reported by the interviewees that lead to a decline in volume allocated to a specific supplier, while (iii) “Specific supplier gaining volume” has the same meaning but in the opposite condition. (iv) “Specific supplier lowering price” refers to a specific situation that lead to price reductions, (v) “New supply strategies that impact price and/or volume” refers to a condition that was initiated by a change in the buyer’s supply strategy and had an impact on the outcome. Finally, (vi) “Collaborative projects” refers to examples of efforts initiated by the buyer or by the supplier that lead to an increase in the value captured by the firms.

The next step was to identify cases associated to each condition. A case was composed of three base elements: the condition identified in step 1, the variables associated to each condition, which could be the dimensions of value creation or relationship characteristics, and the specific outcome of that condition. All interviews and codes were read, and a specific case was considered when the coded text could (1) identify a specific condition, (2) describe in an open-ended manner one or more variables associated to that condition, and (3) be associated to a positive or negative outcome. The unit of analysis of the cases identified within conditions (i) and (v) is at the category level (ISO, SW or LSP) because it refers to generic decisions, whereas for cases within conditions (ii), (iii) and (iv) is the dyad because the case is specific to a particular situation.

Finally, all quotes that related to a specific case were grouped according to the respective variables and connected into one unique string that represented a single case, independently of the person interviewed. If one person mentioned different variables associated to the same condition, or if two people or more interviewees talked about the same condition or variable, it was considered as being the same case.

To illustrate this process, a case example is provided in Table 8. In the first step, four different respondents responsible for the software factory (buyers and suppliers interviews coded as 5, 6, 7 and 32) described a situation (the condition) where supplier SW-E gained a larger share of the volume (the outcome). This situation represented a case.

**Table 8: Case example extracted from the interviews**

<b>Condition: Specific supplier gaining volume</b>		
<b>Case: Supplier SW-L gain volume</b>		
<b>Variable</b>	<b>Quotes</b>	<b>Example of quote</b>
Core TCE- Performance	5:11; 5:23; 5:33	“He had professionals and was better delivering the service, so automatically we started doing this tipping”
Core RBT- Capability	5:33; 5:40; 32:71	“The supplier has evolved because it sought knowledge of our business”, or “The supplier had already articulated and put the architects in there”
Core SET- Relationship	5:44; 6:6; 7:67	“The supplier has built and is very efficient in the relationship with our internal customers, in the relationship with our purchasing area. He has a different preparation and warns me before”
Attraction	32:37; 32:38	What I’m [the supplier] looking from him [the buyer]? We have a business; it has some technologies that are being implemented that I do not participate yet. That is our desire to actually be inside”
Power		N/A
Change		N/A
Volume	5:33	“We started to drop another one [supplier] that is also big, very competitive. In this case, this has been bringing volume to them”

In a second step, the researcher read all quotes from all interviews conducted with the persons involved with the software factory and identified that three quotes coded within the variable “relationship” were described by three different persons and related to that case (5:44; 6:6; 7:67) This procedure was carried on until all quotes related to that case were identified and grouped into the same variable. At the end, three quotes were related to “performance” (5:11, 5:23 and 5:33), three related to “capabilities” (5:33; 5:40; 32:71), and no quotes related to power or change were found. In the last step, all quotes and variables were connected into a single case.

At the end of this process, 30 different cases were identified. However, two cases related to collaborative efforts were not considered for further analysis because the sample was too small to obtain a meaningful conclusion. Moreover, in both cases, the value created was totally captured by the buyer because the supplier did not get any benefit. In one ISO case, the supplier developed a new technology based on an app to improve operations, and in one SW case the supplier proposed a new method to fulfill the staff and guarantee the necessary 24/7 hours support. In both cases the buyer was not willing to pay for the benefit and the supplier could not offer the solution in the market because it was specific to that situation.

PSM practices were excluded of the study because no heterogeneity was found on the cases. Although the literature suggests that buyers might employ practices differently, in all interviews buyers and suppliers provided similar evidences regarding the use of balanced scorecards to evaluate suppliers, segregation between technical and procurement teams to conduct negotiations and performance reviews.

The remaining 28 cases were fairly distributed across the different sectors and outcomes, and considered being satisfactory for the QCA analysis (Table 9). Each case was copied and represented a line in an MS-Excel spreadsheet.

**Table 9: Conditions that impact value capture**

<b>Condition – Value creation</b>	<b>ISO</b>	<b>LOG</b>	<b>SW</b>	<b>Total</b>
Generic price / volume decisions	4	3	6	13
Specific supplier losing volume	2	1	1	4
Strategies that impact price and/or volume	2	1	1	4
Specific supplier gaining volume	1	1	1	3
Specific supplier lower price	1	1	2	4
Collaborative efforts (2 cases excluded)	0	0	0	0
<b>Total</b>	<b>10</b>	<b>7</b>	<b>11</b>	<b>28</b>

### **3.7 Phase II – QCA analysis**

The QCA model was analyzed with the Fuzzy Set Qualitative Comparative Analysis (fs/QCA) software program according to the individual outcomes (volume or price). The crisp-set methodology (Rihoux & Ragin, 2009) was used because the variables had only two possible values, 0 and 1.

#### **3.7.1 Configuring the truth table and data set**

Truth tables contain the cases organized into logically combinations of causal conditions and the outcome associated with each configuration. In the truth table the attribute set is composed of binary variables, coded 1 for “present” (high score) and 0 for “absent” (low score) (Ragin, 2008; Rihoux & Ragin, 2009).

Set membership measure is the first step to construct the truth table. Because the variables were based on verbal reasoning, it was necessary to transform the text into dichotomous values “1” or “0” (Rihoux & Ragin, 2009). The outcome for volume was considered “present” if the case pointed that the supplier firm increased its volume or share, while the outcome for price was considered “present” when the representative of a buyer firm said that they were willing to pay a different price, or the supplier was actually able to charge a higher price. For the other variables, a “present” condition was considered when the quote had a positive relationship with the outcome.

In the example presented in Table 8, the outcome was “present” (a score of “1” assigned) because the supplier increased its volume. The attributes core-TCE, core-RBT, and non-core-TCE were also assigned “1” because they were positively associated to an increase in volume to the supplier. Power and change were assigned “0” because they were not associated with the outcome.

The next step was to refine the truth table based on frequency and consistency. The cut-off criteria for frequency in medium-sized samples (i.e. 10–50 cases) was 1 (Rihoux & Ragin, 2009). Consistency measures are calculated as the sum of the consistent membership scores in a causal set divided by the sum of all the membership scores of that causal set. Although consistency scores should be as close to 1.0, it is accepted for QCA analysis when it exceeds 0.8 (Ragin, 2008). One case showed consistency measure of 0.5 and was a contradictory configuration where the buyer expected better quality and capabilities at lower prices. Since this case was more a speculative argument made by one buyer rather than an actual situation, and contradictory cases cannot be present in crisp set QCA (Rihoux & Ragin, 2009), it was removed from the data set.

The final step was to identify the existence of a necessary condition that could simplify the model. A necessary condition implies that the outcome is not present unless the condition is also present. In other words, when one observes the outcome, one will always observe the condition (Schneider & Eggert, 2014). Conventionally, a condition or a combination of conditions is “necessary” if the consistency score exceeds the threshold of 0.9 (Rönnerberg, Parida, & Kohtamäki, 2016). A sufficiency analysis for the core dimensions (TCE, RBT and

SET) and the combination of “core” TCE and RBT was performed and all results were below 0.58 and 0.83, indicating that no variables or combinations alone were necessary for the outcome.

At the end of this process one truth table containing a total of 28 cases and the corresponding outcome was built (Appendix F). Outcomes were analyzed for the presence or absence of five conditions: three core value dimensions (TCE, RBT and SET) and two relationship characteristics (power and change).

### **3.7.2 QCA Results**

Findings are presented in form of tables found in respective literature (Fiss, 2011; Russo et al., 2019). The presence of a condition is marked by a filled circle (●), and the absence of a condition is noted by a circle with an “x” (⊗). If a condition is not involved in a solution, there is no notation. To identify core and peripheral conditions as part of a configuration, researchers focus on both the parsimonious and the intermediate solutions. Fiss (2011: p. 403) explains that “...core conditions are those that are part of both parsimonious and intermediate solutions, and peripheral conditions are those that are eliminated in the parsimonious solution and thus only appear in the intermediate solution.” Core conditions have a strong causal relationship with the outcome when compared to peripheral conditions (Fiss, 2011). Interpreting the results requires a dialogue between the QCA results, the theoretical background and concrete examples of the solutions at work (Farrell & Marsh, 2016).

### **3.7.3 Configurations for value capture - Price**

Cases were analyzed to identify which combinations of conditions are associated with price increase or decrease. The fs/QCA software conducted a logical simplification to reduce the different situations that lead to the outcome (Rihoux & Ragin, 2009), leading to five configurations (I to V) associated with change in price (Table 10), thus showing equifinality.

Performance, capability, and relationship as the three value dimensions, and power, were found to be core conditions, while change represents a peripheral condition. The overall consistency is 0.92 and solution coverage is 1, implying that they are sufficient for the

outcome. Moreover, all configurations have unique coverage above zero, which means that they are empirically relevant. Since higher values for coverage indicate greater empirical relevance, the analysis also shows the consistency and coverage for each individual configuration.

**Table 10: Configurations associated to change in price**

Configuration	I	II	III	IV	V
Core TCE-Performance	●	●	⊗	⊗	⊗
Core RBT-Capability		●	⊗	●	●
Core SET-Relationship		●	⊗	⊗	●
Power	⊗	⊗	●	⊗	●
Change	⊗		●	●	⊗
Consistency	0.875	1	1	1	1
Raw coverage	0,64	0,18	0,09	0,09	0,09
Unique coverage	0,55	0,09	0,09	0,09	0,09

Circles “●” indicate the presence of conditions, and circles “⊗” indicate absence. Large circles indicate core conditions, small circles indicate peripheral conditions.

With a unique coverage of .55, configuration I is the most relevant and shows that in the absence of power and change, high performance is sufficient to change price. When comparing configuration I with Configuration II, it can be seen that high levels of performance and the absence of power are always associated to a change in price, while change, capabilities and relationships can be present or absent.

These results were observed in SW, ISO and logistics cases, where prices are based either on commoditized umbrella contracts with standard rates or specialized services with specific and higher rates. In these cases, capabilities and relationships were used as a second step for a pricing decision, when the customers needed to distinguish suppliers based on efficiency. For example, in SW-P case one manager stated “*If a supplier has better quality and delivers [the service] with fewer errors, I would not be uncomfortable in paying a little more*” (interviewee 15), in LOG-AC a manager stated “*I could pay a little more to have better quality*” (interviewee 11), and in ISO-E “*We can discuss other areas in case of a tiebreaker, for example one’s implementation plan or team composition*” (Interviewee 5).



Configuration III shows that, in the absence of core value dimensions, high levels of power and change in the supply strategy drive price decisions. This was found in SW-U case, where FIN has a relatively high power within its supply base. In this case, the supplier was forced to reduce price regardless of its level of performance, capabilities and relationship because the purchasing firm was forcing price reductions at the time of contract renewals. According to a supplier representative, *“Price renewals are happening like this: I [the buyer] renew [the contract] with you but will pay 30% less. Do you agree?”* (Interviewee 18).

The effect of change was found in the ISO-K case, when the manager decided to conduct a new bidding process to reduce costs. In that case, there was an indication that price could decrease because several suppliers were interested in gaining the bid, but at the same time, two existing suppliers were in a powerful position. In this regard, a representative of a buying firm stated *“There will be a new remuneration model, and if he [the supplier] retains the client base he will receive an additional [fee].”* (Interviewee 5).

Finally, configurations IV and V are characterized by low levels of performance and high levels of capabilities, and high or low levels of relationship, power and change. These situations were found on two cases and seem to be context specific: in SW-V, after FIN decided to implement a disruptive strategy, a new supplier was selected based on the firm’s differential in change management capabilities. In ISO-I, FIN needed additional resources to support a promotion in a remote region of the country, but had no budget for that. Based on their relationship, the current supplier proposed to support the promotion at no additional cost, which would be compensated in another moment.

#### **3.7.4 Configurations for value capture - Volume**

The logical simplification of the cases led to five configurations (I to V) of conditions associated with a change in volume (Table 11). The solution has overall consistency scores of 1, meaning that they are sufficient to produce the outcome, and the coverage of the sample is adequate (Rihoux & Ragin, 2009).

Volume configurations showed relatively similar levels of relevance, indicating that volume follows a more complex decision-making process. In a complementary manner, configurations I, II show different manners by which value dimensions may lead to an increase in volume, as long power and change are not present. While configuration I requires high levels of performance and capabilities, configuration II requires high levels of performance and relationships.

**Table 11: Configurations associated to change in volume**

Configuration	I	II	III	IV	V
Core TCE-Performance	●	●			⊗
Core RBT-Capability	●		●	●	⊗
Core SET-Relationship		●	⊗	●	⊗
Power	⊗	⊗	⊗	●	●
Change		⊗	●	⊗	●
Consistency	1	1	1	1	1
Raw coverage	0,50	0,25	0,17	0,25	0,08
Unique coverage	0,25	0,08	0,08	0,25	0,08

Circles “●” indicate the presence of conditions, and circles “⊗” indicate absence. Large circles indicate core conditions, small circles indicate peripheral conditions.

These situations were found in generic strategy cases, and share commonalities found in similar price configurations. In ISO-F, one manager stated that “the key criteria to increase volume are performance versus cost”, recognized that “qualified suppliers are the ones technically approved at a competitive cost”, and concluded with “my price list will be this one. If you do not agree, we split the volume between supplier A and B, and then see who performs better (interviewee 6). A more specific example was found on case SW-N, where “[despite] the supplier has average performance, I maintain the contract because it has senior resources who know the platform very well” (interviewee 15).

Configuration III is almost opposite to the previous ones, requiring high levels of capabilities combined with low levels of relationship and no presence of performance. This was probably due to respective changes, since it occurred when a new supplier was granted business due to new bidding processes, as shown SW-V case. Accordingly, “*the supplier gained the business due to their strategy and change management differential*” (Interviewee 6).

LSP-Z is the most straightforward case that combines configurations I, II and III, since it comprises high level of all core value dimensions and change. After FIN's strategy changed to improve logistics and first line repair efficiency and a bidding process was conducted, a new supplier firm was selected based on its specific capabilities, but declined the contract a few weeks later. Instead of conducting a new bid, the logistics manager decided to award the business to LSP-Z. Its superior performance and trustworthy relationships within the organization convinced the buyer that they would develop the necessary capabilities. Accordingly, the manager stated *"During the last four years the supplier consistently had better inventory results and had a larger distribution center. In this process there was no bidding involved, it was a direct hire with the supplier to take over the service"* (Interviewee 10).

Configuration IV is the most distinct from the others. Accordingly, high levels of capabilities, relationship quality and power drive an increase in volume regardless of performance. However, the case found in this configuration seems to represent a specific business situation. In ISO-I, although FIN gave additional volume to a supplier that had capabilities required to deliver a new promotion in a specific region, the relationship between both companies seemed to balance the supplier's relative power and build deeper relationships. At the same time that a representative of the buyer firm recognized supplier's power by stating *"They know if I'm desperate or not. If the promotion is in a region (i.e. Sao Paulo) where the supplier is already there, I close the deal with him"* (Interviewee 4), the supplier firm did not use its relative powerful position to negotiate price extensions. Instead, it positioned itself to build the relationship as follows: *"several times they called me and said: I need [to set-up] a promotion with five salespeople but do not have the sum to pay you. Ok, I will send the people and we can settle the situation later, in another promotion"* (Interviewee 7).

At the category level, ISO managers decided to implement a new supply strategy due to changes in their sales strategy, pricing policies and performance measurements. First, they reduced the number of suppliers to keep the best performers capable to implement the new strategy, and then planned to conduct a new bidding process to change the operational and remuneration models with the objective of attracting new suppliers, reduce dependency and price. As a result, the remaining suppliers initially increased their volume but, as they

expected that soon there would be significant impact on price and volume. According to a buyer *“The request for proposal will be new because we will quote everything since the beginning, starting from zero”* (Interviewee 5). More specifically, this was found in ISO-K already discussed with respect to price, since it is expected, as the buyer stated, that the new bidding process will also impact volume *“Today I’m a ‘hostage’ of two companies. But there are sixteen companies that came to talk to use, many people want to talk to us, and I will initiate a new bid from scratch.”* (Interviewee 4).

### 3.8 Theoretical implications

Extant literature has provided several dimensions of value creation, and tends to focus value capture based on price (Cheung et al., 2011; Ellegaard et al., 2014; Grönroos & Helle, 2012; Homburg et al., 2005; Lavie, 2006; Wagner et al., 2010; Yan & Wagner, 2017). Moreover, value capture given by the price paid or volume allocated to a certain supplier has been investigated based on individual relationship factors, including tradeoffs between quality and volume (Flint & Woodruff, 2001; Lindgreen & Wynstra, 2005; Möller, 2006), the relative power between buyers and suppliers (Bowman & Ambrosini, 2000), PSM activities (Carr & Pearson, 1999; Hallikas et al., 2014), or the change initiated by the buyer (Chatain, 2010).

This article takes a different perspective and investigates how various factors interact in changing value capture in B2B relationships. In order to address the complex causalities among these factors and to focus on customers’ and suppliers’ perspectives at the same time, a configurational QCA was conducted with a focal company and six suppliers. The resulting framework suggests that different configurations among operational performance, supplier capabilities, relationship quality, power and change can increase or decrease the price paid for a service or shift of volume among suppliers.

To show the interplay with price and volume, the following discussion is structured around three different clusters (Table 12), each one comparing the differences and similarities between the value dimensions and relational factors.

**Table 12: Differences and similarities between configurations for price and volume**

Cluster	1: Power-based	2: Value-based	3: Capability-based
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Outcome	I-A Price	I-B Volume	II-A Price	II-B Volume	III-A Price	III-B Volume	IV-A Price	IV-B Volume	V-A Price	V-B Volume
Performance	⊗	⊗	⊗		●	●	●	●	⊗	
Capability	⊗	⊗	●	●			●	●	●	●
Relationship	⊗	⊗	●	●		●	●		⊗	⊗
Power	●	●	●	●	⊗	⊗	⊗	⊗	⊗	⊗
Change	●	●	⊗	⊗	⊗	⊗			●	●
Consistency	1	1	1	1	0,875	1	1	1	1	1
Raw coverage	0,09	0,08	0,09	0,25	0,64	0,25	0,18	0,50	0,09	0,17
Unique coverage	0,09	0,08	0,09	0,25	0,55	0,08	0,09	0,25	0,09	0,08

Circles “●” indicate the presence of conditions, and circles “⊗” indicate absence. Large circles indicate core conditions, small circles indicate peripheral conditions.

Two principles found in Schneider & Wagemann (2010 p:15-16) support this structure: First, relevance of different configurations should not consider only coefficients of coverage, but also their theoretical relevance. “Sometimes, an empirically less important path can be theoretically and substantively more important than other paths covering many cases”. Second, although interpreting results focusing on the role of individual conditions in isolation from other conditions is not in line with the QCA method, researchers should pay attention to specific variables if there is a strong consensus that a particular condition is indispensable for producing an outcome, even if it did not show as a necessary condition.

In this sense, cluster 1 (I-A/B and IIA/B) has high levels of power as the common characteristic, cluster 2 (IIIA/B and IVA/B) high levels of performance and low levels of power in common, and cluster 3 (VA/B) high levels of capabilities combined with low levels of power and relationship quality, and change as a peripheral condition.

### 3.8.1 Power based configurations

Although power has been recognized a primary source of value capture (Bowman & Ambrosini, 2000), this cluster contributes to theory by showing two distinct configurations on how power interplays with core value dimensions and change to increase value capture, either through price or volume.

Changes in supply tend to involve new bidding processes or contract renegotiations, or increase the level of competition between buying and supplying firms, either directly from firms that have existing relationships with the buyer, or indirectly from other firms in the market (Chatain, 2010; Ellegaard et al., 2014; Lepak et al., 2007). While in these situations customer requirements are more likely to be fulfilled by existing, and not new suppliers (Chatain, 2010), it is also an opportunity for new suppliers to invest and get additional business. In that situation, the party that has the strongest bargaining power (either the customer or the supplier) determines who captures the largest amount of value, which can be done through price negotiations, additional services or other opportunistic behaviors (Bowman & Ambrosini, 2000; Ellegaard et al., 2014; Gulati & Sytch, 2007). These arguments support configurations I-A/B, since low levels of all value dimensions lead to no differentiation that could provide benefits to either the customer firm or the supplier. Therefore, in such situations high levels of power seems to be a sufficient condition to impact volume and price.

When change is not present (II-A/B) and contracts are already in place, increases (or decrease) in price or volume will depend on specific firm or dyadic characteristics. In such cases, high levels of capabilities and relationship quality are necessary to increase value capture. Organizations that build VRIN capabilities create isolating mechanisms and sustain a competitive advantage (Barney, 2001; Dierickx & Cool, 1989; Wernerfelt, 1984). An isolating mechanism is “any knowledge, physical, or legal barrier that may prevent replication of the value-creating new task, product, or service by a competitor” (Lepak et al., 2007: p. 188). This may serve to achieve a temporary monopoly, increase bargaining power, or help customers and suppliers discriminate competing firms, which in turn increases the customers’ willingness to pay or the volume supplied (Lieberman et al., 2017; Töytäri, Rajala, & Alejandro, 2015; Ulaga & Eggert, 2006). In addition, customers need to assure that suppliers have the capabilities required to deliver additional volume without affecting operational performance or increasing risk. Therefore, even if one party has high levels of power, additional volume or better prices will not be granted unless the other party has the necessary capabilities.

Theoretical explanations of why high levels of relationship quality are also needed in these configurations can be found in SET. An assumption of this theory is that actors enter and maintain exchange relationships with the expectation that acting in a trustworthy manner will be economically rewarding (Autry & Golicic, 2010; Blau, 1965; Cropanzano & Mitchel, 2005). Moreover, in dyadic relationships there is tendency for commercial relationships to be interwoven with personal ones (Zaheer & Venkatraman, 1995), and as the duration and intensity of interactions increase, the embedded relationships generate trust, discourage opportunism and lead to more relational and informal governance. According to TCE, more informal governance reduces transaction costs and increase performance because it functions as a safeguard against opportunism and the dyadic partners are more likely to deploy relation-specific investments without crafting complex contracts or asking for safeguards (Corsten, Gruen, & Peyinghaus, 2011; Zaheer & Venkatraman, 1995). Therefore, relationship quality may be the additional and complementary value needed to increase volume or negotiate better prices.

In this cluster, operational performance plays a slightly different role in price and volume capture. While low levels of operational performance were found when the outcome was price, they were not present on the volume outcome. These results are in line with the above discussion on power and dependence indicating that the powerful party tends to look backwards and consider the value for money paid when making sourcing decisions.

### **3.8.2 Value-based configurations**

In the absence of power and change, different paths for capturing value (III-A/B and IV-A/B) require high levels of operational performance, which can be combined with capabilities and relationship quality to capture price or volume. These results shed more light to the contrasting views on value: while some authors provide a common and simplistic conceptualization of value-for-money as the ratio between quality (or performance) and price, others suggest that viewing value as a trade-off between only quality and price is too simplistic (Sweeney & Soutar, 2001).

The more complex view found in this study is supported by theory. For the past decades, buyer-supplier relationships were driven by operational performance (Terpend et al., 2008), and supplier's quality performance of service activities have been used to choose a particular vendor (Gassenheimer, Sterling, & Robicheaux, 1996), foster long-term cooperation and knowledge transfer (Lee & Johnsen, 2012; Squire, Cousins, & Brown, 2009). Most often, value is considered in monetary terms (Lindgreen & Wynstra, 2005), and the evaluation of performance is an economically significant short-term outcome (Jap & Anderson, 2003). Moreover, poor performance has been recognized as a potential risk of outsourcing (Kremic, Tukel, & Rom, 2006). Therefore, when power is not present, operational performance acts like a hygiene factor that drives the increase or decrease in price or volume, which is represented in configuration III-A, and partially in III-B.

This cluster also shows how the interplay between high levels of operational performance and capabilities (IV-A/B) drives changes in price and volume. Customers and suppliers may shift volume in their networks due to efficiency problems, the need of additional volume to support an increase in overall demand, to secure a minimum level of business, or due to new projects. According to RBT, resources are assets, processes, information or knowledge of a firm that enable the development and implementation of strategies to improve efficiency and effectiveness (Barney, 2001). As a customer shifts more volume to a certain supplier or if a supplier firm increases its volume with a buyer, it also increases its dependency and need to secure the supply in case of any failure in delivery (Aminoff & Tanskanen, 2013). Therefore, before shifting volume, it is expected that firms will assure that the other party has the specific capabilities to deliver the additional volume without affecting operational performance and increasing risk.

As for price, the configurations in this cluster can also be considered an extension of Cluster 1, where capabilities may function as an isolating mechanism (Lepak et al., 2007), and serve to increase bargaining power or discriminate competing firms. This in turn increases the buyer's willingness to pay (Lieberman et al., 2017; Töytäri et al., 2015; Ulaga & Eggert, 2006). Surprisingly, high levels of relationship quality were necessary to capture volume or price only in specific conditions (III-B and IV-A). This partially contradicts findings from the case studies, since relationship quality was the most cited value dimension. According to



SET, the duration and intensity of interactions between exchange partners generate trust and commitment, discourage opportunism and lower transaction costs (Anderson & Narus, 1990; Granovetter, 1985; Morgan & Hunt, 1994). Therefore, it was expected to observe high levels of relationship quality in all configurations that show low levels of power, since buyers or suppliers with good relationships are more trustworthy and would be able to capture more value. These results may be an indication that the interplay between relationship quality and value capture may depend on other dyadic characteristics.

### **3.8.3 Capability-based configurations**

In this cluster, configurations V-A and V-B strongly relate to considerations of RBT, and provide several indications showing that firms have the full potential to capture value when they hold VRIN capabilities. First, the fact that change is a peripheral condition indicates that a change in the outcome partially depends on a change in the buyer or supplier organization. In addition, the low levels of power, relationship quality and operational efficiency suggest that value in the dyadic relationship is solely based on capabilities, the remaining variable in the model. These indications corroborate and extend previous discussions, where VRIN capabilities increase buying firms willingness to pay or the volume supplied to them (Lieberman et al., 2017; Töytäri et al., 2015; Ulaga & Eggert, 2006).

## **3.9 Implications to practice**

Increasing value in B2B relationships is a complicated task that requires understanding of the options available. In face of this challenge, this research offers several practical avenues for customers and suppliers to increase the value they capture in their relationships.

First, managers should be aware of other forms of capturing value apart from price negotiations, where value is captured at expense of the relationship partner. Value can also be captured by shifting volume among competing firms inside the supply network (Ellegaard et al., 2014), or by creating new value through collaborative (Cheung et al., 2011; Ellegaard et al., 2014; Grönroos & Helle, 2012; Wagner et al., 2010).

Second, different configurations showing the interplay among core value dimensions, power and change in buyers' supply strategy were presented. Although it is not surprising that the more powerful party tends to appropriate a larger share of the value (Bowman & Ambrosini, 2000; Ellegaard et al., 2014), managers can deliberately change their supply strategy to increase competition and capture value. For example, when a customer firm decides to reduce its supply base, it will increase competition and efficiency, while the remaining suppliers will see this as an opportunity to increase volume.

Third, in the absence of power asymmetries and change, operational performance becomes a hygiene factor that enables value capture. However, different firms have different capabilities available, and each dyad has specific relationship characteristics. By offering managers different combinations among core value dimensions that lead to similar outcomes, they can better allocate resources or invest in relationships more appropriate to their specific situation (Russo et al., 2019).

### **3.10 Conclusions, limitations and future research**

The goal of this study was to investigate how value is created and delivered in B2B relationships. While the marketing and OM disciplines have mostly investigated these areas without focusing on interactions (Su & Yang, 2017), this paper combined an embedded case study and a qualitative comparative analysis (QCA) to examine how different combinations between the dimensions of value creation and relationship characteristics impact value capture.

The paper provides several contributions to theory building and methodology. First, it expands previous models and shows that value is created based on core and non-core dimensions, and can be captured in three distinct forms, volume, price and collaborative efforts, although this latter form was not found in the case studies. Second, it provides empirical evidence on how different combinations among core value dimensions (operational performance, capabilities and quality of relationships), change in buyers' supply strategy, and power may lead to similar outcomes of value capture (equifinality). Third, it was conducted in service-intensive industries, an under-explored area since previous research has been

conducted mainly in physical products and retail (Keränen & Jalkala, 2013). Finally, the detailed method and example developed in the study offer new and innovative perspectives on how QCA can be used (Su & Yang, 2017).

For managers, the paper offers a more holistic view of value creation and capture, use different perspectives (customers and suppliers), and provide different combinations among relational factors that may facilitate decision-making, such as when or not accept higher or lower prices, or how to split volume in the supply network.

As with any study, this research has limitations that can be addressed through future research. First, the combination of case studies and QCA has its own limitations and constraints. For example, when building cases and constructing truth tables with binary data (“high” =1 or “low” =0) based on judgement, a single wrong coding of a case could significantly alter the results, particularly when dealing with few cases for each outcome condition (Russo et al., 2019). Second, the sample consisted of firms within the financial services industry in Brazil. Because results may be different in other industries, countries, cultures and business practices, future research should test these combinations in other settings to increase generalizability of the findings. Finally, value creation and capture attributes found in the literature, such PSM practices, non-core dimensions of value creation and collaborative efforts, were irrelevant in this study, and future research could apply the methodology to identify combinations in which they could be significant.

## **4 Paper three**

### **4.1 Background to Paper three**

The title of this paper is “*Value dimensions, willingness to pay and value capture in B2B relationships*”, and it examines the relative extend of the price that purchasing managers are willing to pay for certain value dimensions. This is the last paper to be produced and, similarly to the others, I was responsible for conducting the literature review, finding and learning ACBC methodology, identifying the respondents and administrating the survey, analyzing the data, structuring the discussion, and writing the whole paper. Andre Samartini,

professor at FGV-EAESP, provided assistance in the statistical analysis of the conjoint experiment, and will be the co-author along with my supervisor who provided insights and will review the final document.

The corresponding article is already written, and under internal final revision to be submitted by begin-2020 to journals that have supported experimental methods, such as the Journal of Supply Chain Management (JSCM) or Journal of Purchasing and Supply Management (JPSM).

## **4.2 Abstract**

**Purpose** – Examine the relative price that purchasing managers are willing to pay for different dimensions of value. Seven value dimensions are conceptualized based on economic, resources and social theories.

**Design/methodology/approach** – An Adaptive Choice Based Conjoint (ACBC) analysis based a procurement situation in services was conducted with 54 purchasing managers operating in different industry sectors in Brazil.

**Findings** –Substantial price premium may be obtained by suppliers that math market average, and not superior levels of operational efficiency performance. Despite the extant literature emphasizes the value of relationships, buyers are not willing to pay for the quality of relationships, and therefore it adds indirect value. Other value dimensions may increase WTP, but their potential depends if they are strategically managed as trade-offs or cumulative.

**Research limitations/implications** – The insights are limited to an emerging market setting, and probabilistic sample limits the generalizability of results. Future studies could investigate similar settings in different industries or purchasing professional backgrounds.

**Practical implications** – Managers should be aware of the costs and benefits of pushing for superior performance. Other value dimensions have limitations on price, and efforts should focus on the dimensions that are more demanded or could be implemented with less effort. Amiable relationships may not increase price but are essential for attraction and collaboration.

**Originality/value** –The relative importance of different value dimensions to value capture was not investigated in previous studies, and ACBC method is relatively novel in OM/SCM studies.

### 4.3 Introduction

Study of value creation and capture in business to business (B2B) relationships is of central interest to the Marketing and Operations Management (OM) disciplines (Keränen & Jalkala, 2013; Lai, Chan, Yang, & Wei-Chun, 2015; Lieberman et al., 2017; Pinnington et al., 2016). As firms increasingly outsource important activities, buyers need to be able to evaluate the value creation potential of available suppliers, and how competition affects the value that each can capture (K. E. K. Möller & Törrönen, 2003; Obloj & Zemsky, 2015).

In general, value has been conceptualized as the trade-off between net benefices and sacrifices (or costs), with economic, technical and non-economic dimensions, considering the available alternative suppliers in the relationship (Anderson & Narus, 1990; Grönroos, 2011; Lapierre, 2000; Lindgreen & Wynstra, 2005; Ulaga, 2003; Ulaga & Eggert, 2006; Vargo & Lusch, 2008). According to the means-end value hierarchy (Mentzer et al., 1997), customers perceive the value they receive based on hierarchical levels: product attributes (the lowest level), benefits, such as trust, and desired values (the highest level) represented by dimensions such as recognition and security.

Willingness to pay (WTP) is the maximum amount of money a customer is willing to spend for a product or service, and is limited by the perception of the net benefits (Brandenburger & Stuart, 1996; Brito & Miguel, 2017; Homburg et al., 2005). In evaluating WTP, customers make inferences about the overall value based on the perceptions of what is given and what is received (Bowman & Ambrosini, 2000). If a supplier increases a customer's WTP, he may also be able to charge moderately higher prices to a certain point, without increasing a potential supplier switch.

Value capture (or appropriation/claim) corresponds to the share of the value created which is held by the buyer or supplier. It is independent of the value created, but tied to WTP

(Bowman & Ambrosini, 2000; Brandenburger & Stuart, 1996; Homburg et al., 2005; Lindgreen & Wynstra, 2005). Increasing the price that a buyer pays for a certain product or service is a common method that suppliers use to capture a larger share of value (Grönroos & Helle, 2012; Homburg et al., 2005; Töytäri et al., 2015).

So far, very little is known or there are some contradictory views about the relative importance of the different dimensions of value, and how they affect the WTP in a business-to-business (B2B) setting. Existing empirical studies have focused on the interaction processes / mechanisms of value creation (Kähkönen et al., 2015; Keränen & Jalkala, 2013; Marcos-Cuevas et al., 2014) or their priorities (DeSarbo et al., 2001; Eggert et al., 2006). Effects on WTP have been investigated on a broader level, and do not compare the relative effect of different value dimensions. Examples include studies focused on end-customer satisfaction (Stock, 2005), power asymmetries and governance (Brito & Miguel, 2017), multi stage marketing (Geiger et al., 2015) or relational processes (Tuli et al., 2007). Finally, there are contradictory views on the relationship between certain value dimensions and WTP. For example, while Homburg et al. (2005) suggested that customers receiving higher quality products or services are willing to pay more, Ulaga & Eggert (2006) proposed that quality and delivery performance are core offerings and therefore have the lowest potential for value creation.

Based on the above discussion, this research aims to answer the question on *how different dimensions of value affect the price a customer is willing to pay?* In this paper, the value dimensions are conceptualized based on three theories on relationship value found in the Marketing and OM disciplines, and then empirically test whether purchasing managers are willing to pay a price difference for each value dimension. Transaction Cost Economics (TCE) is a theory that seeks cost minimization, considers the total cost of ownership with regard to the benefit dimensions (Geiger et al., 2015; Williamson, 2008). The Resource Based Theory (RBT) is based on market competition, and one of its critical features is that a firm can raise the price a customer is willing to pay based on the benefits obtained from a supplier's valuable, rare, inimitable and non-substitutable resources can bring (Barney, 1991). From the Social Exchange Theory (SET) point of view (Blau, 1964; Emerson, 1976), value creation is a non-contractual agreement based on the notion that social interactions contain

both social and economic dimensions of value that can be exchanged. In common to these theories, a buyer compares the benefits among different alternative suppliers to evaluate the WTP for a given product or service offering. Another interest of this research is to determine if individual, professional, or organization-related characteristics also influence WTP.

In order to estimate the relative price levels that buyers are willing to pay for different value dimensions, an Adaptive Choice Based Conjoint (ACBC) analysis was conducted with 54 purchasing managers operating in different industry sectors in Brazil, which means that this study provides insights in an emerging market setting. This research expands existing theory in several manners. First, by asking purchasing managers to rank the relative importance of seven different value dimensions, it shows that operational efficiency is the most important decision factor, while other dimensions are almost equally important. Second, by suggesting that buyers are indeed willing to pay for “market average”, but not “superior” operational efficiency, it sheds more light in the existing ambiguity regarding if operational efficiency brings value to buyers (Macdonald et al., 2016; Terpend et al., 2008), or if it is a hygienic factor with low value potential (Ulaga & Eggert, 2006).

Third, it partially contradicts the literature on buyer-supplier relationships (Doney & Cannon, 1997; Dyer & Chu, 2000; Y. Liu, Luo, & Liu, 2009; Palmatier et al., 2007) by proposing that buyers are not willing to pay for the quality of relationships, probably because the benefits of social exchanges may not be priced (Blau, 1964). However, the quality of relationships cannot be neglected because it increases attraction, affect the efforts to collaborate and reciprocate, and improve operational performance. Fourth, it shows how other value dimensions are interchangeable and can be strategically managed to increase WTP.

From a management perspective, answering the research question is relevant because price is a key element in the profit equation for both buyers and suppliers (Homburg et al., 2005), and up to 60–80% of the total cost structure of a modern firm are directly connected to the purchasing of goods and services (Hallikas et al., 2014). Buyer firms face internal conflicts because purchasing managers commonly seek the lowest purchasing price, very often receive performance-based salaries tied to cost savings (Goebel, Reuter, Pibernik, Sichtmann, & Bals, 2018), and may be reluctant to choose services with highest delivered value (Töytäri et al.,

2015). On the other hand, OM managers are more concerned with the value obtained from product specifications and quality standards than price.

The remainder of this paper is organized as follows. In the next section, the theoretical background on how seven different dimensions of value creation and relate to WTP is presented. Thereafter, the rationale for using ACBC analysis is discussed, including the methodology, survey design, and sampling procedure that will be used. Results and trade-offs are presented and discussed on section 4.6, followed by practical recommendations for management. The paper concludes with the limitations and opportunities for further research.

#### **4.4 Theoretical background**

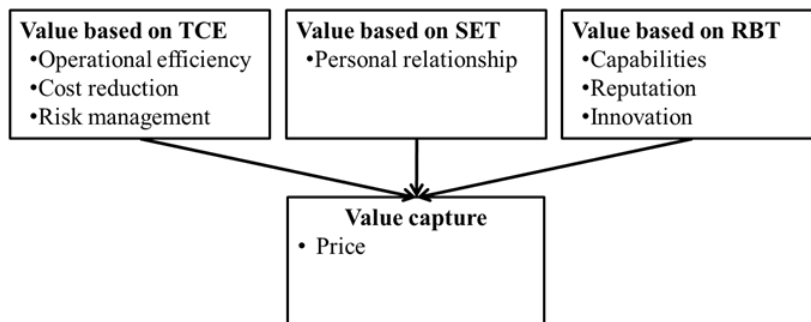
The theoretical background in this paper is based on three streams: research on the dimensions of value, their relationship with WTP, and characteristics that may influence the relationship with WTP.

As outlined in the introduction, a value dimension refers to the benefits that a party perceives from the relationship, and there are arguments for and against the propensity for buyers to pay higher prices for certain products or services. The theoretical background that supports the relationship between different value dimensions and WTP will be grounded on TCE, RBT and SET for different reasons. These grand theories attend Goebel et al. (2018) call to move beyond TCE, and make results more generalizable because they are the most common theoretical perspectives found in OM studies (Soosay & Hyland, 2015; Gianluca Spina et al., 2013).

Grounded on these theories, this section provides a brief review on seven general dimensions of value creation that should be valid across different contexts of product or services, the theoretical support on why they should be positively related to WTP, and gaps to be investigated (Figure 4),

**Figure 4: Value dimensions and value capture**





#### 4.4.1 Value creation based on TCE and willingness to pay

TCE takes an economic approach to predict that a company will outsource an activity to an outside supplier as long as the sum of the transaction and production costs are lower than doing the same activity internally (Williamson, 1981). Customers evaluate their WTP for a given offering with regard to benefit dimensions, and consider aspects that go beyond to the mere cost (transaction price) of the product or service, such as the total cost of ownership (Geiger et al., 2015). Based on the literature, four value dimensions associated to transaction costs and related to WTP were identified.

*Operational efficiency* is a value dimension frequently found in B2B relationships, and is based on common attributes of quality, reliability, flexibility and efficiency. Terpend, Tyler, Krause, & Handfield's (2008) review of studies of buyer–supplier relationships found that operational efficiency was an important type of value in buyer–supplier relationships, and almost ten years later Macdonald, Kleinaltenkamp, & Wilson (2016) also found that several value-in-use constructs were related to operational performance. As the literature shows, past studies have supported the notion that customers receiving higher quality services or satisfied with the product are willing to pay more (Homburg et al., 2005; Ulaga & Chacour, 2001), but there is not empirical evidence of the degree of this relationship. Although these arguments support that the relationship between operational efficiency and WTP should be high, Ulaga & Eggert (2006) suggested that product quality and delivery performance may have the lowest potential for value creation in B2B relationships because, by definition, they are core offerings that must be provided by existing suppliers. Although the positive relationship between operational efficiency and WTP may still be valid, the strength of this relationship in

relation to other value dimensions may be weaker than expected or lower in comparison to other value dimensions.

*Cost reduction*, or the ability of a supplier to reduce costs, is a second value dimension that should have a positive relationship with WTP because buyers consider cost reductions as a key source of value. Such reductions can be achieved through other mechanisms, such as supply-chain collaboration (D. Kim, Cavusgil, & Cavusgil, 2013; Soosay & Hyland, 2015), supply chain integration (Flynn, Huo, & Zhao, 2010), commitment and communication (Simpson et al., 2001), the possibility of short notice deliveries / sell over-capacities (Walter 2001) or process improvements (Marchet et al., 2017). Due to the increasingly competition in global and local markets, firms are facing a strong pressure to reduce costs in their respective operations (Ulaga & Eggert, 2006). As noted by Cannon & Homburg (2001 p.29), “one method for creating value is to reduce costs in commercial exchange”, and Barry & Terry (2008) reminded that “customers value cost reductions more than benefits when assessing value”. Lambert & Enz (2012) found that savings to be generated have a high weight in evaluating a distributor, and reflects directly in the quoted price for the service. Despite the theoretical support that cost reductions adds value to the relationships and may reflect in WTP, sometimes the literature refers cost reductions as a subset of operational efficiency. For example, Cheung, Myers, & Mentzer (2011) considered the ability to reduce costs as a formative construct of relationship performance, Monczka, Petersen, Handfield, & Ragatz (1998) suggested that delivery performance, quality performance, and supplier cost reduction compose a quantitative category to monitor supplier performance, Kleinaltenkamp & Dekanozishvili (2018) found that efficiency, performance and cost reduction can be considered as one general value-in-use dimension of productivity. Therefore, it is still necessary to bring more evidence on the relationship between cost reductions, as a dimension of value, and WTP

*Risk management* refers to the perception that the supplier can mitigate financial, performance or social risks and liabilities. While overall risk represents a “subjective expectation of loss”, performance risks include aspects such as risks of disruptions (Stevens and (Stevens & Johnson, 2016) or safeguards that guarantee a level of business (K. E. K. Möller & Törrönen, 2003). Assessing the relationship between risk and WTP is relevant because a key role of

SCM is to minimize risk, and sometimes managing and mitigating risk has been transferred to OM and labeled as operational risk (Hora & Klassen, 2013; Stevens & Johnson, 2016). The negative relationship between risk and customers' perceptions of value was found in several studies of Faroughian, Kalafatis, Ledden, Samouel, & Tsogas's (2012) paper, while the willingness to accept higher unit costs to protect against social risks, such as supplier's compliance to legal obligations or human rights standards, was found on Leppelt, Foerstl, Reuter, & Hartmann's (2013) study. Other practical examples of value from reducing financial risks can be found in Rolls-Royce's TotalCare service, a difficult to copy service that accurately predicted engine problems and helped airlines to reduce financial risk (Macdonald et al., 2016), or providers of e-banking services that can differentiate from competitors by emphasizing how their rigorous secure protocols can minimize financial risks (Faroughian et al., 2012). Although the literature supports a positive relationship between risk management and WTP, there is no empirical evidence of the degree of this relationship or its relative relevance compared to other dimensions.

#### **4.4.2 Value creation based on RBT and willingness to pay**

Whereas TCE is a theory that seeks cost minimization, RBT is based on market competition and has been a dominant theory used to explain supplier selection and outsourcing decisions (Hitt, Xu, & Carnes, 2016). Several arguments taken from the RBT support that differences in the possession of resources are related to a firm's ability to create and appropriate value. From a strategic perspective, firms that have valuable, rare, inimitable and non-substitutable (VRIN) capabilities can implement value creation strategies that lead to above-normal returns and sustainable competitive advantage (Barney, 1991). From a supplier perspective, a critical feature of RBT is that the competitive advantage that enable a company to raise prices is obtained from the firm's resources, instead of market power or artificial restrictions of output (Peteraf & Barney, 2003). Based on the literature, three value dimensions associated to capabilities and related to WTP were identified.

*Capabilities* is the first dimension and refers to the ability of firms to have access, create, learn or develop competencies with their partner's, to meet market requirements in a value chain. "The acquisition of external competences, capabilities and expertise is the main – and

perhaps most often cited – strategic reason for outsourcing” (Marchet et al., 2017). In this study, capabilities were based on Marcos-Cuevas et al. (2014 p. 98), and defined as a set of operational “skills and resources which enable the company to achieve superior performance”. Since capabilities can reside outside the boundaries of the firm (Nordigården, Rehme, Brege, Chicksand, & Walker, 2014), a supplier with superior resources can deliver greater benefits to their customers for a given cost (Peteraf & Barney, 2003) or have more power (Lindgreen et al., 2012). Suppliers that offer to customers an attractive resource/price relationship in comparison to competitors can capture more value, while suppliers selling identical products or services must have a low-cost position (Bowman & Ambrosini, 2000). Therefore, it is expected a strong positive relationship between supplier capabilities and WTP, or in other words, the value of supplier capabilities should be reflected by its market price.

*Reputation* is a second dimension of value commonly found in the literature, and refers to a market signal of how buyers perceive a supplier quality, performance, fairness and trustworthiness (Eggert et al., 2019; Faroughian et al., 2012; Ulaga & Chacour, 2001; S. M. Wagner, Coley, & Lindemann, 2011). While trustworthiness of suppliers is based on the history in relationships with other firms, reputation influence buyer’s decisions to conduct business with a particular supplier, acts as informal safeguard mechanism that reduces transaction cost, and influence perceptions about the firm’s capabilities (Claycomb & Frankwick, 2010; Doney & Cannon, 1997; Dyer, 1997; S. M. Wagner et al., 2011). According to the literature, suppliers use their reputation to attract new customers or build legitimate power with key customers due to their position in the industry (Lacoste & Blois, 2015), and therefore it should be expected a positive relationship between reputation and customer’s WTP. However, Baumann, Le Meunier-FitzHugh, & Wilson (2017) suggested that reputation is only significant for customers as long as business performance is high, and therefore more empirical evidence is needed to evaluate its relative strength with other value dimensions.

The *innovation* that suppliers can bring to customers is a third value dimension, and has been emphasized by different authors as a dimension of value creation (Grönroos & Helle, 2010; Lusch, Vargo, & Tanniru, 2010; Walter et al., 2001). In this study, innovation refers to the buyer’s perception on the innovations that a supplier brings to improve products, processes or services (Molina-Morales & Martínez-Fernández, 2009), and based on the prior discussions it

is expected it should have a positive relationship with WTP. However, much of the literature that discusses innovation and value in an integrated manner do not provide empirical evidence of this relationship. Instead, they have focused on how innovation is co-created by buyers and suppliers, or its impact on relationship value. Examples of such studies include how the product innovation capability mediates the relationships between market orientation, relationship value, and co-creation of value (O'Cass & Ngo, 2012), how know-how and ideas are obtained from the relationship partner through the innovation function (Walter et al., 2001), or how customer-driven innovation brings a major value-creation opportunity in outcome-based contracts (Visnjic, Jovanovic, Neely, & Engwall, 2017).

#### **4.4.3 Value creation based on SET and willingness to pay**

While TCE is restricted to the economic aspect of exchanges and RBT focuses on market competition, SET is based on the notion that social interactions contain both social and economic value that can be exchanged, which are compared to other exchange alternatives (Blau, 1964; Emerson, 1976). From a social exchange point of view, value creation is a non-contractual agreement that emphasizes reciprocity and relies on trust (Tanskanen, 2015). Positive outcomes increase trust and commitment, and over time, norms develop that govern the relationship (Lambe, Wittmann, & Spekman, 2001). Social rewards can be in the form of satisfaction, market information, technological advice, pursuit of personal advantage (Lambe et al., 2001; Tanskanen, 2015).

*Personal relationships*, as a dimension, is commonly found in related studies based on SET, and refers to the quality, ethics and effectiveness of the personal interactions between buyers and suppliers. Partners comfortable with their personal relationship have better communication, tend to have less opportunistic behavior, favor the transfer of information, or promote firms to take initiatives in value creation activities beyond what a contract has specified (Y. Liu et al., 2009). The value obtained from personal relationships can be in the form of efficiency improvements, cost saving and profit enhancements, support risk-taking, or reciprocity-based behaviors (Doney & Cannon, 1997; Y. Liu et al., 2009; Palmatier et al., 2007), and therefore, it is expected a positive relationship between personal relationship and WTP. However, Blau (1964) argued that “In contrast to economic commodities, the benefits

involved in social exchange do not have an exact price in terms of a single quantitative medium of exchange” (p. 94). Furthermore, he implies that “since social benefits have no exact price, and since the utility of a given benefit cannot be clearly separated from that of other rewards derived from a social association, it seems difficult to apply the economic principles of maximizing utilities to social exchange (p. 96). Other approaches suggest that in scenarios with high levels of social capital, the costs of relationships may outweigh the benefits or performance may decrease due to the loss of objectivity, ineffective decision making or supplier’s potential opportunistic behavior (Thomas & Skinner, 2010; Villena, Revilla, & Choi, 2011). Because these situations are ambiguous, the significance of the social exchanges to WTP must be better understood.

## **4.5 Research method**

The research was conducted in two steps. First, a preliminary qualitative study was conducted to confirm that the value dimensions found in the literature were valid across different contexts and specify an appropriate purchasing situation for a quantitative study. Then, a quantitative study based on an adaptive choice-based conjoint analysis (ACBC) was conducted to estimate the relative price that purchasing managers are willing to pay for different value dimensions.

### **4.5.1 Preliminary study**

#### **4.5.1.1 The dimensions of value creation**

One of the objectives of the preliminary study was to confirm the value dimensions to be used in the study. Twenty-two semi-structured in-depth interviews were conducted in service-related industries, with professionals involved in purchasing and operations from the buyer’s side, and sales and operations from the supplier’s side. These professionals were responsible for managing logistics, software and independent sales organizations (ISO) services for a leading company in financial payments firm. All respondents had been involved with procurement related functions for at least five years. Interviews were coded following Saldaña (2015) procedures, starting with a pre-defined list containing the seven value dimensions

proposed in the theoretical background. As new dimensions were uncovered during the coding process, they were included in the coding process.

From the ten different value dimensions found in the preliminary study, seven were in line with the literature review and supported the research design, while the other three were not included because they seem not to be applicable in most situations. Operational efficiency, personal relationship and capabilities/resources were repeatedly identified across all interviews and dyads, probably because they constitute the foundations of each grand theory used in this study. Cost reductions, risk management innovation and firm reputation were also mentioned in all interviews, but less frequently, and therefore seem to be applicable to most relationships. Asset efficiency, access to information from sources outside the organization, and time reduction (ability to reduce the lead-time to implement new products or processes) were not mentioned in all interviews or were relevant only in specific situations, and therefore not included in the study.

#### **4.5.1.2 Purchasing situation**

The second objective of the preliminary study was to define a hypothetical, but realistic, purchasing situation appropriate for conducting the ACBC analysis. The in-depth interviews revealed three essential factors for the purchasing situation: (i) the strategic relevance of the purchased service, (ii) the necessity to have a chance situation that create competition among suppliers, and (iii) the need to have a sophisticated service that brings a relative importance of all value dimensions to be studied. In this respect, a situation in a complex service that has a high degree of expertise should be considered because they are produced and delivered based on specialized knowledge, associated resources and capabilities by an educated and skilled workforce to achieve customer desired business outcomes (Y. Liu et al., 2009).

Based on that, the following purchasing situation was defined for the ACBC study and introduced to the respondents prior to the conjoint experiments: The instructions asked the participants to imagine that they were purchasing managers from a large firm, leader in the beauty and cosmetics industry, and recognized by its good management practices. In the outlined situation, the respondent was the procurement manager responsible for selecting a

supplier that will support a major technology transformation in the company, which include ERP, e-commerce, supply-chain e sales force mobility systems. The context also mentioned that this service had high strategic importance due to the amount spent, criticality of software coding, and impact to the final service quality. At the end of this selection process, only one supplier would be selected for a four-year contract.

#### **4.5.2 Main study**

An experiment was selected for this study because it exercises control of independent variables, gathers evidence regarding causations suggested by earlier work, has been cited as an effective method specifically to the PSM literature, and tests a theorized effect instead of generalizing the size of the effect. Although experiments have been used in marketing research for decades, in OM/SCM disciplines they relatively novel but have seen increasing deployment and called to expand studies on behavioral issues (Aguinis & Bradley, 2014; X. Huang, Gattiker, & Schwarz, 2008; Y. Huang et al., 2016).

Choice Based Conjoint analysis (CBC) is a method that captures more accurately realistic purchase situations, and can determine the customer's willingness to pay for different attributes, such as reputation (Black, Babin, & E. Anderson, 2005; Garver et al., 2012). In choice analysis, participants are asked to make decisions between factors (or attributes) in order to assess the relative importance of different features, trade-offs, and price sensitivity that may influence decision (Aguinis & Bradley, 2014). One limitation of CBC is that respondents cannot effectively process more than about six attributes at a time (Orme, 2006).

Differently from traditional CBC, where the experimental design for each respondent is developed before taking the survey, ACBC is adaptive, which means that each participant's responses are used to determine the content of the following questions. Based on Garver et al. (2012), ACBC experiments offer several advantages to this study. First, they become more realistic because the concepts presented become more relevant to the participants. Second, they require smaller sample sizes, which is relevant because large samples can be difficult to obtain and are a basic problem in B2B studies. Finally, they are best applied for conjoint-type problems in which there are about five attributes or more, which is the case.



Therefore, ACBC was the method employed in this study. It was administered by means of the Lightouse Sawtooth Software, a commercial software developer that became the most popular conjoint software method used by practitioners (Garver et al., 2012). The ACBC methodology is detailed in this section, and will be based on existing practices, including (i) specification of factors, manipulation levels and control variables, (iii) definition of participants, (iv) design of measurement instruments and (v) data analysis.

#### 4.5.2.1 Conjoint analysis design

The common choice scenario proposes the procurement situation described above, including three control variables. Relationships are an ongoing process; buyers and suppliers consider the past to forecast future outcomes, and it is expected that the purpose and objectives of each party's also changes with time. Therefore, the stage of the relationship was the first control variable in the common module and was controlled in the experiment by stating that the respondent's firm has worked with all suppliers in the past. Being a global or local supplier may also impact the perceived value from the buyer side. For example, a global supplier may reduce product development cycle times because they can send the requirements to specialized offshore facilities, or use its global customers to provide positive referrals to clients. This was controlled by stating that both alternative suppliers are multinational companies with similar global backgrounds.

Based on the conceptual model presented in the literature review, the seven dimensions of value creation (or factors) will be the independent variables. Since the objective of the main study was to know the relative importance of these dimensions to price, the final definition for the value dimensions were adapted to the purchasing situation. Table 13 describes the factors and text that was displayed to the participants, and respective levels to be manipulated.

**Table 13: Attribute factors for the ACBC analysis**

<b>Factor</b>	<b>Text shown to the participants</b>	<b>Levels (from low to high)</b>
Operational efficiency	Operational efficiency is given by the % of projects completed on time and with the desired quality	<ul style="list-style-type: none"> <li>• Below average, &lt;90%</li> <li>• Average, 90% to 95%</li> <li>• Above average, &gt; 95%</li> </ul>
Cost reduction	Suppliers will be able to bring proposals to reduce costs and increase	<ul style="list-style-type: none"> <li>• Brings no cost reduction proposals</li> <li>• Brings superficial, low potential proposals</li> </ul>

	the project's return on investment (ROI).	<ul style="list-style-type: none"> <li>• Brings elaborated, with relevant potential proposals</li> </ul>
Risk management	Certifications reduce the risk of delays, bugs or cost overruns (e.g. APICS / Supply-chain, ABNT / Technical, CMM / Process, PMO / Projects, ...)	<ul style="list-style-type: none"> <li>• Does not have the desirable certifications</li> <li>• Has all desirable certifications (APICS, ABNT, CMM, PMO, ...)</li> </ul>
Capabilities	The implementation will require knowledge of various technologies, programming languages and software	<ul style="list-style-type: none"> <li>• Has professionals capable of supporting only common demands, and will subcontract the others</li> <li>• Has professionals capable of supporting the common demands and some of the most critical ones, and will subcontract the others</li> <li>• Has professionals capable of meeting all demands without subcontracting</li> </ul>
Reputation	Like e-commerce, vendor reputation is gained through market references of successful implementations, and is given by the number of "stars"	<ul style="list-style-type: none"> <li>• "3 stars" - picture</li> <li>• "4 stars" - picture</li> <li>• "5 stars" - picture</li> </ul>
Innovation	The supplier may bring a competitive advantage by suggesting innovations in the technologies, processes or solutions that will be implemented	<ul style="list-style-type: none"> <li>• Laggard, suggests only innovations that have already been introduced by the direct competitors</li> <li>• Follower, suggests innovations that are commonly found in the market</li> <li>• Pioneer, suggests innovations that have recently begun to be seen in other markets or countries</li> </ul>
Personal relationship	Friendly suppliers stand out for ease of doing business, quality of personal interaction, and agility in problem solving	<ul style="list-style-type: none"> <li>• Difficult</li> <li>• Friendly</li> </ul>

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Price was the dependent variable that represented WTP and was measured based on four levels of relative change: significantly lower than market average, slightly lower than market average, slightly higher than market average, significantly higher than market average. Although price measurement with conjoint analysis are based on ranges, this study was based on relative ranges for different reasons. First, the objective was the determine how price is affected by different value dimensions on a relative level, and not its accuracy in terms of value or percentage.

Second, conjoint studies are very sensitive to attribute levels, and the use of specific price or percentage ranges found in previous studies could lead to biased results due to the difficulty in determining such ranges. For example, Goebel et al. (2018) chose 0%, 1%, 2%, and 5% as

relevant price premium levels for purchasing professionals in Germany, Geiger et al. (2015) used 15% below, equal and 15% above average market levels in the adhesives industry Germany, Austria, and Switzerland, and Stock (2005) suggested that a 1% change in purchasing price is much more relevant in financially important product/services as opposed to unimportant ones. Third, country specific factors may influence the propensity to pay (Goebel et al., 2018), and as such purchasing managers in emerging markets may not respond in the same way as developed countries such as Germany and Austria.

Considering the total number of factors and levels, 972 ( $3 \times 3 \times 2 \times 3 \times 3 \times 3 \times 2$ ) different potential situations with seven factors each must be compared. Because this task would have been too long and complex for the participants to complete, a simpler design was generated before initiating the ACBC exercise. In the beginning of the survey, the seven value dimensions were presented to each respondent, and he was asked to rank them in order of importance from 1 (most important) to 7 (least important) when selecting the supplier for the purchasing situation proposed in the study. For each respondent, a new constructed list of factors was built based on his ranking, and the three factors that were considered more important by the respondent were used for the ACBC experiment. Therefore, the three factors yield to 27 ( $3 \times 3 \times 3$ ) possible combinations to be evaluated.

The ACBC experiment was managed by the software in two-steps. The first step (screening) focuses on a subset of most interest factors to the respondent. Each participant was presented to 6 screens showing 3 concepts per screen (Figure 5). In this step respondents are not asked to make final choices, but rather to build a consideration set of service concepts by indicating whether each one “would be a possibility” or “not”. Depending on the respondent answers, cut-off rules were identified through “unacceptable” and “must have” questions.

In order to identify cut-off rules that are absolutes and cannot be compensated for by the presence of other features, depending on the respondent’s previous choices the software selected attribute levels that consistently appeared in concepts deemed as “not a possibility” and asked if that attribute level was “unacceptable”. Similarly, for level attributes that were always present when the respondent deemed as “a possibility”, the respondent was asked if it was a “must have” attribute level.

**Figure 5: Example of screening section**

For each of the 3 options presented below, please inform if you would consider as an option to contract or not.  
(1 of 6)

Price	<b>Significantly higher</b> than Market average	<b>Slightly higher</b> than Market average	<b>Significantly lower</b> than Market average
Relationship	<b>Difficult</b>	<b>Amiable</b>	<b>Amiable</b>
Innovation	<b>Laggard:</b> suggests innovations only after introduced by your competitors	<b>Laggard:</b> suggests innovations only after introduced by your competitors	<b>Follower:</b> suggests innovations commonly found in the market
Risk management	<b>Has all desired certifications</b> (APICS, CMM, ...)	Do not have desired certifications(APICS, CMM, ...)	<b>Has all desired certifications</b> (APICS, CMM, ...)
	<input type="radio"/> Could be a possibility	<input type="radio"/> Could be a possibility	<input type="radio"/> Could be a possibility
	<input type="radio"/> Would not contract	<input type="radio"/> Would not contract	<input type="radio"/> Would not contract

In the second step (choice section), the goal is to lead respondent to good tradeoff data for estimating utilities for each value dimension. Each participant was presented to 6 screens showing 3 concepts per screen (Figure 6) and was asked to select his most preferred supplier. The most preferred choices are presented again, until a final “winner” is chosen.

Three co-variables were measured to capture individual, professional, or organization-related characteristics that may influence price. Participants informed their age, industry and level of familiarity they had with the specific activities related to this study, because subjects should have working experience in procurement and the industry in which they work may influence how they interpret the situation. For example, a professional with working experience in a commoditized industry may have more difficulty in differentiating the price factor or rate the factors significantly differently than a professional that work in an industry with similar characteristics as the proposed scenario.

Participants in scenario-based methods must understand and respond to experimental tasks, and take the role seriously in the experiment, and two checks were performed at the end of the survey (Geiger, Dost, Schönhoff, & Kleinaltenkamp (2015): the participant was asked to rate on a five point scale that (i) he had no difficulty imagining himself in the situation and (ii) the situations described was realistic.

**Figure 6: Example of choice section**

This is the final step, where you will select the supplier and award the contract to implement the Project. The finalists were selected based on the previous scenarios, and negotiations with the procurement area have been terminated.

Seven scenarios (screens) will be presented in this section, each one with 3 supplier options. For each scenario, **please inform which supplier you would award the contract** (attributes marked in gray are similar for the 3 options)

(1 of 4)

Price	<b>Significantly higher</b> than Market average	<b>Slightly higher</b> than Market average	<b>Significantly higher</b> than Market average
Relationship	<b>Difficult</b>	<b>Amiable</b>	<b>Difficult</b>
Innovation	<b>Laggard:</b> suggests innovations only after introduced by your competitors	<b>Pioneer:</b> suggests innovations that have recently seen in other markets or countries	<b>Follower:</b> suggests innovations commonly found in the market
Risk management	<b>Has all desired certifications</b> (APICS, CMM, ...)	<b>Do not have</b> desired certifications(APICS, CMM, ...)	<b>Has all desired certifications</b> (APICS, CMM, ...)
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In order to increase internal validity, a pre-test was conducted to ensure that the research instrument was clear, realistic, complete and effective, and serve as a preliminary assessment of results. This was accomplished by presenting the final survey to three professionals familiar with purchasing, and asking feedback about the phrases, instructions, texts and manipulated levels. Adjustments were made based on the feedback received and were followed by a pilot test with 10 additional professionals. Since no additional requirements or changes were identified, the responses were considered valid and the questionnaire was administered to the entire sample.

#### 4.5.2.2 Definition of participants and questionnaire administration

Collecting quality data in conjoint studies require that the scenarios and questions must be appropriate for and relevant to the sample, and the sample needs to have knowledge and experience in the area (Garver et al., 2012). The context of this study requires assessment of decision behaviors in purchasing and understanding of scenarios, therefore the subjects should have working experience in procurement.

Participants were identified and selected based on previous practices found in SCM experiment literature (Chen et al., 2016; Y. Huang et al., 2016), and consisted of professionals with previous full-time working experience. In order to ensure diversity of the sample,

participants were obtained from several sources, including LinkedIn groups with specific focus in procurement, the researcher network that was built during more than 30 years in OM, and procurement professionals that participated in previous executive education programs at the school that supported this study. Given the diversity of professionals that belong to LinkedIn groups or attend education programs, a careful and detailed online examination of each individual's background profile was conducted to confirm that he attended the necessary criteria.

Having the list of respondents defined, a first e-mail letter containing a short description of the study with a request to participate, the link to the research was sent to potential participants, and a follow up reminder was sent 15 after days. In order to encourage participation, respondents were informed that they would receive a summary of the results, along with a summary of a previous study conducted by the researcher so that the benefit of participating could be more tangible.

As a result, a total of 54 respondents completed the experiment. Although small samples could represent a concern due to high standard error of the estimates, the sample in this study can be considered satisfactory due to several reasons: First, conjoint studies require large samples within the range of about 150 respondents (Orme, 2006), or 50 respondents to obtain a glimpse into preferences (Hair, Black, Babin, & Anderson, 2010) mainly on very large populations, which is not the case of this study that focuses on the specific population of purchasing professionals. Also, previous conjoint studies have demonstrated that even small samples can produce valid results in choice-based studies. For example, Goebel et al. (2018) considered a sample of 59 purchasing professionals to estimate WTP for attributes that constitute sustainability, and Chiambaretto, Bengtsson, Fernandez, & Näsholm (2019) used a sample of 61 managers to investigate trade-offs between benefits and risks when firms choose a competitor.

Third, it is possible to increase the validity of the results by selecting a random subset of the data and running the analysis to see how having fewer respondents would affect the findings (Orme, 2006). Based on that, the analysis was conducted with sample sizes of 20, 40 and 54 respondents, and all utilities varied less than 10% within them, indicating that the results can be considered reliable. However, the researchers acknowledge that this may constitute a limitation, and validation can be enhanced by expanding to larger samples.

## 4.6 ACBC analysis and results

The questionnaires were analyzed in two steps. The first consisted of descriptive statistics of the sample, and the second applied the conjoint analysis methods to model the relative importance scores for each factor, and the scores for the different factors. Since Sawtooth software offers the most common tools used in ACBC analysis, the analysis was conducted based on the multiple reports provided by the tool to analyze the overall attribute importance scores and preference scores for different attribute levels.

### 4.6.1 Descriptive statistics

In line with the sample criteria, most respondents (97%) regarded themselves as very experienced professionals in procurement (50%) or had good experience (27%) in procurement. Most of the respondents (Table 14) work in industrial (56%) or service related (23%) firms. Also, they work for firms that have revenues above USD 125 million (63%), which can be considered large for Brazil's standards.

Moreover, ninety-nine percent of the participants informed that they had no difficulty imagining themselves in the situation and that the situations described was realistic, indicating that they understood the experiment and took the role seriously

**Table 14: Respondents industry and firm size**

Area	Industry	Count	%	Revenue (USD MM)	Count	%
Industrial	Oil, gas, chemicals, metal, mining	14	26%	Above 125	34	63%
	Food, beverage, beauty, hygiene	8	15%	25 - 125	11	20%
	Automotive, parts, machinery	6	11%	15 – 25	1	2%
	Electro-electronics, hardware	1	2%	2.5 – 15	4	7%
	Machinery, equipment	1	2%	0.12 - 2.5	4	7%
Agribusiness	Agribusiness, dairy	2	4%	< 0.12	0	0%
Retail	Wholesale, distributors, traders	3	6%	Total	54	100%
	Apparel, fashion	0	0%			
Services	IT services, consulting	4	7%			
	Logistics	3	6%			
	Banking, insurance	3	6%			
Other	Telecom, logistics, pharma,	9	17%			

construction		
Total	54	100%

#### 4.6.2 Relevance of value dimensions

The relevance of the seven value dimensions was assessed in two steps, and the results show that, although each individual tends to have his own decision logic, there is a strong consensus that operational efficiency is the most important decision factor, the quality of relationships is the least important, and other value dimensions are considered of medium importance to buyers. In a first step, an analysis was conducted based on the priorities each respondent ranked to provide initial insights of purchasing managers' decision factors (Table 15), without considering any relationship with price.

**Table 15: Attribute ranking given to attributes by respondents**

Value dimensions	Importance		
	High (1,2)	Medium (3,4,5)	Low (6,7)
Operational efficiency	<b>61%</b>	20%	19%
Cost reduction	22%	<b>48%</b>	30%
Risk management	30%	<b>50%</b>	20%
Professional's capabilities	19%	<b>54%</b>	28%
Reputation	26%	<b>50%</b>	24%
Innovation	<b>31%</b>	<b>33%</b>	<b>35%</b>
Quality of relationships	11%	<b>44%</b>	<b>44%</b>

Operational efficiency was ranked of a high important decision factor (1<sup>st</sup> or 2<sup>nd</sup> priorities), the quality of relationships was ranked low (6<sup>th</sup> or 7<sup>th</sup>), and the remaining dimensions ranked medium (3<sup>rd</sup>, 4<sup>th</sup> or 5<sup>th</sup>), A chi-square test attested that the ranks were not equally distributed among the attributes ( $p < 0,001$ ).

In a second step, the software allowed respondent to define which attribute levels were considered unacceptable. Although this feature is used to adapt the survey to each respondent profile by not showing unacceptable features in the hypothetical scenarios, it also provides information about the importance of different attributes and levels. Of all respondents, 25% (14) considered that a level of operational efficiency "Below average of <90%" was unacceptable, hence a level of "average, 90% to 95%" is a must-have. Risk management was



the second most cited attribute by the respondents with 15% (8) respondents considering unacceptable if the supplier does not have the desirable certifications. Six respondents (11%) considered unacceptable the “3-star” reputation, followed by 4 respondents (7%) that professional capabilities that support “only basic requirements” was unacceptable, 3 respondents (5%) that cost reductions with “no relevant proposals” and finally 2 (4%) considered unacceptable a “difficult relationship”.

Next section shows the relative magnitude of the relationship between these attributes and WTP, along with the theoretical explanation for these findings.

#### 4.6.3 Utility of value dimensions on price

Theory of ‘utility’ provides the basis for work on consumer value, customer value and relationship value, and proposes that consumers spend their income so as to maximize the satisfaction they get from products (Bowman & Ambrosini, 2000). A utility score measures a relative desirability or worth of the attribute level. Levels that have high utilities have a large positive impact on influencing respondents to choose products, and therefore the higher the utility, the preferable is the attribute level compared to others.

Every attribute level in a conjoint project is assigned a utility (also referred to as a part-worth), and in order to compare utilities within individuals the part-worth need to be normalized and zero-centered within each attribute. Therefore, there will always be positive and negative utilities, and the sum of all normalized utilities is zero. Initially, normalized part-worth utilities under the zero-centered method were determined for each response using Sawtooth’s built-in Hierarchical Bayes (HB) estimator, and then the average and standard deviations each attribute level for the total sample were determined (Table 16). With these results it was possible to compare and interpret the relative utility importance of each attribute levels.

**Table 16: Utilities of attribute levels**

<b>Attributes levels</b>	<b>Mean</b>	<b>Std Deviation</b>	<b>Lower 95% CI</b>	<b>Upper 95% CI</b>
<b>Price (relative to market)</b>				
Significantly lower	81,43	36,19	71,78	91,08

Slightly lower	30,07	28,83	22,38	37,76
Slightly higher	-25,73	26,40	-32,77	-18,69
Significantly higher	-85,77	43,79	-97,45	-74,09
<b>Operational efficiency</b>				
< 90% (below average)	-88,50	79,48	-109,70	-67,30
90% to 95% (average)	25,79	31,77	17,32	34,26
> 95% (above average)	62,71	54,35	48,21	77,20
<b>Cost reduction</b>				
Do not bring proposals	-30,68	47,17	-43,26	-18,10
Superficial or low potential	-16,48	35,49	-25,94	-7,01
Elaborated and relevant	47,16	66,02	29,55	64,77
<b>Risk</b>				
Not certified	-54,37	62,97	-71,16	-37,57
Certified	54,37	62,97	37,57	71,16
<b>Professional's capabilities</b>				
Support basic requirements	-35,10	52,47	-49,10	-21,11
Partially support critical requirements	0,45	11,16	-2,53	3,43
Support all requirements	34,65	49,01	21,58	47,72
<b>Reputation</b>				
3 "stars"	-48,00	72,38	-67,30	-28,69
4 "stars"	12,67	24,90	6,03	19,32
5 "stars"	35,33	52,41	21,35	49,30
<b>Innovation</b>				
Laggard	-43,03	57,51	-58,37	-27,70
Follower	1,16	13,42	-2,42	4,74
Pioneer	41,88	55,66	27,03	56,72
<b>Quality of relationship</b>				
Difficult	-18,07	41,03	-29,02	-7,13
Amiable	18,07	41,03	7,13	29,02

As expected in procurement decisions, the most relevant attributes based on the highest utility variance were price (-85.7 to 81.4) and operational efficiency (-88.5 to +62.7). Relationship quality was the least relevant (-18 to 18), and the remaining attributes had similar levels of variance (-30.6 to +54.3). These results will be further discussed in the trade-off sub-section.

Moreover, the overall importance of each attribute was assessed by comparing the difference in utilities between the best and worst levels of each attribute with the total difference for each response, and then calculating the mean and average differences for each attribute considering the total sample. Because Zero-centered diff method rescales utilities so that for each

individual the total sum of the differences between the worst and best levels of each attribute across attributes is equal to the number of attributes times 100, and since there are 8 attributes in the model, the sum of the differences must be 800. As an example, for the first respondent of the sample the difference between the maximum and minimum utility for price was 183.20 (95,2 for price significantly lower and -88,0 for significantly higher than market average), which corresponds to 22,9% of the total difference of all attributes (183.2 / 800).

The same method was applied to all attributes at the individual level, and then the mean and standard deviations were determined for the sample, leading to the relative importance of each attribute (Table 17). Reinforcing previous findings, price and operational efficiency are the most important attributes, and account for 40% of the importance, the quality of relationships account for almost 5% of the importance, and the remaining 55% are equally shared among the other attributes.

**Table 17: Attribute part-worth importance**

<b>Attribute</b>	<b>Mean</b>	<b>Std Deviation</b>	<b>Lower 95% CI</b>	<b>Upper 95% CI</b>
Price	21,96	7,62	19,93	23,99
Operational efficiency	19,03	16,52	14,63	23,44
Cost reduction	10,60	14,63	6,69	14,50
Risk	13,66	15,69	9,47	17,84
Professional's capabilities	9,05	12,47	5,72	12,37
Reputation	10,54	15,46	6,41	14,66
Innovation	10,61	14,05	6,87	14,36
Quality of relationship	4,56	10,24	1,83	7,29

The large standard deviations found in the results also mean that the importance and utilities vary considerably among respondents and reinforces that each individual has its own decision logic. These findings will be further discussed in the trade-off sub-section.

#### **4.6.4 Trade-offs among value dimensions and price**

Part-worth can be summed to calculate the total utility of a concept. In other words, the overall utility function of a concept can be expressed as the sum of the part-worth utilities of each individual attribute. In this study, each of the 8 attributes ( $x_i$ ) have a part-worth utility for

the level of the attribute ( $U_i$ ), and a certain concept ( $U$ ) can be expressed as the sum of the individual part-worth of the attributes, or:

$$U(x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8) = \sum_{i=1}^8 U_i(x_i)$$

For example, a concept that has price “slightly higher than market average” (utility of -25.73), operational efficiency “above average” (+62.71), cost reductions that are “elaborated” (+47.16), “the necessary” certifications (54.37), professional’s capabilities that “partially support critical requirements” (0.45), a “4-star” reputation (12.67), a “follower” in terms of innovation (1.16) and has a “difficult” relationship (18.07) has total utility equal to 134.72.

Considering the extent by which the utilities vary for each attribute level, it is possible to determine how trade-offs among different value dimensions may affect price (Table 18). The first and most significant one is how operational efficiency impacts price, as long as the other variables remain the same. Increasing operational efficiency from “below average” to “average” has similar effects of significantly increasing price by up to two relative levels, while increasing operational efficiency from “average” to “above average” do not compensate any increase in price. When operational efficiency goes from “below average” to “average” (1 level) utility increases by 114 units (from to -88.50 to 25.79), while the same utility decreases 107 units when price increases two relative levels, going from “significantly lower” than market average (81.43 units) to “slightly higher” (-25.73 units). Similar compensation can be found when increasing price from “slightly lower” (-30.07) to “significantly higher” (-85.77) than market average (2 levels, -116 units).

**Table 18: Trade-offs among utilities and price**

Relative price increase levels (WTP)	Change in utility	Value dimension	Relative change in Utility levels	Change in utility	Conclusion and theoretical support
Significant increase (2 relative price levels)	- 107 / 116	Operational efficiency	Increasing from “below market average” to “market average”	114	Deliver market performance average, and not exceeding, has the highest value to customers. Possibility to move prices from “significantly lower” to “slighter higher”, or “slightly lower” to “significantly higher” than market average. Supports the relationship between operational efficiency and WTP (Terpend et al., 2008)
	-107	Risk	Being certified instead of not being certified	108	Avoid risk is the second most relevant factor, but is limited to “slighter higher” than market average. Supports the relationship between risk and WTP (Faroughian et al., 2012; Leppelt et al., 2013)
Moderate increase in case of trade-offs among individual dimensions (1 relative price level)	-51 to -65	Cost reductions	Bringing elaborated and relevant cost reduction proposals	63	Bring elaborated and relevant proposals compensates a relative increase in price (e.g. from “slightly lower” than market average to “slightly higher”), while superficial proposals don’t. Supports that customers value cost reductions (Barry & Terry, 2008)
- or -		Professional’s capabilities	Having internal professionals capable of supporting all requirements	70	Moving from having professionals supporting only “basic requirements” to “all requirements” compensates one level increase in price. Buyers outsource because they need external competences (Marchet et al., 2017), but they do not expect suppliers to do so
Significant increase in case of cumulative (simultaneous) changes in two dimensions (2 relative price levels)		Reputation	Moving from "3 stars" to "4 stars" reputation	60	Moving from “3 stars” to “4 stars” compensates one relative level increase in price, but not to “5 stars”. Support certain limits to this relationship (Baumann et al., 2017)
		Innovation	Being a pioneer instead of laggard	83	Moving from “laggard” to “pioneer” compensates one relative level of price increase. New empirical evidence on the relationship between innovation and WTP relative to other dimensions
		Relationship quality	Mov from difficult to amiable relationship	36	Not enough utility to compensate changes in price levels, benefits of social exchanges may not have exact price (Blau, 1964)

Although these results support the positive relationship between operational efficiency and WTP found in the literature (Macdonald et al., 2016; Terpend et al., 2008), they also suggest a relative degree of that relationship, in which customers are willing to pay for “market average”, but not “superior” performance. While Ulaga & Eggert (2006) suggested that delivery performance has the lowest potential for value creation because it is a hygienic factor that must be provided by existing suppliers, the setting of this study showed that having market performance averages is the factor that has the highest value to customers.

The second most relevant trade-off concerns risk and price. According to the results, having the necessary certifications has a utility of 108 units, which can be compensated by increasing prices from “slightly lower” to “slightly higher” (-107 units). This brings new empirical evidence to the OM practice not only by supporting the relationship between risk management and WTP (Faroughian et al., 2012; Leppelt et al., 2013), but also by bringing empirical evidence that avoiding risks is the second most relevant factor that affects WTP and has almost similar effects than operational efficiency.

When considered at the individual level, cost reduction, professional capabilities, reputation and innovation have similar trade-off utilities as long as there is a relevant variation in their levels to compensate the negative utility that each level of variation has on price (from -51 to -65 units), suggesting that these value dimensions may be inter-changeable.

Suppliers that bring elaborated and relevant cost reduction proposals (63 units) may increase one relative level of price (i.e. from “slightly lower” to “slightly higher” 55 units, or “significantly lower” to “slightly lower” 51 units). Bringing superficial proposals have a utility of 15 units, which is not enough to compensate any changes in price levels. While these results support Barry & Terry (2008), who suggested that “customers value cost reductions more than benefits when assessing value”, it also shows that superficial proposals may be too subjective or of low value to justify any price increase.

Having internal professionals capable of supporting the business seems to be a viable trade-off with price only if they show all necessary requirements, otherwise it will not be possible to change price levels. Empirical evidence suggests that suppliers that move from having

professionals supporting only “basic requirements” to supporting “all requirements” (+70 units) compensate moving one relative level in their relative market price (51 to 65 units), while moving from supporting basic requirements to partially supporting critical requirements has an utility of 35 units. Although these findings are in line with the underlying premise that suppliers with superior resources can deliver greater benefits to their customers (Peteraf & Barney, 2003), they also show that this differential can only be achieved by having in-house resources. In other words, buyers outsource because they need external competences, capabilities and expertise (Marchet et al., 2017), but they do not expect suppliers to rely on external capabilities to deliver their services.

Reputation is another value dimension that may compensate changes in price levels up to a certain extent. Moving from “3 stars” to “4 stars” has a utility of 60 units, and compensates moving one relative level of price increase (i.e. from “slightly lower” than market average to “slightly higher”), while moving from “4 stars” to “5 stars” has a utility of 23 units, and therefore do not compensate changes in price levels. Although this positive relationship is in line with the literature (Claycomb & Frankwick, 2010; Doney & Cannon, 1997; Dyer, 1997; Lacoste & Blois, 2015; S. M. Wagner et al., 2011), the results show that there is a certain limit of the benefits that reputation may bring, and up to a certain point it may be significant only as long as business performance is high (Baumann et al., 2017).

Innovation can only increase price if a supplier moves from being a “laggard” to a “pioneer” (2 levels, 73 units), otherwise the utility benefits will not compensate a change in price levels. In other words, buyers will only perceive and pay for suppliers that bring breakthrough innovations, since the utility of being a follower is only 43 units. This results brings new empirical evidence on the relationship between innovation and WTP relative to other value dimensions, since previous studies have focused on co-creation or the qualitative impact on relationship value (O’Cass & Ngo, 2012; Visnjic et al., 2017; Walter et al., 2001). Surprisingly, the quality of relationship did not show sufficient levels of utility to compensate any change in price levels, which is contradictory to the theory since for a long time the value from personal relationships has been commonly found in related studies (Doney & Cannon, 1997; Dyer & Chu, 2000; Y. Liu et al., 2009; Palmatier et al., 2007). This provides more empirical support to the ambiguity found on the significance of the social exchanges, and

supports that benefits involved in social exchanges may not have an exact price (Blau, 1964), and therefore buyers are not willing to pay for this attribute.

However, these attributes can also be combined and increase the impact on price because part-worth can be summed to calculate the total utility of a concept. For example, the negative utility of increasing price from “significantly lower” to “slightly higher” than market average (-107 units) could be compensated by “having internal professionals capable of supporting all requirements” and at the same time increasing the firm’s reputation from “3 stars” to “4 stars” (+130 units).

#### **4.7 Implications to practice**

From a managerial perspective, the results provide practical directions that buyers and suppliers could follow to increase buyer’s WTP in their relationships, which in this study was based on price. First, in line with the theory, operational efficiency has the highest potential to increase price and acts as a hygienic factor. By delivering an operational efficiency that is consistent to market average, buyers increase their price from “significantly lower” than market average to “slightly higher”, or from “slightly lower” than market average to “significantly higher”. Although practical observations found in the preliminary study confirm that operational efficiency is already highly weighted in buyers’ evaluation scorecards and actively pursued by suppliers, they should be aware of the costs and benefits of pushing for superior performance.

Second, based on the relative utility of each individual value dimension, buyers and suppliers should be aware that an increase in the levels of other value dimensions have some limitations regarding price, and therefore should align their value-creation strategies based on the dimensions that are more demanded or could be implemented with less additional effort. This study shows that the relative utility from other value dimensions may lead to moderate price increases in relation to market average, for example from “slightly lower” than market average to “slightly higher”, or from “significantly lower” to “slightly lower”.



As a practical example, a moderate increase in price levels could be compensated by having the necessary certifications. In this case, buyers should be more aware of the risks and costs of not having certified suppliers, and suppliers could decide which certifications they should develop first to justify a price premium. Buyers want suppliers that bring opportunities to reduce costs, but they are willing to pay only if they are elaborated and relevant to them. Also, buyers are willing to pay suppliers that have good reputation (“3 stars”), and not necessarily seek and pay for excellent “4 stars” reputation. Suppliers are also willing to pay premium prices to pioneer suppliers that bring innovations that are new to the market, and not to followers that only bring innovations that are already common in the market.

Finally, although having amiable or difficult relationships may not increase WTP, it does not mean that buyers and suppliers should neglect it. When buyers and suppliers increase the quality of their relationships, they also increase the attraction of their partnership, affect the efforts to collaborate and reciprocate, and improve operational performance. Therefore, if they ought to increase WTP, they should maintain the efforts to communicate their value to each-other and be aware of how the other party perceives their relationships because perception gaps exist and are common in B2B relationships due to bargaining power asymmetries, limited access to information, or the effectiveness of interpersonal relationships.

#### **4.8 Conclusions, limitations and directions for future research**

Based on the theoretical reasoning that there is a positive relationship between seven value dimensions and WTP found in three grand theories (TCE, RBT and SET), this research considered price as a proxy to WTP and attempted to answer the research question: *how different dimensions of value affect the price a customer is willing to pay?*

An ACBC analysis based on a complex service setting was conducted with purchasing managers from several industries, and the results bring new theoretical and practical contributions about the relative effect of different value dimensions on price. First, it suggests that purchasing managers are willing to pay a substantial price premium for suppliers that bring market average levels of operational efficiency, but not for superior levels, and therefore buyers and suppliers should be aware of the costs and benefits of seeking superior

performance. Second, despite the extant literature emphasizes the value of relationships, buyers are not willing to pay for the quality of relationships because social exchanges are subjective and may not have an exact price to be determined. Third, other value dimensions such as cost reductions, risks, capabilities of the internal professionals, reputation and innovation may increase price, but their potential is limited and depend on steep changes in attribute levels. Therefore, buyers and suppliers should align their value-creation strategies based on the demands and effort to deploy them.

Despite the contributions of this study, some limitations were identified and could be addressed in future research. The study identified the relative influence that key value dimensions have on price, but did not their appropriate range for the price premiums or discounts. Future studies could define and test relevant ranges for price, for example by conducting a qualitative pre-test that provide respondents with a similar purchasing situation and ask them to directly state how much they would be willing to pay for alternative levels for the different value dimensions. A second limitation is the regional setting (Brazil) in which the study was conducted. Customers from different cultures and nationalities have different expectations that may influence results (e.g. Goebel et al. 2018; Pullman, Verma, & Goodale, 2001), results could be confronted in other settings.

Third, the generalizability of the study is limited because the results are based on the responses of 54 procurement professionals from different industries, and the setting proposed for the study is limited to the specific situation. Previous studies provide inconclusive results on how professionals from different industries value their relationships, since some infer that relationship value can be determined mainly from an industry or supply chain perspective (B. Kim et al., 1999), can be fairly similar within a supply chain but differently weighted for different buyers or suppliers (DeSarbo et al., 2001), or their relative importance may change according to the life cycle stage of the relationship (Hallikas et al., 2014). Therefore, future research could increase the sample size to consider specific effects of respondent's industry-related background or explore other purchasing categories depicted in the scenario setting.

### **PART 3: CONCLUSION**

The aim of this study was to answer the question of *how buyers and supplier can increase the value they get from their relationships?* The main proposition of this research is that several theoretical gaps still remain because research on value creation and capture has mostly run independently without much interaction (Su & Yang, 2017), and there is a scarcity of empirical investigations on value-in-use (Aarikka-Stenroos & Jaakkola, 2012). Even the structured or systematic literature reviews in this area do not provide a clear and structured view because they tend to be specific to a SCM topic or discipline (Ellegaard et al., 2014; Francis et al., 2014; Mortensen, 2012; Soosay & Hyland, 2015; Gianluca Spina et al., 2013).

Based on that, three specific research objectives were defined to answer the main question. The first was to organize the exiting body of knowledge on the topic and provide insights that may answer the main question. The second examined, in a qualitative manner, how the dimensions of value creation and relationship factors can be combined to increase value capture. The third provided a relative quantification of how different value dimensions may increase value capture, using price as a proxy to WTP.

To attain these objectives, this dissertation was divided into three separate studies, each one with specific and complementary objectives, methodology and sample. The results draw on insights of a systematic literature review, empirical evidence obtained from an embedded case study followed by a QCA from a firm in financial services industry and 6 dyads, and an ACBC analysis conducted with a sample of 54 purchasing managers. As a result, three papers were produced. Individually, each one contributed to the research question they were positioned in, and collectively they fulfilled the research objectives.

In order to create ground to discuss the collective contributions of this research to the OM practice, subsections 5.1 to 5.3 will first summarize the main argument and contributions from each paper, placing higher emphasis on the findings that address the research question and objectives. A summary of these contributions is provided on subsection 4.5. Then, subsection 6.1 to 6.3 combine the theoretical and practical findings of the three papers, and provide new insights that could only be uncovered with reflections on the outcomes of the papers together.

Therefore, the collective contributions are more than the sum of the contributions of the individual papers. Final subsection 6.4 offers concluding remarks on the limitations and opportunities for future research.

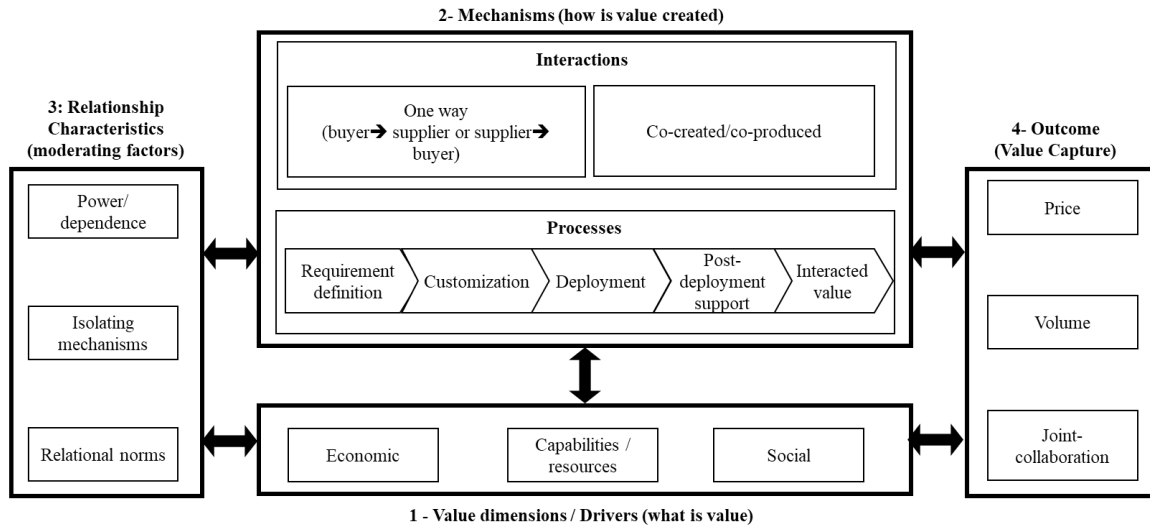
## **5 Contributions of the individual papers**

### **5.1 Paper one**

Based on the respective contributions of 191 papers, an integrative framework based on four components was proposed to explain how value is created, deployed, and captured by buyers and suppliers (Figure 7). The first component includes 17 value dimensions associated with three most relevant theoretical perspectives. TCE proposes that firms will conduct an activity internally as long as the transaction costs are lower than conducting the same transaction in the market, and five dimensions were found: operational efficiency, asset efficiency, financial efficiency, safeguards, and risk management. SET brings the social mechanisms to the dyadic relationships, and four dimensions were associated to it: personal relationship, personal benefit, access to information and access to market. RBT argues that firms that have resources and capabilities that are valuable, rare, difficult to imitate and imperfectly substitutable obtain of superior competitive advantage and performance, and five dimensions were associated: capabilities/resources, firm reputation, innovation, time reduction and service support.

The second component organizes value creation around five key relational processes, namely requirement definition, customization and integration, deployment, post-deployment support and interacted value. These processes are enabled through interactions, that can be one-way (from buyer to supplier or vice-versa), or both was (interactive) to co-create value. The third component is based on three relationship characteristics that moderate value creation and capture: power/dependence that increases bargaining power, isolating mechanisms that may increase or decrease power and dependence, and relational norms based on the quality of the relationships and communication.

**Figure 7: Integrated framework for value creation and capture**



The fourth component proposes three different forms of value capture. The first and most common form to capture value is by negotiating better prices, at the expense of the relationship partner, and two additional forms are shifting volume in the network at the expense of other competing firms, or increasing the size of the value pie through the benefits of collaborative efforts, at no one's expense because new value is created.

## 5.2 Paper two

This paper is based on arguments from the previous one: First, in addition to the price that a buyer is willing to pay (Cheung et al., 2011; Ellegaard et al., 2014; Grönroos & Helle, 2012; Homburg et al., 2005; Lavie, 2006; S. M. Wagner et al., 2010; Yan & Wagner, 2017), value can be captured by shifting volume among suppliers in the supply chain (Ellegaard et al., 2014) or engaging in collaborative efforts to increase the total value of the relationship (Cheung et al., 2011; Ellegaard et al., 2014; Grönroos & Helle, 2012; S. M. Wagner et al., 2010). Second, the relationship between value creation and capture is based not only on the tradeoff between quality, volume and price (Flint & Woodruff, 2001; Lindgreen & Wynstra, 2005; K. Möller, 2006), but also from combinations among different value dimensions and dyadic relationship characteristics (equifinality).

The main insights of this paper were proposed based on the results of the QCA analysis (Table 19). First, for both buyers and suppliers, value creation is based on "core" dimensions

of operational performance (SET), capabilities (RBT), and relationship quality (SET), while the other dimensions found in the framework proposed in the first article are “non-core”. Core dimensions are expected to be found in most buyer-supplier relationships, while “non-core” are more specific to the context of each dyad.

**Table 19: Differences and similarities between configurations for price and volume**

Cluster	1: Power-based				2: Value-based				3: Capability-based	
Outcome	I-A Price	I-B Volume	II-A Price	II-B Volume	III-A Price	III-B Volume	IV-A Price	IV-B Volume	V-A Price	V-B Volume
Performance	⊗	⊗	⊗		●	●	●	●	⊗	
Capability	⊗	⊗	●	●			●	●	●	●
Relationship	⊗	⊗	●	●		●	●		⊗	⊗
Power	●	●	●	●	⊗	⊗	⊗	⊗	⊗	⊗
Change	●	●	⊗	⊗	⊗	⊗			●	●
Consistency	1	1	1	1	0,875	1	1	1	1	1
Raw coverage	0,09	0,08	0,09	0,25	0,64	0,25	0,18	0,50	0,09	0,17
Unique coverage	0,09	0,08	0,09	0,25	0,55	0,08	0,09	0,25	0,09	0,08

Circles “●” indicate the presence of conditions, and circles “⊗” indicate absence. Large circles indicate core conditions, small circles indicate peripheral conditions.

Second, in the presence of power asymmetries, value capture depends on configurations between the change initiated in the buyer’s supply strategy and core value dimensions, as represented in cluster 1. Third, in the absence of power and change in the buyer’s supply strategy, value capture is driven by different configurations among core value dimensions, as represented in cluster 2. Fourth, in the absence of operational efficiency and power, value capture is driven by the presence of high levels of capabilities, but with change in the supply strategy being a peripheral condition, as represented in cluster 3. Finally, although the above configurations are applicable for both forms of value capture (price and volume), they follow slightly different paths.

### 5.3 Paper three

Two arguments found on previous papers support this paper: First, suppliers that increases a customer's WTP may also be able to charge moderately higher prices up to a certain point, without increasing a potential supplier switch. Second, in evaluating WTP customers make

inferences about the overall value of a product based on the perceptions of what is given and what is received (Bowman & Ambrosini, 2000).

The main insights of this paper (Table 20) were: First, operational efficiency is the attribute that mostly increases WTP, but its potential has limitations. While delivering consistent “market average” operational efficiency may lead to significant price increases, delivering superior performance has a moderate or low effect on changes in price. Also, avoiding risks is the second most relevant attribute that affects price, but also has a limited effect since customers are willing to pay only slightly higher prices for it.

**Table 20: Value dimensions and WTP**

<b>Impact on WTP</b>	<b>Relative change in price levels compared to market average</b>	<b>Value Dimension</b>	<b>Relative change in levels</b>
Significant increase	Increase WTP by 2 relative levels: <ul style="list-style-type: none"> <li>• from “significantly lower” to “slightly higher”</li> <li>• from “slightly lower” to “significantly higher”</li> </ul>	Operational efficiency	Move from “below market average” to “market average” Deliver market performance average, and not exceeding, has the highest value
	Increase WTP by 2 relative levels, but limited to “slighter higher”	Risk	Be certified instead of not being certified
Moderate increase in case of trade-offs among individual dimensions or	Increase WTP by 1 relative level: <ul style="list-style-type: none"> <li>• from “significant below” to “slightly below”</li> <li>• from “slightly below” to “slightly higher”</li> <li>• from “slightly higher” to “significantly higher”</li> </ul>	Cost reductions	Bring elaborated and relevant cost reduction proposals instead of superficial ones
Significant increase in case of cumulative (simultaneous) changes in dimension value levels	Increase WTP by 2 relative levels	Professional’s capabilities	Have internal professionals capable of supporting “all requirements” instead of “basic requirements”
		Reputation	Move from "3 stars" to "4 stars", but not to “5 stars”
		Innovation	Be a pioneer instead of laggard
No impact on WTP	None	Relationship quality	Move from a difficult to amiable relationship

Surprisingly, the quality of relationship did not show enough levels of utility to compensate any change in price levels, probably because social exchanges are subjective, and their benefits may not have an exact price. Finally, the remaining value dimensions (cost reduction, professional capabilities, reputation and innovation) have similar effects on price, and may lead to moderate increases in price if strategically managed as trade-offs, or significant increases in price if managed in a cumulative manner.

#### **5.4 Summary of the contributions of the individual papers**

This section summarizes the insights of the three papers and shows, in a consolidated manner, how this research achieved its objectives and answered its main research question (Table 21). The outcomes revealed how value creation and capture result from the interplay among different dimensions of value creation, five processes that enable value creation, how buyers and suppliers interact with these processes (one-way or both-ways), and the value they expect to capture (price, volume, or collaborative benefits).



**Table 21: Theoretical contributions of the three papers**

<b>Main research question: how buyers and suppliers can increase the value they create and capture from their relationships?</b>			
<b>Topic</b>	<b>Paper One</b>	<b>Paper Two</b>	<b>Paper Three</b>
	<b>An integrated perspective on value creation and capture</b>	<b>Unpacking value creation and capture in buyer-supplier relationships</b>	<b>Increasing willingness to pay in buyer-supplier relationships</b>
Individual research question	How value is created, enabled and captured?	How different dimensions of value creation and relationship factors may increase the price paid by a buyer or volume supplied by a supplier?	How different value dimensions affect the price that buyers are willing to pay? (a proxy of value capture)
<b>Main findings / contributions</b>			
Dimensions of value creation	Seventeen different value dimensions were identified based on TCE, SET and RBT	Operational efficiency, capabilities and quality of relationship are core to relationships, and impact value capture. Others are non-core, specific to the dyad	Operational efficiency is the most relevant dimension that affects price, quality of relationships is the least, and others are of equal importance
Mechanisms that affect value creation and value capture	Value is created by means of 5 different processes and one-way interactions (buyer-supplier or vice-versa), or co-created when interactions are both ways	Equifinality - value can be <u>captured</u> based on different combinations among core dimensions and two relationship factors, power and change in the supply strategy	Despite consensus that operational efficiency is the most relevant dimension, individuals tend to have their own logic when selecting suppliers
	Relationship factors, such as power, isolating mechanisms and the quality of relationships moderate value capture	Power captures value in the presence of change. Capabilities act as isolating mechanism in the absence of power, change and other dimensions. Quality of relationship should be combined with other dimensions to be effective	The quality of relationships does not increase price, but indirectly enables interactions that lead to value creation and capture
Value capture / WTP	3 different manners to capture value: price (at expense of the other party), volume (at expense of the network), or collaborative efforts (at no one's expense)	Only price and volume were identified, indicating that buyers have low propensity to share benefits of collaborative efforts or with suppliers	Increase operational efficiency to "market average" is most significant, while other dimensions have similar effects or can be combined to leverage

## **6 Collective contributions of the papers**

The collective contributions will be discussed in three subsections: the first provides the contributions to theory and brings new insights to value dimensions and how they interplay with relationship factors to increase value capture. Then, the methodological contributions that are valuable to OM researchers are presented, followed by the practical contributions that can be applied by managers in real world situations.

### **6.1 Theoretical contributions to value creation and capture**

The theoretical contributions of this research are divided into two parts. The first discusses value creation and capture from a dimensional standpoint, to show that value capture is not a straightforward discussion based only on “core” and “non-core” dimensions. The second part discusses the interplay between value dimensions, relationship factors and value capture. A summary of the theoretical contributions is provided at the end of the section (Table 22).

#### **6.1.1 Value dimensions and value capture**

Supported by three theoretical perspectives from the literature and empirical evidences from the case study and ACBC experiment, three value dimensions were defined as “core” and expected to be present in most relationships. Operational performance (a TCE dimension) is core because supporting customer’s business performance and effectiveness is key to value creation (Grönroos & Helle, 2012; Hwang et al., 2016), relationship quality (a SET dimension) because entering and sustaining relationships is a key premise of business relationships (Blau, 1965; Cropanzano & Mitchel, 2005; Emerson, 1976), and capabilities (a RBT dimension) because access to heterogeneous resources that are intentionally committed and shared between buyers and suppliers is a fundamental premise of an outsourced activity to achieve relational rents (Lavie, 2006). In this respect, the remaining dimensions identified in the studies were defined as “non-core” because they seem to be dyadic or context specific.

### *“Core” dimensions and value capture*

Empirical evidence from the second and third studies showed that operational efficiency is the dimension that mostly affects WTP, and three additional theoretical insights were uncovered. First, although previous literature suggests that delivery performance could be considered a hygienic factor that must be provided by existing suppliers, and therefore its value creation potential could be low (Ulaga & Eggert, 2006), it seems that, as it has been in the past decades, buyer-supplier relationships continue to be driven by operational performance (Terpend et al., 2008), and supplier's performance of service activities are still used to choose particular vendors (Gassenheimer et al., 1996). Second, the effect of operational efficiency on WTP has some limits, since the impact from delivering consistent “market average” performance on price is much higher than delivering “above market” performance. Third, differently from price, operational efficiency alone is not sufficient to shift volume to a supplier, since it also depends on capabilities or relationship quality to be effective. The reason is that when a buyer that shifts its volume to a supplier also increases its dependency, and needs to secure the supply in case of any failure in delivery (Aminoff & Tanskanen, 2013). Therefore, buyers will first assure that the supplier has the necessary capabilities to deliver the additional volume without affecting their operational performance or increasing risk.

Although relationship quality is a “core” dimension, it has the lowest effect on both forms of value capture (price and volume). From one side, this was not surprising since the literature recognizes that the benefits involved in social exchanges do not have an exact price, or that it is difficult to apply economic principles of maximizing utilities from them (Blau, 1964). However, the fact that it has to be combined with other value dimensions to increase value capture supports the theoretical arguments that relationship quality adds indirect value to buyers and suppliers by facilitating communication, reducing opportunistic behavior, favoring the transfer of information, increasing risk-taking, or promoting reciprocity-based behaviors (Doney & Cannon, 1997; Y. Liu et al., 2009; Palmatier et al., 2007).

Capabilities is another “core” dimension that brought new theoretical insights because the impact on value capture may or not be relevant depending on how they interplay with other

dimensions and relationship factors. According to the literature, firms that own VRIN resources will be in a position to increase their power and appropriate a larger share of the created value (Barney, 1991; Ellegaard et al., 2014; Lavie, 2006), or firms with superior resources deliver greater benefits to their customers (Peteraf & Barney, 2003). In this case, buyers or suppliers that owns specific capabilities could negotiate better prices or obtain a larger share of volume.

The evidences also suggests that capabilities may have a significant impact on price only if they are enough valuable and rare to act as an isolating mechanism, which will serve to increase bargaining power or discriminate competing firms, and thus increase a buyer's WTP (Lieberman et al., 2017; Töytäri et al., 2015; Ulaga & Eggert, 2006) or shift volume to a specific supplier. This situation can be considered an extension and is in line with the concepts of power and dependence in business relationships.

However, when capabilities are not sufficient to act as isolating mechanisms, their effect on price or volume will only be moderate and equivalent to other “non-core” value dimensions. This result may be explained based on the premises that buyers outsource to specific suppliers because they need external competences, capabilities and expertise (Marchet et al., 2017), and organizations can be regarded as a bundle of resources and capabilities that can be heterogeneously distributed across firms (Martelo et al., 2013). In this case, buyers recognize that suppliers may also be viewed as a bundle of resources, and therefore consider capabilities in equal terms of importance and value as other dimensions.

#### *“Non-core” dimensions and value capture*

Individually, “non-core” dimensions seem to have similar effects on value creation and capture. Evidences from the second and third studies show that they are equally important decision factors, relevant in specific dyadic contexts, or subject to each individual's decision logic. Because they also show similar effects on price, it is possible to conclude that they create value according to the theoretical concepts discussed in the three papers, but are limited to the context of the dyad.

### 6.1.2 Value dimensions, relationship factors and value capture

While previous research on value creation and capture has mostly been independent and without much interaction (Su & Yang, 2017), this study increases theoretical knowledge about different manners by which contextual variables influence value capture (Table 22).

**Table 22: Summary of the theoretical contributions of the study**

Topic	Previous Literature	Theoretical contribution
Operational efficiency	Delivery performance could be considered a hygienic factor with low value creation potential	Dimension that mostly affects WTP (price), but is limited to market performance levels. Shifts in volume depends on capabilities or relationship quality.
Relationship quality	Benefits of social exchanges do not have an exact price, or are difficult to apply economic principles	Has the lowest effect WTP and volume, but adds indirect value in other aspects (communication, opportunism, risk-taking, or reciprocity behaviors)
Capabilities	Firms that own VRIN resources increase their power or deliver greater benefits and could negotiate better prices or obtain a larger share of volume.	Has significant impact on WTP only if they are valuable and rare to act as isolating mechanism. Otherwise, impact will be moderate and equivalent to other “non-core” dimensions
Non-core dimensions	Create value according to the individual theoretical concepts	Relevant in specific dyadic contexts, have similar effects on WTP.
Power	The party that has the strongest bargaining power determines who captures the largest amount of value	Power should interplay with value dimensions or change in the buyer’s supply strategy to increase price or volume
Combinations of dimensions and value capture	Previous research has mostly been independent and without much interaction	<p>Different combinations among value dimensions may lead to similar outcomes in price or volume (equifinality)</p> <p>Moderate impact when dimensions are considered as individual trade-offs, but relevant when combined (total value is cumulative and can be summed)</p> <p>Increase (or decrease) in price and volume follow slightly different combinations among dimensions</p>

First, it recognizes two distinct configurations on how power interplays with other dimensions and change in the buyer’s supply strategy to increase both forms of value capture, price or

volume. While in situations of change in customer requirements are more likely to be fulfilled by exiting suppliers (Chatain, 2010), it is also an opportunity for new suppliers to invest and get additional business. In that situation, the party that has the strongest bargaining power (either the customer or the supplier) determines who captures the largest amount of value (Bowman & Ambrosini, 2000; Ellegaard et al., 2014; Gulati & Sytch, 2007). However, when change is not present, contracts are already in place and an increase (or decrease) in prices or volume will depend on high levels of capabilities and relationship quality to increase value capture.

Second, it shows that in the absence of power and change, different combinations among value dimensions may lead to similar outcomes (increase or decrease) in price or volume (equifinality), but that outcome follows slightly differences combinations. This provides further support that viewing value only as a trade-off between only quality and price is too simplistic (Sweeney & Soutar, 2001). These results can be considered as an extension of the individual discussion on “core” dimensions, where capabilities may function as an isolating mechanism that increases WTP and volume (Lieberman et al., 2017; Töytäri et al., 2015; Ulaga & Eggert, 2006), relationship quality may add indirect value (Doney & Cannon, 1997; Y. Liu et al., 2009; Palmatier et al., 2007), and buyer-supplier relationships continue to be driven by operational performance (Terpend et al., 2008).

Moreover, except for operational efficiency and relationship quality, the impact of “non-core” value dimensions on price may be moderate or significant depending on how they are combined. When considered as individual trade-offs, each dimension has similar levels of perceived value for the buyer, and lead to similar moderate effects on price. However, when these dimensions are combined, their perceived value is cumulative and may lead to significant increases on price because the total value can be summed. For example, a supplier that decides to have the necessary capabilities internally and at the same time increases his reputation might increase price from “significantly lower” to “slightly higher” than market average.

## **6.2 Methodological contributions**

From a methodological perspective, this study employed methods that have hardly been used in OM research. Although literature reviews are not novel, the method employed to select the journals combined criteria found in previous studies, such as meta-database searches with no restriction to the journal list (Mortensen, 2012; Soosay & Hyland, 2015), disciple rank based or ABS quality guides (Francis, Fisher, Thomas, & Rowlands, 2014; Spina et al., 2013). To the knowledge of the researchers, no previous literature reviews were conducted based on 21 different journals, with similar representation from three different disciplines (MKT, OM and Strategy).

The second paper fulfills Su & Yang (2017) request to move to the OM practice towards QCA methods to study complex buyer-supplier relationships, and provides a major contribution by combining QCA with a qualitative case study approach, while existing QCA studies are typically based on surveys and secondary data methodology. Also, the study significantly advances knowledge on business relationships by exploring dyadic perspectives in much greater detail (Gianluca Spina et al., 2013). The detailed method described in the paper offers OM researchers new perspectives on the use QCA in OM research.

The third paper was based on an ACBC experiment, which have been used in MKT for decades, but is relatively novel in OM (Aguinis & Bradley, 2014; X. Huang et al., 2008; Y. Huang et al., 2016).

## **6.3 Practical implications**

Buyers and suppliers can better understand different mechanisms and options available to increase the value from their relationships apart from price negotiations, where value is captured at expense of the relationship partner. For example, the first paper provides a practical and real word framework of the value creation and capture mechanisms, how business is divided among suppliers, and the two options available to increase value capture in addition to price negotiations (Ellegaard et al., 2014; A. H. Liu et al., 2005).

The second paper showed how different configurations among core value dimensions (operational efficiency, capabilities and relationship quality), and dyadic characteristics (power and change in the supplier's supply strategy) can be used to increase value capture. For instance, because different firms have different capabilities available and each dyad has specific relationship characteristics, managers can better allocate their resources or invest in the relationships that are more appropriate to their specific situation (Russo et al., 2019). Alternatively, managers can deliberately provoke a change their supply strategy to increase competition and capture value.

The third paper showed that operational efficiency has the highest potential to increase price, but buyers and suppliers should only be consistent to market average, since exceeding it has limited value upside. Moreover, due to the limitations that other value dimensions have on price, managers should align their value-creation strategies based on the dimensions that are more demanded or could be implemented with less additional effort.

As a last practical contribution, although the results show that having amiable or difficult relationships may not increase value capture, it does not mean that buyers and suppliers should neglect it because it adds indirect value in other aspects of relationships, such as increasing communication effectiveness, risk-taking or reciprocity, or decreasing opportunistic behaviors.

#### **6.4 Limitations and opportunities for future research**

The limitations and opportunities for future research should be interpreted in the light of the context of each paper. For example, the first paper found that perception gaps in business relationships exist, are common, and negatively influence partnership results (Ambrose et al., 2010; Aminoff & Tanskanen, 2013; Golicic, 2007; Oosterhuis et al., 2013). Based on that, future studies could bring show how the (mis)alignment of perceptions in core and non-core value dimensions impact different forms of value capture.

Although sample sizes were reliable for the QCA and ACBC studies, the generalizability of this thesis is limited to the scope of each one, such as industry-related characteristics,



purchasing categories, and culture. Future research could increase the sample size to consider these specific effects and explore other settings. Moreover, results could be confronted to other regions apart Brazil, since customers from different cultures and nationalities have different expectations that may influence results Goebel et al. 2018; Pullman, Verma, & Goodale, 2001).

Finally, although the studies were anchored on only three dominant theoretical perspectives (TCE, RBT and SET) and based on the Marketing, OM and strategy disciplines, from the researcher's perspective the advantages outweigh potential drawbacks that result from mixing other less common theoretical lenses and disciplines that study this subject.

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## 8 Appendixes

### 8.1 Appendixes from paper one

#### Appendix A: Articles extracted for the literature review

Journal	Title	Article
Academy of Management Review	Value creation and value capture: A multilevel perspective	Lepak2007
British Journal of Management	Capturing Value from Innovation in Knowledge-Intensive Business Service Firms: The Role of Competitive Strategy	Desyllas2018
	Diagnosing Customer Value: Integrating the Value Process and Relationship Marketing	Payne2001
	Examining the Firm's Value Creation Process: A Managerial Perspective of the Firm's Value Offering Strategy and Performance	OCass2011
	Impact of customer-based corporate reputation on non-monetary and monetary outcomes: The roles of commitment and service context risk	Walsh2014
	Value Creation Versus Value Capture: Towards a Coherent Definition of Value in Strategy	Bowman2000
European Journal of Marketing	Ethics and value creation in business research: Comparing two approaches	Lindfelt2006
	Examining positive and negative value-in-use in a complex service setting	Sweeney2018
	Organisational capabilities: Antecedents and implications for customer value	Nasution2008
	Organisational learning and value creation in business markets	Lopez-Sanchez2010
	Relationship value and relationship quality: Broadening the nomological network of business-to-business relationships	Ulag2006
	The customer as co-producer	Wikstrom1996
	The development of buyer-seller relationships in industrial markets'	Ford1980
	The value concept and relationship marketing	Ravald1996
European Management Journal	Value creation in supply chain relationships: A critique of governance value analysis	Hammervoll2009a
	Managing value appropriation in buyer-supplier relationships: The role of commercial decision resources	Hallberg2018
	RAVE™: Integrated value management for customer, human, supplier and invested capital	Strack2002
	Strategic customer management: Designing a profitable future for your sales organization	Lane2004

Industrial Marketing Management	A Model of Value Creation: Supplier behaviors and their impact on reseller-perceived Value	Simpson2001
	A relationship value perspective of social capital in networks of software SMEs	Westerlund2008
	A service perspective on business relationships: The value creation, interaction and marketing interface	Gronroos2011
	Assessing value-in-use: A conceptual framework and exploratory study	Macdonald2011
	Building competences for new customer value creation: An exploratory study	Berghman2006
	Building industrial brand equity by leveraging firm capabilities and co-creating value with customers	Zhang2015
	Business suppliers' value creation potential a capability-based analysis	Moller2003
	Buyer and supplier attractiveness in a strategic relationship - a dyadic multiple-case study	Tanskanen2015
	Buyers' perspectives of buyer-seller relationship development	Claycomb2010
	Capturing value creation in business relationships: A customer perspective	Ula2003
	Co-creating integrated solutions within business networks: The KAM team as knowledge integrator	Hakanen2014
	Communicative skills that support value creation: A study of B2B interactions between customers and customer service representatives	Salomonson2012
	Creating superior customer value for B2B firms through supplier firm capabilities	OCass2012
	Creating value in business relationships: The role of sales	Haas2012
	Creating value in retail buyer-vendor relationships: A service-centered model	Wagner2015
	Customer participation in knowledge intensive business services: Perceived value outcomes from a dyadic perspective	Mustak2019
	Customer perceived value in B-t-B service relationships: Investigating the importance of corporate reputation	Hansen2008
	Customer Value in Business Markets: An agenda for inquiry	Ula2001a
	Does IT alignment between supply chain partners enhance customer value creation? An empirical investigation	Kim2013
	Every cloud has a silver lining - Exploring the dark side of value co-creation in B2B service networks	Chowdhury2016
	Expected relationship value: a construct, a methodology for measurement, and a modeling technique.	Hogan2001
	Marketing competencies and the sources of customer value in business markets	Golfetto2006
	Marketing of competence: Exploring the resource-based content of value-for-customers through a case study analysis	Zerbini2007
	Marketing of competence-based solutions to buyers in exploratory relationships: Perspective of OEM suppliers	Li2011
	Measuring customer-perceived value in business markets	Ula2001

Measuring intangible value in business-to-business buyer–seller relationships: An intellectual capital perspective	Baxter2004
More is not always better: The impact of relationship functions on customer-perceived relationship value	Ritter2012
Organizational and institutional barriers to value-based pricing in industrial relationships	Toytari2015
Past, present and future trends of purchasing and supply management: An extensive literature review	Spina2013
Provider and relational determinants of customer solution performance	Powers2016
Role of competences in creating customer value: A value-creation logic approach	Moller2006
Searching for Relationship Value in Business Markets: Are We Missing Something?	Corsaro2010
Small business industrial buyers' price sensitivity: Do service quality dimensions matter in business markets?	Zeng2011
Tension in a value co-creation context: A network case study	Toth2018
The bonding effects of relationship value and switching costs in industrial buyer-seller relationships: An investigation into role differences	Geiger2012
The challenge of communicating reciprocal value promises: Buyer-seller value proposition disparity in professional services	Baumann2017
The customer as enabler of value (co)-creation in the solution business	Petri2016
The emergent role of value representation in managing business relationships	Corsaro2014
The Initiators of Changes in Customers' Desired Value: Results from a Theory Building Study	Flint2001
The supplier's side of outsourcing: Taking over activities and blurring organizational boundaries	Baraldi2014
Theory and practice of value co-creation in B2B systems	Kohtamaki2016
Towards a framework of customer value assessment in B2B markets: An exploratory study	Keranen2013
Understanding attractiveness in business relationships — A complete literature review	Mortensen2012
Value co-creation in knowledge intensive business services: A dyadic perspective on the joint problem solving process	Aarikka-Stenroos2012
Value co-creation practices and capabilities: Sustained purposeful engagement across B2B systems	Marcos-Cuevas2014
Value co-creation: The role of actor competence	Waseem2018
Value creation in buyer - seller relationships: Theoretical considerations and empirical results from a supplier's perspective	Walter2001
Value creation in the relationship life cycle: A quasi-longitudinal analysis	Eggert2006
Value in business and industrial marketing: Past, present, and future	Lindgreen2012
Value in business markets: What do we know? Where are we going?	Lindgreen2005

	Which types of multi-stage marketing increase direct customers' willingness-to-pay? Evidence from a scenario-based experiment in a B2B setting	Geiger2015
International Journal of Production Economics	Buyers' perceptions on the impact of strategic purchasing on dyadic quality performances	Yeung2015
	Differences in buyers' and suppliers' perceptions of supply chain attributes	Oosterhuis2013
	Do what and with whom? value creation and appropriation in inter-organizational new product development projects	Yan2017
	Examining the mechanism of the value co-creation with customers	Zhang2008
	Service purchasing and value creation: Towards systemic purchases	Hallikas2014
	What brings the value to outcome-based contract providers? Value drivers in outcome business models	Visnjic2017
International Journal of Production Research	A fuzzy AHP evaluation model for buyer–supplier relationships with the consideration of benefits, opportunities, costs and risks	Lee2009
	Influence of initiators on supply chain value creation	Jayaram2004
	The meaning of 'value' in purchasing, logistics and operations management	Francis2014
Journal of Business and Industrial Marketing	Creating a service platform – how to co-create value in a remote service context	Lofberg2018
	Early stage value co-creation network – business relationships connecting high-tech B2B actors and resources: Taiwan semiconductor business network case	Park2018
	Perceived value of service innovation: A conceptual framework	Coutelle-Brillet2014
	Scale development and validation for DART model of value co-creation process on innovation strategy	Taghizadeh2016
	The role of learning in value co-creation in new technological B2B services	Komulainen2014
	Value co-creation in an outsourcing arrangement between manufacturers and third party logistics providers: resource commitment, innovation and collaboration	Sinkovics2018
	Value co-creation, dynamic capabilities and customer retention in industrial markets	Preikschas2017
Journal of Business Research	Buyer-supplier relationship decline: A norms-based perspective	Marcos2017
	Creating and appropriating value in collaborative relationships	Wagner2010
	Enabling value co-creation with consumers as a driver of business performance: A dual perspective of Polish manufacturing and service SMEs	Zaborek2019
	Examining customer value perceptions of organizational buyers when sourcing from multiple vendors	Liu2005
	Intrinsic value of business-to-business relationships: An empirical taxonomy	Biggemann2012
	Investigating customer value in global business markets: Commentary essay	Ulaga2011
	Multiplex value cocreation in unique service exchanges	Razmdoost2019



	Reflective and formative metrics of relationship value: A commentary essay	Baxter2009
	Reflective and formative metrics of relationship value: Response to Baxter's commentary essay	Diamantopoulos2010
	Replicating, validating, and reducing the length of the consumer perceived value scale	Walsh2014a
	Service value revisited: Specifying a higher-order, formative measure	Ruiz2008
	The use of organizational capabilities to increase customer value	Martelo2013
	To be or not to be (loyal): Is there a recipe for customer loyalty in the B2B context?	Russo2016
Journal of Business-to-Business Marketing	Can Customer Satisfaction Decrease Price Sensitivity in Business-to-Business Markets? Ruth	Stock2005
	Key Account Managers' Role Within the Value Creation Process of Collaborative Relationships	Georges2003
	Relationship Quality-Relationship Value and Power Balance in Business Relationships: Descriptives and Propositions	Mysen2012
	Relationship Value in Business Markets: The Construct Its Dimensions.	Uлага2005
	The effect of perceived value and switching barriers on customer price tolerance in industrial energy markets	Garcia-Acebron2010
	The Impact of Relational Variables on Value Creation in Buyer–Seller Business Relationships	Sanchez2010
	Understanding Customer Value in Business-to-Business Relationships	Menon2005
	Value Co-Creation Processes—Early Stages of Value Chains Involving High-Tech Business Markets: Samsung–Qualcomm Semiconductor Foundry Businesses	Park2015
	Value-creation logic in supply chain relationships	Hammervoll2009
Journal of Interactive Marketing	Co-creation experiences: The next practice in value creation	Prahalad2004
Journal of Marketing	A comparative longitudinal analysis of theoretical perspectives of interorganizational relationship performance	Palmatier2007
	A model of distributor firm and manufacturer firm working partnerships	Anderson1990
	Buyer-Supplier Relationships and Customer Firm Costs	Cannon2001
	Creating Enduring Customer Value	Kumar2016
	Do Satisfied Customers Really Pay More? A Study of the Relationship Between Customer Satisfaction and Willingness to Pay	Homburg2005
	Evolving to a new dominant logic for marketing	Vargo2004
	Exploring the Phenomenon of Customers' Desired Value Change in a Business-to-Business Context	Flint2002
	How Business Customers Judge Solutions: Solution Quality and Value in Use	Macdonald2016
	Interfirm Relational Drivers of Customer Value	Palmatier2008

	Is Customer Participation in Value Creation a Double-Edged Sword? Evidence from Professional Financial Services Across Cultures	Chan2010
	Rethinking customer solutions: From product bundles to relational processes.	Tuli2007
	Value-Based Differentiation in Business Relationships: Gaining and Sustaining Key Supplier Status	Ulaga2006
Journal of Marketing Management	Managing and measuring value co-creation in business-to-business relationships	Lambert2012
	Value dimensions and relationship postures in dyadic 'key relationship programmes'.	Henneberg2009
Journal of the academy of marketing science	Customer value: the next source for competitive advantage	Woodruff1997
	Assessing the value of commonly used methods for measuring customer value: a multi-setting empirical study	Leroi-Werelds2014
	Customer Value, Satisfaction, Loyalty, and Switching Costs: An Illustration From a Business-to-Business Service Context	Lam2004
	Developing a Customer Value-Based Theory of the Firm	Slater1997
	Initiating value co-creation: Dealing with non-receptive customers	Malshe2018
	Managing the co-creation of value	Payne2008
	Proactive customer orientation and its role for creating customer value in global markets	Blocker2011
	Reflections on Gaining Competitive Advantage Through Customer Value	Parasuraman1997
	Service, value networks and learning	Lusch2010
	Service-dominant logic: Continuing the evolution	Vargo2008
	The customer value proposition: evolution, development, and application in marketing.	Payn2017
	Value co-creation: concept and measurement	Ranjan2016
Journal of Operations Management	Does relationship learning lead to relationship value? A cross-national supply chain investigation	Cheung2010
	Evaluating buyer–supplier relationship performance spirals: A longitudinal study	Autry2010
	Examining supply chain relationships: Do buyer and supplier perspectives on collaborative relationships differ?	Nyaga2010
	The dark side of buyer-supplier relationships: A social capital perspective	Villena2011
Journal of Purchasing and Supply Management	A grounded theory of value dissonance in strategic relationships	Pinnington2016
	Can I read your mind? Perception gaps in supply chain relationships	Chen2016
	Exploration of congruence in perceptions of buyer-supplier attraction: A dyadic multiple case study	Aminoff2013
Journal of Retailing	Consumer Perceived Value: The development of a multiple item scale	Sweeney2001
Journal of Service	Adopting a service logic in manufacturing: Conceptual foundation and metrics for mutual value creation	Gronroos2010

Management		
Journal of Supply Chain Management	Buyer – supplier relationships: derived value over two decades	Terpend2008
	Effects of suppliers' reputation on the future of buyer-supplier relationships: the mediating roles of outcome fairness and trust.	Wagner2011
	Innovation in logistics outsourcing relationships: proactive improvement by logistics service providers as a driver of customer loyalty.	Wallenburg2009
	Power, Governance, and Value in Collaboration: Differences between Buyer and Supplier Perspectives	Brito2017
	Reframing Supply Chain Management: a Service-Dominant Logic Perspective	Lusch2011
	Service Supply Chains: a Customer Perspective	Mauil2012
	Value Creation, Value Capture, and Supply Chain Structure: Understanding Resource-Based Advantage in a Project-Based Industry	Skilton2014
Management Decision	Creating dynamic capabilities to increase customer value	Landroquez2011
	Customer value: a review of recent literature and an integrative configuration	Khalifa2004
	Management of customer assets for increased value capture in business markets	Nenonen2014
	The bright side and dark side of co-production: a dyadic analysis	Wu2017
	The value co-creation process as a determinant of customer satisfaction	Vega-Vazquez2013
	Three strategies for customer value assessment in business markets	Keranen2014
	Value proposition as a catalyst for a customer focused innovation	Lindic2011
RAE	Value creation and capture in buyer-supplier relationships: a new perspective	Tescari2016
Strategic Management Journal	Creating value through mutual commitment to business network relationships	Holm1999
	Customer value analysis in a heterogeneous market	DeSarbo2001
	Measuring Value Creation and Appropriation in Firms: The VCA Model	Lieberman2017
	The value of relational learning in global buyer-supplier exchanges: a dyadic perspective and test of the pie-sharing premise.	Cheung2011
	Value creation and value capture under moral hazard: Exploring the micro-foundations of buyer– supplier relationships.	Obloj2015
	Value creation, competition, and performance in buyer-supplier relationships	Chatain2010
Supply Chain Management: An International Journal	Buyer's dependence in value creating supplier relationships	Kahkonen2015
	Into the depths of the I-E-I framework: using the internet to create value in supply-chain relationships	Foster2007
	The perception gap among buyer and suppliers in the semiconductor industry	Kim1999

Academy of Management Learning& Education	The competitive advantage of interconnected firms: an extension of the resource-based view.	Lavie2006
International Journal of Operations& Production Management	Buyer supplier perspectives on supply chain relationships	Ambrose2010
	The real meaning of value in trading relationships	Ramsay2005
	Who wins in a complex buyer-supplier relationship? A social exchange theory based dyadic study	Tanskanen2015a
International Journal of Physical Distribution& Logistics Management	A comparison of shipper and carrier relationship strength	Golicic2007
	Application of the means-end value hierarchy model to understanding logistics service value	Mentzer1997
	Creating and Managing Value in Collaborative Networks	Bititci2004
	Direct and indirect value creation in offshored knowledge-intensive services	Brandl2017
	Relational value creation and appropriation in buyer-supplier relationships.	Miguel2014
	Value creation models in the 3PL industry: what 3PL providers do to cope with shipper requirements	Marchet2017
Journal of Business& Industrial Marketing	Customer perceived value: a substitute for satisfaction in business markets?	Eggert2002
	Customer value and switching costs in business services: developing exit barriers through strategic value management	Annie2006
	Customer-perceived value in industrial contexts	Lapierre2000
	Empirical study of relationship value in industrial services	Barry2008
	Exploring the dynamics of customer value in cross-cultural business relationships	Blocker2007
	Extending relationship value: observations from a case study of the Canadian structural wood products industry	LefaixDurand2009
	From customer value to repurchase intentions and recommendations	Olaru2008
	Involving customers in innovation: knowledgeability and agency as process variables	Peters2018
	Relationship-value-based antecedents of customer satisfaction and loyalty in manufacturing	Cater2009
	Return on relationships: conceptual understanding and measurement of mutual gains from relational business engagements	Gronroos2012
	The impact of trust and commitment on value creation in asymmetric buyer–seller relationships: the mediation effect of specific asset investments	Chen2017
	The influence of adaptations, trust, and commitment on value-creating functions of customer relationships	Walter2003
	The value creation scale of supplier-distributor relationship in international markets	Lai2015
	Value appropriation in business exchange - literature review and future research opportunities	Ellegaard2014

Appendix B: Examples of dimensions and terminologies found in studies

Perspective	Dimension	Original terminology
SET	Access to information	Follow up information, Information, Information sharing, Knowledge about the client, Market information, Market intelligence, Market-signaling, Scout
	Access to market	Access, Access to market, access to new buyers, access to new suppliers, Door opening, Market
	Personal benefit	Perceived control, Pressure reduction, social, self-image, Social comfort, social self-concept, Special treatment by sales representative, Task simplicity, Time for core business, Time for the job
	Personal relationship	Commitment, Communication, Conflict, Contact density, Credibility, effectiveness of working relationships, Eliminating friction, Enhanced international communication, Knowledge sharing, Motivation, personal interaction, Personal relations, Reciprocity, Respect, Solidarity, Trust
RBV	Capabilities/resources	Capabilities, Capability development, competence, Complementary resources, Customer satisfaction measurement system, Extended network, Flow management capabilities, intellectual agility, Know-how, Learning, Market oriented behavior, problem-solving knowledge, Resource access, Retention of competency, Technical competence, Technology capabilities
	Innovation (product/service)	Alternative solutions, cooperation/innovation, Customer-driven innovations, Customization, Data-driven innovations, Idea generation, Innovation, Product improvement
	Reputation	Image, market/reputation, Personal reputation, Referencing Reputation, Vendor's brand equity
	service support	Communication system support, customer service, Easier for customers to seek assistance, Quick service/response, repair service, Resolution of customer complaints, service support, technical support, Value added services
TCT	Time reduction	Time, time to market, time compression, timeliness
	Operational efficiency	Availability, Avoid downtime, billing, Consistency of products, Delivery performance, Efficiency, productivity, Excellence (quality), Flexibility, performance, Performance value, performance/quality, preventative maintenance, product quality, Quality, Reducing lot size, Reducing setup time, Reducing supplier base, Reliability, Reliability and speed of supply, Reliability of supplier, Responsiveness, technical performance, Work performance
	Asset efficiency	Asset control, asset maximization, asset/cost efficiency, fixed capital avoidance
	Financial (cost efficiency)	Acquisition cost, Cost, Cost advantage, cost improvement, Cost reduction, Cost savings, Delivery value loss, Direct cost, Economies of scale, effect on cost, financial, Access to low cost places, Operational cost, Process costs, Reducing inventory to free up investment, Switching costs
	Financial (price/revenue)	benefit/price, price, price/value for money
	Financial (profit)	Focus on shared value, increased margins, profit, profit

	growth, profitability
Financial (Revenue growth)	Customer retention, effect on growth and revenue generating, Access to new markets, growth, Increase revenues, New customers, Referrals, Share of business, Share of market, volume/growth
Risk management	Continuity, dependence, Managing and eliminating risk, Reduced financial risk, Risk management, Uncertainty reduction
Safeguard	Assurance of supply, safeguards

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## 8.2 Appendixes from paper two

### Appendix C: Interview guideline

A) Thinking about value creation in relationships, please comment on your experience in customer / supplier relationships

- Do you think relationships with suppliers / customers can contribute to value creation (financial and non-financial) for the company?
- How does the company you work for create value for your suppliers / customers?
- Do you think your suppliers / customers see this in the same manner?

B) Thinking about the categories

- Does the company you work for have different relationship strategies with your suppliers / customers?
- do these strategies differ between product / segment categories?
- What types of value (financial and non-financial) do you expect suppliers / customers in this category / segment to create for your business? Do you have examples?
- What factors could influence how your company divides the volume of business to be given between suppliers / customers in the same segment?
- Is it possible to practice different prices for suppliers / customers in the same segment? What factors could influence this decision?

C) Thinking about your relationship with supplier / customer XYZ:

- How did the relationship with him start?
- What are relationship characteristics and how has this relationship evolved?
- Without providing confidential information, how would you position this customer / supplier in terms of relative price to others and % of supply volume
- Can you identify any examples of work done in collaboration with this supplier / customer that generated value for your company? Did the other suppliers also have this opportunity?
- What criteria or motivators do you think were considered for the above situations to happen (relative price, % volume and collaborative projects)
- Have the benefits from the relationship with this supplier / customer been leveraged in other suppliers / customers? In what way?

Appendix D: Summary of interviews

<b>Interview</b>	<b>Category</b>	<b>Function</b>	<b>Perspective</b>	<b>Duration (minutes)</b>
1	General	Manager - procurement	Buyer	60
2	General	Procurement specialist	Buyer	70
3	General	Vice President - Operations	Buyer	50
4	ISO	Operations manager	Buyer	60
5	ISO	Operations supervisor	Buyer	75
6	ISO	Procurement manager	Buyer	60
7	ISO	General manager	Supplier	61
8	ISO	Sales manager	Supplier	80
9	Logistics	Operations manager	Buyer	65
10	Logistics	Operations supervisor	Buyer	*
11	Logistics	Operations supervisor	Buyer	43
12	Logistics	Procurement manager	Buyer	55
13	Logistics	Operations manager	Supplier	81
14	Logistics	Operations manager	Supplier	55
15	Software factory	Operations manager	Buyer	55
16	Software factory	Procurement manager	Buyer	65
17	Software factory	Operations manager	Supplier	*
18	Software factory	Operations manager	Supplier	*
19	Software factory	Operations manager	Supplier	*
20	Software factory	Sales manager	Supplier	71
21	Software factory	Sales manager	Supplier	76

\* Indicate that the interview was conducted with more than one person

Appendix E: Code list

<b>Family</b>	<b>Code</b>	<b>Description</b>	<b>Total Quotes</b>
Value capture	Colabor_Polinization	Examples of practices that the supplier brings from other clients to the focal company	21
	Colabor_project_client	Collaborative projects initiated by the focal company that lead to an increase in scope, and may or may not be charged by the supplier	35
	Colabor_project_supplier	Collaborative projects initiated by the supplier that lead to an increase in scope and may or may not be charged by the supplier	52
	Price	Perception of the customer (focal company) on the weight of the price in the purchase decision, or the possibility of practicing differentiated prices between suppliers	138
Context	Volume	Factors that can influence volume division / capture	88
	Area	Area of the company to which the interviewee belongs or function that he / she performs	18
	Category	Focal company's service category: ISO services, SW Factory and Logistics	23
	Expertise	Area of experience or expertise of the interviewee	7
	Business Region	General context of industry, company or category Region where there is demand from the customer or where the supplier acts and may influence value capture	97 17
Value dimension	Time	Time of relationship between the supplier and the focal company	31
	RBT_Capability	Access, learn or develop competencies and capabilities with the partner	114
	RBT_Innovation	Perception that one partner has on the innovations that his counterpart brings to improve his processes	29
	RBT_Reputation	Market signal about a firm's quality, performance and trustworthiness	27
	RBT_Time	Ability to reduce the lead-time through the joint-development or implementation of new products, processes or other improvements	18
	SET_Integrity	Quality and effectiveness of interpersonal ties and interactions	13
	SET_Mkt_Info	Information obtained from sources outside of the organization	11
	SET_personal_benefit	Benefits perceived to perform the job at the individual level (bring more simplicity, less time, or less pressure)	1
	SET_Relationship	Quality and effectiveness of interpersonal ties and interactions	163



	TCE_asset	Perceived value from having better control over an asset or maximizing its use	2
	TCE_Finance	Perceived cost reductions, value for money paid, increase in profits, or possibility to increase business within a market or existing customers	71
	TCE_Performance	Basic operational efficiency attributes (quality, reliability, flexibility and efficiency)	101
	TCE_Risk	Taking over and managing the financial, performance or social risk	24
	TCE_safeguard	Reduce uncertainty by assuring enough supply (buyers) or level of business (suppliers)	2
Focal company	Focal_1	When interviewee acts for Focal Company 1 (client)	4
	Focal_power	Factors that empower the focal / client company	28
	Focal_value_buyer	Value that the focal company believes it brings to the supplier	43
	Focal_value_supplier	Dimensions of value that the buyer believes the supplier must bring to him, at a more macro level (several dimensions)	23
Supplier	Supplier_1	It refers to the name of the supplier when it is of the focal company 1	6
	Compare_price	Relative price difference that may exist between suppliers of the same category	23
	Compare_relationship	When the interviewee compares the relationship between suppliers	44
	Compare_volume	Relative volume difference between suppliers	30
PSM Practice	Supplier_Power	Factors that increase supplier's bargaining power	29
	Information	Information sharing between companies (not IT / EDI), so that both are aware of strategies, performance or demands	64
	Bonus	Possibility to provide performance bonus to suppliers	12
	Strategy	How the company defines its buying or selling strategy	90
	Proactivity	Perception of supplier's proactivity in bringing solutions and innovations	44
	Processes	Buyer's processes related to selecting and managing the supplier	72
	Recognition	Processes or ways in which the customer (focal company) recognizes supplier performance	23

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## Appendix F: Truth Table

Case	Outcome	Core value dimensions			Relationship Characteristics		Value Capture	
		TCE	RBT	SET	Power	Change	Price	Volume
ISO-A	Volume	1	1	1	1	0	0	1
ISO-B	Volume	1	0	0	0	0	0	0
ISO-C	Volume	1	1	0	0	1	0	1
ISO-E	Price	1	1	0	0	0	1	0
ISO-F	Vol/price	1	1	0	0	0	1	1
ISO-G	Price	1	0	0	0	0	1	0
ISO-H	Price	0	0	0	1	0	0	0
ISO-I	Vol/price	0	1	1	1	0	1	1
ISO-J	Volume	0	0	1	1	0	0	0
ISO-K	Vol/price	0	0	0	1	1	1	1
SW-L	Volume	1	1	1	0	0	0	1
SW-M	Volume	0	1	0	0	0	0	0
SW-N	Volume	1	1	0	0	0	0	1
SW-O	Price	0	0	0	0	0	0	0
SW-P	Price	1	1	1	0	0	1	0
SW-Q	Price	1	1	0	0	0	1	0
SW-R	Price	0	1	0	0	0	0	0
SW-S	Price	1	1	0	0	0	0	0
SW-T	Vol/price	1	0	1	0	0	0	1
SW-U	Price	0	0	0	1	0	0	0
SW-V	Vol/price	0	1	0	0	1	1	1
LOG-W	Volume	1	1	1	1	0	0	1
LOG-X	Volume	0	0	0	1	0	0	0
LOG-Y	Volume	1	1	1	0	0	0	1
LOG-AA	Price	1	0	0	0	0	1	0
LOG-AB	Price	1	0	0	1	0	0	0
LOG-AC	Price	1	0	1	0	0	1	0