

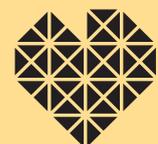
Khuram Shahzad

Managing successful buyer-supplier relationships

Aligning the enabling roles of governance structure



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Tiivistelmä Tämän väitöskirjan tarkoituksena on tutkia transaktiokustannusteoriaan ja sosiaalisen vaihdannan teoriaan perustuvia hallintamallien konsepteja menestyksekkäiden toimittajasuhteiden johtamisessa. Väitöskirjassa käytetään useita tutkimusmetodeja, kuten kirjallisuuskatsaus, laadulliset ja määrälliset tutkimusmenetelmät, joiden avulla päästään tutkimuksen tavoitteisiin viidellä tiedeartikkelilla. Laadullinen tieto kerättiin osittain strukturoiduissa haastatteluissa kansainvälisiltä case-yrityksiltä. Määrällinen tieto kerättiin kyselyiden avulla 170 pieneltä ja keski-suurelta yritykseltä. Tutkimuksen tulosten mukaan yhteistyökumppaneiden yhdenmukaisessa hallintamallissa, joka sisältää tavat organisoida kumppaneiden yhteistyötä, on tärkeää kehittää ostaja-toimittajasuhteiden suorituskykyä, koska se pienentää kustannusriskiä ja konflikteja. Toimittajien kehitysprosessi lisää luottamusta yritysten välillä, mikä kannustaa toimittajaa reagoimaan ostajan tarpeisiin. Yritykset haluavat osallistua investoimalla transaktiospesifisiin resursseihin, jolloin vaihtokustannus on suurempi. Yritysjohdon on analysoitava ja käytettävä sopivimpia suhteiden hallintamalleja, samanaikaisesti tai vaihtoehtoisesti, jotta saavutetaan pitkäaikaisia kustannus- ja suhde-etuja. Kattava tutkimusviitekehys selittää, kuinka yrityksen johto voi suunnitella tehokkaita ostaja-toimittajasuhteiden hallintamalleja, jotka perustuvat tutkimuksen tuloksiin ja löydöksiin..		
Asiasanat Ostaja-toimittajasuhde, suhdehallintamalli, transaktiokustannusteoria, sosiaalisen vaihdannan teoria, monimenetelmä tutkimus		

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Abstract Based on transaction cost economics (TCE) and social exchange theory (SET), this dissertation aims to explore and investigate the determinants of governance structure and align their enabling roles in managing successful buyer-supplier relationships. By employing a mixed method approach as its research methodology, this dissertation attempts to achieve the research objectives by formulating five articles, approached through a systematic literature review, as well as qualitative and quantitative methods. Qualitative data were collected through semi-structured interviews from MNEs, whereas quantitative data were collected through survey questionnaires involving 170 SMEs. The results of the study suggest that an aligned governance structure, i.e., an approach to organizing and regulating the conduct of relationship partners, is crucial in order to improve firm performance because it can minimize the operational hazards of ex-post transaction costs as well as inter-firm conflicts. While supplier development processes enhance the level of confidence between firms that encourage suppliers' response to buyers' needs. Firms are eager to become directly involved in investing transaction-specific resources that have a lower alternative value. Further, based on relationship objectives, managers need to analyse and employ the most appropriate relationship governance mechanisms, whether simultaneously and/or alternatively, in order to achieve long-term cost as well as relationship performance. The comprehensive research framework explains how managers can craft effective buyer-supplier governance arrangements based on synthesized results and findings.		
Keywords Buyer-supplier relationships, relationship governance structure, transaction cost economics, social exchange theory, mixed method approach		

To my family – my parents, my siblings, my wife and our beloved son

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“He is the First and the Last, the Ascendant and the Intimate, and He is, of all things, Knowing” [Quran 57:3]

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Contents

ACKNOWLEDGEMENT	VII
1 INTRODUCTION	1
1.1 Background of the research	1
1.2 Research gaps	3
1.3 Research problems, objectives and questions	5
1.4 Research design and contribution	6
1.5 Structure of the study	10
2 THEORETICAL FOUNDATION	11
2.1 Transaction cost economics and social exchange theory hybrid	11
2.2 Supplier development	13
2.2.1 Supplier development strategies	14
2.3 Relationship governance mechanisms	17
2.3.1 Transactional governance mechanisms	17
2.3.2 Relational governance mechanisms	18
2.4 Ex-post transaction costs	21
2.5 Conflict resolution strategies	21
2.6 Synthesis of governance structure: the potential interaction of its determinants	22
3 RESEARCH METHODOLOGY	24
3.1 Research approach	24
3.1.1 Philosophical worldview/paradigm	24
3.1.2 Research design and methods	27
3.2 Research approach, design and methods of this study	27
3.3 Value and rationale used in the dissertation	30
3.4 Quality of the research	31
4 SUMMARY OF THE ARTICLES	33
4.1 Supplier development strategies	35
4.2 Supplier development to buyer-supplier relationship development	35
4.3 Buyer-supplier relationship success	37
4.4 The varying roles of relationship governance mechanisms	38
4.5 Conflict resolution strategies and buyer-supplier relationship performance	39
5 DISCUSSION AND IMPLICATIONS	41
5.1 Theoretical contributions	41
5.1.1 Answering research sub-question 1	41
5.1.2 Answering research sub-question 2	43
5.1.3 Answering research sub-question 3	43
5.2 Synthesized results and overall contributions	45
5.3 Managerial implications	47
5.4 Limitations and future research	49

6 CONCLUSIONS.....	52
REFERENCES	54
PUBLICATIONS	67

Figures

Figure 1.	Research design	7
Figure 2.	Conceptual framework	23
Figure 3.	Mixed methods used in the dissertation	30
Figure 4.	Supplier development to buyer-supplier relationship development	36
Figure 5.	Integrated framework of relationship factors based on two theoretical perspectives	38
Figure 6.	Conflict resolution in buyer-supplier relationships	40
Figure 7.	Synthesized research model	47

Tables

Table 1.	Components of each article	9
Table 2.	Key elements of transaction cost economics and social exchange theory in relationship management Adapted from Kingshott (2006)	13
Table 3.	Supplier development strategies.....	16
Table 4.	Relationship governance mechanisms	20
Table 5.	The study's philosophical worldview and paradigm components.....	26
Table 6.	Research approach adopted in the articles.....	29
Table 7.	An overview of the key findings in each article	34

Abbreviations

TCE	Transaction cost economics
SET	Social exchange theory
CRS	Conflict resolution strategies
SMEs	Small and medium enterprises
MNEs	Multinational enterprises
SCM	Supply chain management
SD	Supplier development
PLS	Partial least squares
SEM	Structural equation modelling
RBV	Resource based view
IT	Institutional theory

Publications

This dissertation incorporates following five research articles:

- [1] Sillanpää, I., Shahzad, K., & Sillanpää, E. (2015). Supplier development and buyer-supplier relationship strategies—a literature review. *International Journal of Procurement Management*, 8(1-2), 227-250.¹
- [2] Shahzad, K., Sillanpää, I., Sillanpää, E., & Imeri, S. (2016). Benchmarking supplier development: an empirical case study of validating a framework to improve buyer-supplier relationship. *Management and Production Engineering Review*, 7(1), 56-70.²
- [3] Shahzad, K., Takala, J., Ali, T., & Sillanpää, I. (2015). Managing for success: The role of transactional and relational mechanisms in buyer-supplier relationships. *Management*, 10(1), 35-59.
- [4] Shahzad, K., Ali, T., Takala, J., Helo, P., & Zaefarian, G. (2017). The varying roles of governance mechanisms on ex-post transaction costs and relationship commitment in buyer-supplier relationships. *Industrial Marketing Management*. In press.³
- [5] Shahzad, K. (2017). Conflict resolution strategies and buyer-supplier relationship performance: The role of governance mechanisms. An earlier version of this paper was presented at 26th IPSERA Conference 2017, Budapest, Hungary.²

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1 INTRODUCTION

1.1 Background of the research

Over recent decades, inter-firm transactions have been considered to be indefinably complex and dynamic due to fiercely transformed ways of conducting business, governance, therefore, is becoming increasingly uncertain. The pressure to develop and sustain a competitive edge, as well as face turbulence in relation to highly segmented demands, intensive global competition and uncertainty, emphasizes how firms need to reconsider their strategic choices throughout the value chain and implement effective ways of organizing buyer-supplier operations (Hanvanich, Miller, Richards & Cavusgil, 2003; Silva, Bradley & Sousa, 2012). Similarly, the scarcity of absolute resources is driving firms towards production and distribution hazards effecting their business performance, such that the use of all available resources effectively becomes the most significant tasks for firms (Modi & Mabert, 2007). These conditions pose a variety of challenges to a firm's supply chain operations. However, these challenges can also be perceived as opportunities in developing buyer-supplier relationships by employing different governance approaches. Therefore, firms have realized the importance of these relationships, not only to identify the optimized ways to best utilize their resources in managing successful transactions, but also to foster joint performance and long-term exchange (Kremic et al., 2006). Thus, research on inter-firm relationship governance has received significant attention in the operations, inter-firm governance and supply management literature, reflecting the value of these relationships influencing business performance (Zaheer, McEvily & Perrone, 1998; Poppo & Zenger, 2002; Terpend, Tyler, Krause & Handfield, 2008; Dyer & Chu, 2011; Liu, Luo & Liu, 2009; Luo, Liu, Yang, Maksimov & Hou, 2015; Liu, Luo, et al., 2017).

However, transaction costs and inter-firm conflicts are commonly seen as potential obstacles to cooperation development, relationship performance and commitment. The uncertainty experienced by relationship partners concerning the expectations of their counterpart's cooperative behaviour in conflicts and negotiations is an inevitable dilemma (Liu et al., 2009). The potential negative impact of these relationship disputes and failures overshadow the aggregate effects of relationship behaviours (Palmatier, Dant, Grewal & Evans, 2006). Hence, several studies have demonstrated high rates of relationship disputes and failures (e.g., Bamford, Ernst & Gubini, 2004; Dant & Schul, 1992; Jap & Anderson, 2003). Key reasons for these high failures are fragmentary contracts, distrust, asymmetric

information-sharing and interdependence, different goals and interests, and unforeseen market changes, which may act as negative forces in the collaboration, resulting in higher transaction costs, lower relationship commitment and a deterioration in the relationship (Pajunen & Fang, 2013). Governing such buyer-supplier relationships effectively constitutes a panacea for these failures, as well as helping to achieve superior outcomes and stability (Luo et al., 2015; Liu et al., 2009; Corsten, Gruen & Peyinghaus, 2011). Systematic relationship governance elucidates the efficient design of any repeated economic exchange structure where both relationship partners strive to collaborate and are fully devoted to fulfilling common business objectives (Luo et al., 2015; Liu, Luo et al., 2017). Therefore, firms are eager to improve relationship performance by employing such an effective collaborative governance structure (Li, Humphreys, Yeung & Cheng, 2012; Yeung, Zhou, Yeung & Cheng, 2012; He, Ghobadian & Galleary, 2013; Yeung, Lee, Yeung & Cheng, 2013), instead of exposing relationship vulnerabilities (Suh & Houston, 2010). Building on TCE and SET, governance structures consist of interrelated supplier development (SD) strategies (Krause, Scannell & Calantone, 2000), relationship governance mechanisms (Poppo & Zenger, 2002; Liu et al., 2009; Liu, Li, Shi & Liu, 2017) and conflict resolution strategies (CRS) (Yang, Gao, Li, Shen & Zheng, 2017; Lee, Shin, Haney, Kang, Li & Ko, 2017; Bai, Sheng & Li, 2016).

Recent seminal studies on buyer-supplier relationship performance have also called for systematic research regarding the varying roles of relationship governance and development mechanisms in the context of performance (e.g., Liu et al., 2009; Li, Xie, Teo & Peng, 2010). For example, meta-analysis studies conducted on supply chain management and integration link these mechanisms positively with a firm's performance (e.g., Leuschner, Rogers & Charvet, 2013; Zimmermann & Foerstl, 2014). Similarly, several scholars suggest relationship control factors, i.e., asset-specific investments, contracts, relational norms and effective communication in information-sharing, as key elements of relationship performance (e.g., Liu et al., 2009; Li et al., 2010; Corsten et al., 2011). In addition, several studies (e.g., White, Joplin & Salama, 2007; Lin & Wang, 2002) suggest that future research should investigate the role of governance mechanisms and CRS in order to provide a comprehensive picture of conflict resolution processes. Similarly, Le Nguyen, Larimo, and Ali (2016) maintain that further study must analyse the link between CRS and relationship performance. Considering these calls for systematic research, this dissertation focuses on aligning and combining all the missing blocks and nodes that represent a complete picture of managing successful buyer-supplier relationships.

1.2 Research gaps

To date, literature has probed inter-firm performance in numerous ways, but this diversity of approaches reflects an apparent lack of consensus about what effectively explains the management of these relationships. Particularly, this dissertation identifies the following research gaps in the literature. **First**, although there is much explanation in the literature regarding the significance of SD as an integrated means of sustaining competitive advantage and enhancing suppliers' capabilities (Modi & Mabert, 2007; Burt, Dobler & Starling, 2003), and their strategic role in the value chain (Kwon, Joo & Hong, 2010), prior studies have fail to recognize the link between SD strategies and buyer-supplier relationship development. Furthermore, theoretical and empirical evidence concerning the process of SD approaches to inter-firm relationship development is extremely fragmented, as it is individually focused and offers limited understanding (Sillanpää et al., 2015; Shahzad et al., 2016). Therefore, an empirically validated comprehensive framework, which can provide rich explanations for systematic SD strategies and their impact on inter-firm performance outcomes, is needed (Li et al., 2012).

Second, because buyer-supplier relationships are loosely coupled structures, where two relationship partners, having separate objectives, cooperate on supply chain activities (Liu, Huang, Luo & Zhao, 2012), an understanding of transactional and relational governance mechanisms in these inter-firm boundary-spanning decisions and their influence on relationship performance is important in managing successful relationships. Although research on relationship governance has highlighted the effectiveness of both transactional and relational governance mechanisms, it remains limited in the context of opportunism mitigation (e.g., Liu et al., 2009; Luo et al., 2015) and relationship quality (e.g., Liu, Li & Zhang, 2010). Further, several studies have presented two competing views of the nature of the relationship (complementarity and/or substitution) between transactional and relational governance mechanisms, and found conflicting results on whether these mechanisms act in a complementary (Van der Valk, Sumo, Dul & Schroeder, 2016; Poppo & Zenger, 2002; Liu et al., 2009) or as substitutes (Wuyts & Geyskens, 2005; Li et al., 2010). On the other hand, the relative effectiveness of these mechanisms is characterized by a nuanced understanding of different transaction objectives driving governance factors, which is missing in the literature. Different governance mechanisms are required for different transaction objectives in governing relationship exchange. A better understanding of relationship outcomes and collaboration goals should drive managers to analyse which governance mechanism is more crucial for a particular task (Yang, Zhao, Yeung & Liu, 2016). Thus, the varying roles of transactional and relational governance mechanisms

(Yang et al., 2016; Liu et al., 2009) in achieving cost advantage and commitment have yet to be addressed. Such mixed evidence, as well as conflicting views about the complementary-substitutive perspective and the relative effectiveness of governance mechanisms, therefore necessitates further investigation into the phenomenon. This prompts the question about whether these governance mechanisms function as complementary and/or substitutes, and whether they are relatively more effective in minimizing ex-post transaction costs and fostering relationship commitment.

Third, several studies have demonstrated that firms differ in their choices of conflict resolution approaches (e.g., Wade-Benzoni, Hoffman, Thompson, Moore, Gillespie & Bazerman, 2002); managers, therefore, need to identify the relative governance factors when dealing with emerging inter-firm disagreements (Lin & Germain, 1998). Although relatively few recent studies have recognized the significance of inter-firm conflict, the focus has remained mainly on the role of contractual or negotiated incentives in the process of managing conflicts, whether functional or dysfunctional (Chang & Gotcher, 2010; Cheng & Sheu, 2012; Ndubisi, 2011), or constructive or destructive (Li, Liu & Liu, 2011). Further, prior research on conflict resolution process has centred on the context of international joint ventures (Le Nguyen et al., 2016; Lu, 2006; Lin & Wang, 2002; Lin & Germain, 1998), while the applicability of the choice of CRS from a buyer-supplier perspective is unidentified. Although the potential impact of trust (Yang et al., 2017; Ndubisi, 2011) and contracts (Yang et al., 2017; Lee et al., 2016; Bai et al., 2016; Lumineau & Henderson, 2012) on conflict management appears in the literature, the choice of CRS, as influenced by relationship governance mechanisms (i.e., transactional and relational), is under-examined (Yang et al., 2017). In addition, relationship performance is based on established inter-firm governance structures and internal conflict resolution through effective strategies. Prior research has presented no significant evidence of such variant forms of relationship performance involving effective strategies used in emerging conflicts (Le Nguyen et al., 2016), meaning that additional empirical investigations regarding the relationship between governance mechanisms, CRS and relationship performance are needed. Therefore, these aspects of governance mechanisms and CRS need to be further analysed, while this dissertation argues that firms should rely on governance mechanisms to diminish conflicts in order to encourage better relationship performance (Lumineau & Quelin, 2012).

Although prior literature has presented potential benefits, risks and strategic issues of these relationships, it lacks in offering the effective governance tools and guidelines that support firms in making decisions (Kremic et al., 2006). This discussion recommends that the limited research available on inter-firm

relationship governance has produced mixed evidence and conflicting views, and has failed to align and explicitly explain the integrated role of SD strategies, relationship governance mechanisms and CRS in fostering relationship performance. Against the backdrop of this confined discussion by academia, the importance of this research area demands further investigations.

1.3 Research problems, objectives and questions

Problem statement

Buyer-supplier relationships have been documented as fundamental strategic boundary decisions effecting business performance (Gulbrandsen, Lambe & Sandvik, 2017). *However, in spite of the diversity of approaches concerning relationship performance, the determinants of governance structure, such as SD strategies, governance mechanisms, CRS and ex-post transaction costs, as important antecedents to relationship performance can only be found in isolation, while limited research has discerned how these factors are more salient in explaining the effective process of managing relationships.* In other words, there is no comprehensive theoretically and empirically integrated framework in the literature focusing on the potential impact of aligned relationship governance structures on managing successful buyer-supplier transactions.

Research objectives and questions

The prior discussion on the identified research gaps and the research problem in terms of understanding how to manage successful buyer-supplier relationships drives the course of this dissertation. Thus, to fill these research gaps and provide further insights, *this dissertation seeks to investigate and explore the determinants of governance structure and align their enabling roles in buyer-supplier relationship performance.* Therefore, the following research question (RQ) is presented based on the research problem and objectives:

RQ: *What factors explain an effective relationship governance structure, and how does this governance structure ensure relationship outcomes in managing buyer-supplier relationships?*

The following three sub-questions (SQs) are formulated in order to address the central research question of this dissertation:

SQ1: What approaches support the development of suppliers' performance and how does SD strategies significantly lead to buyer-supplier relationship development? (Articles 1 and 2)

SQ2: How do the underlying relationship governance factors effect buyer-supplier relationship outcomes? (Article 3)

SQ3: What are the major relationship governance mechanisms and what are the underlying varying roles of these mechanisms in minimizing transaction costs and inter-firm conflicts, and in maximizing relationship commitment and relationship performance? (Articles 4 and 5)

1.4 Research design and contribution

This dissertation aims to deepen the knowledge about managing inter-firm relationships by developing a comprehensive framework that provides a rich explanation for governance practices in buyer-supplier relationships based on integrative the theoretical perspectives of TCE and SET. This framework depicts a unique combination of both qualitative and quantitative studies, characterized by aligning governance structures of SD approaches, relationship governance mechanisms and CRS, with the premise that these governance structure factors are equally important in achieving manifold relational benefits. This dissertation advances the understanding of SD efforts through identifying and constructing the most comprehensive set of strategies that supports the development of suppliers' performance and capabilities, and provides a pathway to improved buyer-supplier relationships. Furthermore, it contributes to the discussion on the varying nature of relationship governance mechanisms by presenting a holistic picture of relative effectiveness, as well as the joint use of both transactional and relational governance mechanisms.

This dissertation consists of five articles, which address the main research question and sub-questions mentioned above. The first sub-question refers to a pathway within significant SD strategies towards developing suppliers' performance and buyer-supplier relationships. Therefore, Articles 1 and 2 address this question by comprehensively covering and combining the framework of emerging SD approaches, based on the SD literature and empirical evidence. Furthermore, the second sub-question in this dissertation seeks to explore the underlying effect of governance mechanisms on buyer-supplier relationship outcomes. To this extent, Article 3 addresses this question through multiple case studies. On the other hand, the third research question identifies the varying roles of relationship governance mechanisms influencing ex-post transaction costs, CR strategies, relationship

commitment and relationship performance. Based on quantitative analysis, Articles 4 and 5 counter these operational hazards and provide an institutional framework in addressing these issues. As a result, the main research question in this dissertation is addressed by combining the results and findings of all five articles. Figure 1 elucidates the pathway relating to the research design and process adopted in order to achieve the research objectives.

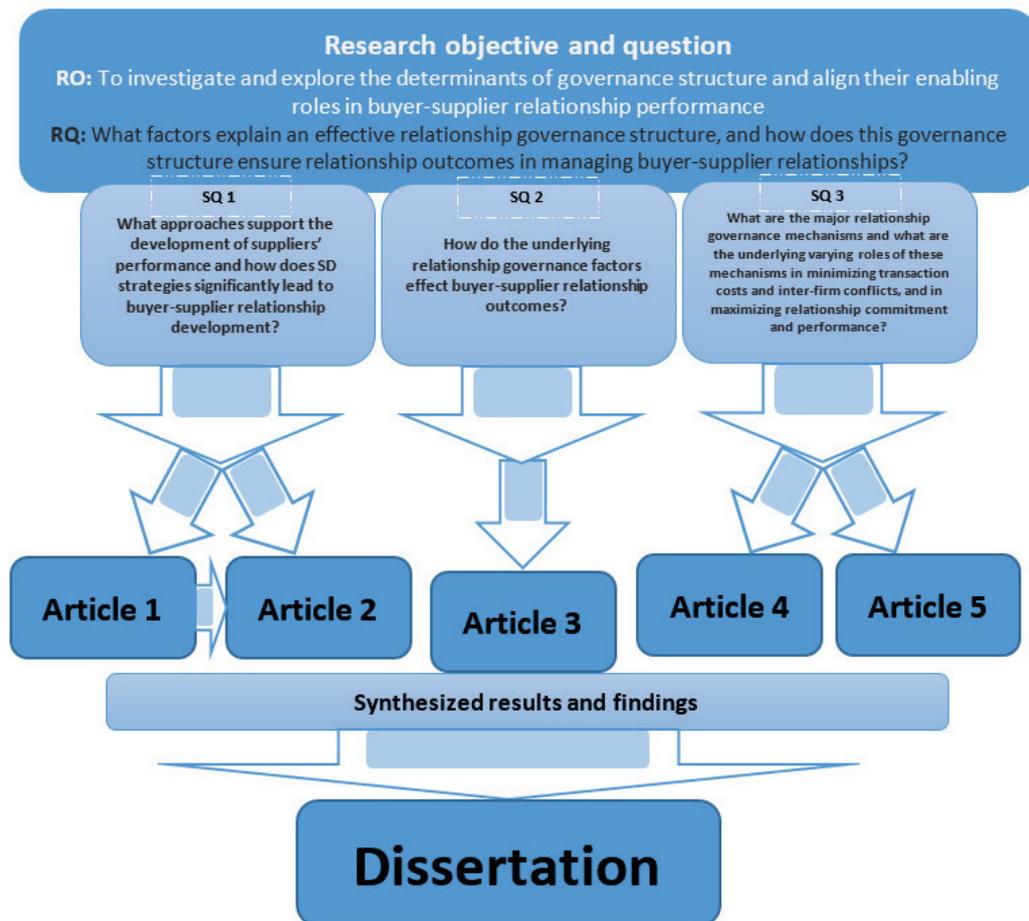


Figure 1. Research design

Methodologically, this study employs a mixed methods research approach involving an integrated summary of all the articles, following both qualitative and quantitative strands in order to present a complete understanding of the phenomenon by covering important elements of the research problem. This approach helps in achieving the research objectives practically and in understanding the holistic nature of a well-researched approach to studying this area. The qualitative and quantitative strands/studies, taken in parallel, prioritize the methods equally, and mix the results from all articles in the course of the overall interpretation. The intent behind the qualitative and quantitative studies

in this dissertation differs: qualitative research was conducted in an MNE environment to gain an in-depth perspective, while quantitative research was conducted in an SME environment to generalize the results. Table 1 below depicts components of each article, along with the research question, theoretical roots and methodology used.

Table 1. Components of each article

Articles	Title of the article	Research question	Theoretical roots	Methodology	Scientific journal/ conference
Article 1	Supplier development and buyer-supplier relationship strategies – a literature review	What approaches support the development of supplier performance in order to improve buyer-supplier relationships?	Supply Chain Management (SCM) literature, SD	Intense literature review	<i>International Journal of Procurement Management</i> , Vol. 8, Nos. 1/2, 2015
Article 2	Benchmarking supplier development: an empirical case study of validating a framework to improve buyer-supplier relationship	How do SD strategies lead to strategically value-added buyer-supplier relationships?	SCM literature, SD	Qualitative single case study (semi-structured interviews)	<i>Management and Production Engineering Review</i> , 7(1), 56-70
Article 3	Managing for success: the role of transactional and relational mechanisms in buyer-supplier relationships	How do the transactional factors of contract completeness and interdependence, and relational factors of trust and communication affect buyer-supplier relationship outcomes?	SET, TCE	Qualitative multiple case study (semi-structured interviews)	<i>Management</i> , Vol. 10, No. 1, 35-59
Article 4	The varying roles of governance mechanisms on ex-post transaction costs and relationship commitment in buyer-supplier relationships	What is the role of relationship governance mechanisms in minimizing transaction costs and maximizing relationship commitment in buyer-supplier relationship?	SET, TCE	Quantitative study (survey)	<i>Industrial Marketing Management</i> , in press
Article 5	Conflict resolution strategies and buyer-supplier relationship performance: the role of governance mechanisms	How do transactional and relational governance mechanisms influence the choice of CRS? Additionally, how do these CRS influence the performance of buyer-supplier relationships?	SET, TCE	Quantitative study (survey)	In: <i>Proceedings of 26th IPSERA 2017</i>

1.5 Structure of the study

This dissertation consists of two major parts: the first part summarizes the whole dissertation into six chapters, and the second contains a compilation of the articles. In the first part, Chapter 1 introduces a discussion on the background to the research and the research gaps. This is followed by a presentation of the research objectives and research questions (including the sub-questions). Finally, the chapter addresses the research design contributions and explains the whole procedure involved in completing the dissertation. The second chapter intends to offer a theoretical background to the research, including the major theories, literature and constructs that are highlighted in the dissertation. The third chapter introduces the research methodology whose approach elucidates the procedures and decisions aligned with the research philosophy, as well as the research design and methods employed in this study. Furthermore, the value and rationale concerning the choice of methods and research quality are significant parts of this chapter. Next, Chapter 4 summarizes all the articles included in this dissertation with their key findings. Chapter five intends to discuss and present the implications of this dissertation. It includes the theoretical contributions of the dissertation by answering each sub-question, followed by responding to the main research question. The main research question is answered by presenting synthesized results and overall contributions. Significant managerial implications, limitations and avenues for further research are presented towards the end of this chapter. The last chapter includes a brief conclusion about the findings in this dissertation. The second part contains all the articles.

2 THEORETICAL FOUNDATION

2.1 Transaction cost economics and social exchange theory hybrid

TCE is a highly influential interdisciplinary theoretical setting within organizational sciences, which identifies and controls economic transaction characteristics (Williamson, 1981, 1985; Hawkins et al., 2008) and principally emphasizes the costs associated with designing the effective governance of inter-firm transactions (Heide & John, 1992). Coase (1937) originally established this theory in explaining the nature of firm, and contributed to economics by explaining the existence of firms and how do they distinguished from market. His comparison between transaction costs and management costs defined the firms' boundaries based on the choice of firm over market. Williamson (1975, 1985) further developed TCE and identified the underlying factors responsible for choice of firms over market (Williamson, 1985, 1993a). TCE syndicates the transactional features of relationship governance and provides compelling logic for assessing the effectiveness of exchange in order to manage opportunism and transaction costs determined by particular characteristics of relationship exchange (Heide & John, 1992; Rindfleisch & Heide, 1997; Dahlstrom & Nygaard, 1999). Inter-firm governance is realized through alternative optimal approaches of organizing economic transactions under a certain set of situational contingencies concerning the implications of a market, hybrid (i.e., relational governance) or hierarchical setting (Williamson, 1991; Reuer & Arino, 2007). Relationship partners are characterized as having bounded rationality and can exhibit opportunistic behaviour, with the major characteristics of transactions being frequency, uncertainty and transaction-specific assets (Williamson, 1985, 2005). TCE contends that relationship exchange should be designed in structural ways, relying on economic forces that organize and restrict a firm's behaviour and enhance collaboration, thereby minimizing partners' incentives for opportunism, conflicts and transaction costs (Hennart & Zeng, 2005; Luo et al., 2015).

On the other hand, SET plays a pivotal role in elucidating relationship exchange and is considered as the foundation for buyer-supplier relationships, which offer social ways to manage and control a relationship in order to strengthen cooperation (Kaufmann & Carter, 2006; Hawkins et al., 2008; Liu et al., 2009; Li et al., 2010). It is defined as "voluntary actions of individuals that are motivated by the returns they are expected to bring and typically do in fact bring from others" (Blau, 1964, p. 91). SET emphasizes the development of norms of reciprocating benefits between relationship partners and suggests that relational elements of

trust and commitment are the significant drivers of relationship exchange (Blau, 1964; Palmatier, 2008). Established to evaluate social behaviours that perform a prominent role among exchange partners, SET has widely influenced the research on buyer-supplier relationships (e.g., Granovetter, 2005; Morgan & Hunt, 1994; Luo, 2002; Kingshott, 2006). As it produces economic rents out of social governance and plays an embedded role in economic transactions, it has evolved as a potential alternative with which to enhance the level of trust, commitment and collaboration in governing effective relationship exchanges (Hawkins et al., 2008; Liu et al., 2009; Hald et al., 2009). However, the increased level of understanding in socially embedded exchange results in an improved level of relationship commitment and cooperation by facilitating joint planning and problem-solving (Claro, Hagelaar & Omta, 2003). Therefore, SET researchers suggest that economic exchange in the longer run turns into strong relational ties, whose behaviours are guided through social factors countering operational hazards (e.g., Luo et al., 2015; Khalid & Ali, 2017).

Several prior studies have highlighted the combined significance of TCE and SET, thus underlying the impact of governance factors on investigating their effectiveness in inter-firm performance (e.g., Ferguson, Paulin & Bergeron, 2005; Heide & John, 1992; Liu et al., 2009; Burkert et al., 2012). Both techniques tend to explain the pathway along which decision makers seek to develop and foster long-term inter-firm relationships, in contrast to approaches demonstrated to strengthen the relationship, as defined in Table 2 (Kingshott, 2006). That said, Hawkins et al. (2008) argued that it is naive to conclude that an inter-firm relationship is guided by the assumptions of TCE and SET. When relationships grow and continue, firms' view of the extracted values and constant changes in strategies may transform the relationships from being transactional to relational, and vice versa. Building on TCE and SET, this dissertation therefore constructs a hybrid model of governance structure in buyer-supplier relationships and argues that firms need to employ a relationship governance structure within which SD strategies, relationship governance mechanisms (transactional and relational governance mechanisms) and CRS play varying pivotal roles in managing successful buyer-supplier relationships. This governance structure not only copes with implementing successful SD programmes and safeguarding relationship-specific assets and adaptation, but also develops an environment of successful cooperation, which ultimately minimizes transaction costs and conflicts, and enhances the performance of relationship exchange.

Table 2. Key elements of transaction cost economics and social exchange theory in relationship management Adapted from Kingshott (2006)

Relational dimensions	Transaction cost economics	Social exchange theory
Managerial philosophy and focus	Minimizing transaction costs Safeguard assets	Building relationships Focus on inputs
Conceptual origins/grounding	Economics	Sociology
Underlying assumptions	Bounded rationality Individuals act opportunistically Need for uncertainty reduction Risk neutrality	Moral obligations between actors Inherent reciprocity Interdependence through socialization
Governance Mechanisms	Contractual/legal Hierarchical	Trust Relational norms Bilateral inputs required
Managerial benefits/burdens	More partner control Greater internalized certainty Relational specifications in advance	Greater flexibility Interactive and adaptive Higher efficiency

2.2 Supplier development

Recent trends show that organizations focus on core capabilities, outsourcing and downsizing, which consequently enhances their dependence on suppliers in terms of competitive quality and timely delivery, as well as amplifies the need to develop suppliers (Krause, Handfield & Tyler, 2007; Mode & Mabert, 2007; Ağan, Kuzey, Acar & Açıkgöz, 2016). SD refers to the cooperative efforts that firms make, not only to continue long-term transactions through sustained competitive advantage, but also to enhance suppliers' competences and efficiency in resolving supply chain problems (Li et al., 2012; Loppacher, Cagliano & Spina, 2011; Ağan et al., 2016). The effectiveness of SD is determined by the clarity of long-term organizational goals; therefore, firms strive to implement SD programmes in order to improve operational performance and long-term relational development. Thus, firms carefully evaluate the competences of suppliers and are eager to implement SD programmes to gain competitive and relational advantage (Modi & Mabert, 2007), as well as a high-performance supply base. Further, firms may also decide to implement SD efforts when suppliers' performance is not satisfactory, due to the

concerns about quality, service levels, capacity sufficiency and innovative strength (Wagner, 2006; Glock, Grosse & Ries, 2017). These efforts help suppliers to foster ongoing improvements where a diversity of skills and knowledge provides effective competitiveness and upgrades their operational and technical capabilities associated with supply-based costs, innovation, quality, delivery and productivity (Modi & Mabert, 2007; Lintukangas, 2011; Blonska, Storey, Rozemeijer, Wetzels & de Ruyter, 2013).

Several seminal studies have emphasized the importance of suppliers' capabilities in firms' competitive advantage. Similarly, researchers have highlighted those critical SD activities (i.e., performance measurement, supplier evaluation, setting goals for suppliers, training, personnel exchange, monitoring etc.) in the inter-firm governance literature that play a pivotal role in firms' performance and relational benefits (Govindan et al., 2010; Blonska et al., 2013; Krause et al., 2007). In addition, SD efforts contain several mechanisms, such as relational norm development, transferring knowledge, bilateral communication, top management involvement and support, shared promises, a positive attitude towards long-term partnership (Bai & Sarkis, 2010; Lintukangas, 2011), and driving relationship development (Sucky & Durst, 2013).

2.2.1 Supplier development strategies

The prior literature on SD has presented several success factors that are critical to SD implementation in different contexts. For example, Krause (1999) developed and validated an important set of antecedents for a SD programme, which need to be assured before being implemented. These antecedents are considered as important inputs for SD, including strategic supplier management, taking into account purchasing functions as a source of competitive advantage, investments in suppliers' capabilities, the consideration of supplier partners, effective communication, and information-sharing. Hartley and Choi (1996) argued that committed top management and capable team development are important in developing suppliers. Moreover, SD factors, such as supplier evaluation and recognition, training and awards, and top management involvement, support firms in effective communication (Krause, 1999; Krause & Ellram, 1997). Krause, Handfield and Scannell (1998) presented a generic process model of SD in a process-oriented way, which contains several important systematic factors from identifying critical commodities for development to ongoing continuous improvements. Humphreys, Li and Chan (2004) examined the role of SD in the context of buyer-supplier relationships and identified transaction-specific and infrastructural factors influencing performance improvement. Furthermore,

knowledge transfer (Arroyo-López, Holmen & De Boer, 2012), communication (Modi & Mabert, 2007; Jane Zhao & Anand, 2009), information-sharing (Krause et al., 2007) and relational factors (Ghijsen, Semeijn & Ernstson, 2010; Govindan et al., 2010) have been recognized as the most important mechanisms for SD programmes in order to gain competitive advantage (Khan & Nicholson, 2014). Ghijsen et al. (2010) conducted an exploratory study and found that the use of promises and both human- and capital-specific SD critically affect supplier commitment, while indirect and direct influence strategies and capital-specific SD play significant roles in supplier satisfaction. Recently, Glock et al. (2017), based on a systematic literature review, presented a supplier relationship management process, comprising several building blocks, such as the identification and selection of appropriate suppliers, their evaluation and development, and the monitoring of their performance.

On the other hand, top management support and long-term commitment, trust, joint actions, supplier evaluation, strategic goals, effective communication and asset-specific investments have been found to be critical factors in SD in order to improve supplier performance and buyers' competitive advantage (Handfield, Krause, Scannell & Monczka, 2000; Li et al., 2007, 2012). Several researchers have highlighted suppliers' importance to buying firms' operational performance, while considering them as a virtual extension of buyers and observing that combined inter-organizational communication is the most important prerequisite for converting a firm's efforts in SD (e.g., Wagner & Krause, 2009; Modi & Mabert, 2007). Therefore, SD strategies concerning competitive pressure, supplier evaluation and incentives, and the direct involvement of buying firms in training suppliers are considered as the most comprehensive internal and external activities supporting inter-firm relationship development (Krause et al., 2000; Modi & Mabert, 2007). Table 3 elaborates the most comprehensive set of SD strategies obtained from prior research.

Table 3. Supplier development strategies

Supplier development strategies	Studies	Explanation
Supplier assessment	Krause et al., 2000; Modi & Mabert, 2007; Song & Di Benedetto, 2008; Hammami et al., 2014; Ho et al., 2010; Agan et al., 2016; Blonska et al., 2013; Glock et al., 2017	A supplier assessment and certification scheme warrants and encourages high performance by supplier and raises the organization's expectation about performance.
Competitive pressure	Krause et al., 2000; Modi & Mabert, 2007; Glock et al., 2017	Multiple supply bases enable firms to put competitive pressure on suppliers by encouraging others to improve quality and supply performance.
Supplier incentives	Krause et al., 2000; Modi & Mabert, 2007; Agan et al., 2016; Wagner & Krause, 2009; Sucky & Durst, 2013; Glock et al., 2017	Supplier incentives help to motivate suppliers in order to enhance their capabilities, resulting in cost advantage, continuity of business and increased volume. These include forms of supplier recognition through awards.
Direct involvement	Krause et al., 2000; Modi & Mabert, 2007; Ghijsen et al., 2010; Li et al., 2012; Agan et al., 2016; Blonska et al., 2013; Glock et al., 2017	Organizations follow a pre-emptive method in order to enhance suppliers' performance by direct involvement. This involvement may contain asset-specific investments etc.

Although prior research has focused on the significance of SD as an integrated means of enhancing suppliers' performance and capabilities (Modi & Mabert, 2007; Burt et al., 2003), and their strategic role in the value chain (Kwon et al., 2010), it has failed to identify the link between a comprehensive set of SD strategies and buyer-supplier relationship development. Moreover, theoretical and empirical evidence of the effectiveness of SD strategies in inter-firm relationship development is extremely fragmented, as well as individually focused with limited understanding (Sillanpää et al., 2015; Shahzad et al., 2016). Based on these previous seminal studies, this study identifies a comprehensive set of SD strategies concerning supplier assessment, competitive pressure, supplier incentives, and forms of direct involvement that improve the performance of both buyer and supplier and support relationship development.

2.3 Relationship governance mechanisms

The importance of managing buyer-supplier relationships to achieving superior relationship performance has increased and become a predominant research issue throughout the supply chain (Liu et al., 2009; Luo et al., 2015). Therefore, effective governance in accordance with TCE and SET is the key instrument that supports firms seeking to enhance relationship performance and stability, while academia has been more attentive towards different aspects of relationship governance structures (Liu et al., 2009; Liu, Li et al., 2017; Liu, Luo et al., 2017). In such relationship exchanges, the main question concerns how to design such a governance structure effectively where both parties are fully committed to fulfilling common business objectives (Yu, Liao & Lin, 2006; Liu et al., 2009; Luo et al., 2015). Therefore, relationship partners need to design and employ several governance mechanisms to deal with operational hazards and achieve relationship objectives (Yu et al., 2006). Several researchers have highlighted the significant multiple governance mechanisms within relationship structures for successfully governing transactions between buyer and supplier (e.g., Bai et al., 2016; Liu et al., 2009; Yang et al., 2017; Lumineau & Henderson, 2012). Hence, derived from the economic and social rationality of TCE and SET, transactional and relational governance mechanisms have emerged as systematic frameworks of inter-firm governance structures centred on enhancing relationship performance (Liu et al., 2009; Liu, Li et al., 2017). The purpose of these mechanisms is not only to cope with issues regarding safeguards against opportunism, conflicts and higher transaction costs, but also to develop an environment of successful coordination and trust, which ultimately minimizes inter-firm uncertainty and enhances performance outcomes.

2.3.1 Transactional governance mechanisms

Transactional governance mechanisms, according to TCE, are manifested as economically embedded organizational measures, which are derived from economic rationality and rely on a binding legal and economic framework (Liu, Li et al., 2017; Luo et al., 2015) that supports the process of managing, monitoring and harmonizing relationship partners' behaviours (Liu et al., 2009). Conflicts, opportunism and higher transaction costs in buyer-supplier relationships have always been dilemmas because each party in a relationship strives to accomplish its own business objectives (Samaha, Palmatier & Dant, 2011). Transactional mechanisms, therefore, offer structural ways to avoid these operational hazards in governing successful relationship exchanges (Williamson, 1985; Hawkins et al., 2008; Liu et al., 2009; Liu, Li et al., 2017). Transactional determinants (i.e.,

contract completeness and interdependence) are demonstrated as being mutually specified contractual clauses and idiosyncratic relationship-specific investments (Brown, Dev & Lee, 2000; Yeung et al., 2013).

Contractual completeness comprises term specificity, contingency adaptability and contractual obligatoriness (Luo, 2005). Term specificity delineates the specificity and details of contractual terms, whereas contingency adaptability concerns the contractual handling of future problems. Contractual obligatoriness includes the legal clauses to which partners are bound and allows for the possibility to penalize the counterpart (Cannon, Achrol & Gundlach, 2000; Luo, 2002, 2005; Reuer & Arino, 2007), as well as protects against exploitation (Lumineau & Malhotra, 2011). As private goal-seeking may create potential risks and misunderstandings between partners (Luo & Park, 2004), a contract functions as a comprehensive tool (i.e., explicitly explaining roles and responsibilities for both partners) controlling for future contingencies and behavioural uncertainty (Liu et al., 2010). While interdependence is a significant transactional incentive factor in monitoring relationship exchange, which necessitates both partners to invest idiosyncratically in physical and human assets that have a lower alternative value (Kumar, Scheer & Steenkamp, 1995; Ali & Larimo, 2016; Khalid & Ali, 2017), explicating that from relationship partners requires a joint motivation of forbearance (Heide, 1994; Liu, Li et al., 2017). Such idiosyncratic investments can be tangible (i.e., technical equipment, facilities and financing) or intangible (i.e., administrative and technical personnel, tacit knowledge, particular technologies or skills) (Jap & Anderson, 2003).

2.3.2 Relational governance mechanisms

Relational governance mechanisms, according to SET, are manifested as socially embedded organizational instruments, which are derived from social rationality and rely on informal arrangements and practices in the context of economic activities that support the process of managing, monitoring and organizing relationships (Liu et al., 2009; Luo et al., 2015; Liu, Li et al., 2017). SET suggests that relationship exchanges rooted in strong relational bonds drive relationship partners to control operational hazards, i.e., conflicts and transaction costs (Granovetter, 2005; Heide & John, 1992; Li et al., 2010). Relational governance mechanisms, therefore, offer relational ways and provide standards of anticipated behaviours, which prevent the need for coercive relations to avoid these operational hazards while strengthening relationship exchanges (Hawkins et al., 2008; Liu et al., 2009; Liu, Li et al., 2017). Based on SET, this study categorizes two relational determinants (i.e., trust and communication) as useful approaches,

as well as underlying the impact of these relational ties on managing successful inter-firm relationships.

As a relational governance mechanism, trust is depicted as a significant non-contractual force that results in inter-firm relationship performance improvement; this is explained as the willingness to trust or have confidence in a counterpart concerning their reliability, benevolence and integrity (Dyer & Chu, 2011; Khalid & Ali, 2017; Liu, Li et al., 2017). Trust, as a source of flexibility and tacit knowledge among relationship partners, minimizes uncertainty by predicting the counterpart's behaviour and aligning their actions accordingly (Liu et al., 2009; Yang et al., 2017). Furthermore, trust enhances firms' confidence and behavioural consistency by critically calculating the perceived risk and exhibiting a cooperative atmosphere between relationship partners, which influences their choice of more collaborative strategies in a disagreement in order to develop and sustain long-term relationships (Lui & Ngo, 2004; Liu et al., 2009; Yang et al., 2017). Meanwhile, communication is depicted as an effective relational instrument in developing collaboration, integration and cooperation (Kim & Chai, 2017), which refers to the mutual expectation of formal and informal information exchanges that are meaningful, frequent and timely (Hung & Lin, 2013; Wang, Wang, Jiang, Yang & Cui, 2016). Mutual effective communication and the frequent availability of particular information act as effective safeguards in deterring perceived risks, conflicts and uncertainty, and help in fostering relationship partners' confidence by aligning perceptions and expectations (Yang et al., 2017; Yen, Shih-Tse Wang & Horng, 2011; Liu, Li et al., 2017). Table 4 explains both relationship governance mechanisms (i.e., transactional and relational) within successful governance, based on the most seminal literature.

Table 4. Relationship governance mechanisms

Relationship governance mechanisms	Studies	Successful governance explanation
Transactional mechanisms	Liu, Li et al., 2017; Luo et al., 2015; Liu et al., 2009; Samaha et al., 2011; Williamson, 1985; Hawkins et al., 2008; Brown et al., 2000; Yeung et al., 2013; Bai et al., 2016; Yang et al., 2017; Lumineau & Henderson, 2012; Poppo & Zenger, 2002	Transactional governance mechanisms are manifested as economically embedded organizational measures, which are derived from economic rationality and rely on a binding legal and economic framework that support the process of managing, monitoring and harmonizing partners' behaviours in relationship exchanges.
Contract completeness	Luo, 2002, 2005, 2009; Cannon et al., 2000; Reuer & Arino, 2007; Lumineau & Malhotra, 2011; Liu et al., 2009; Yang et al., 2017; Liu et al., 2010; Luo & Park, 2004; Malhotra & Lumineau, 2011; Woolthuis et al., 2005; Luo et al., 2015; Liu, Li et al., 2017; Crocker & Reynolds, 1993; Sande & Haugland, 2015; Shahzad et al., 2017	Inter-firm contractual governance is manifested as a significant instrument effectively regulating behavioural boundaries, operational risks and opportunism in the course of developing relationship commitment and cost performance.
Interdependence	Kumar et al., 1995; Ali & Larimo, 2016; Khalid & Ali, 2017; Heide, 1994; Liu, Li et al., 2017; Jap & Anderson, 2003; Wu & Wu, 2015; Kohtamäki et al., 2012; Williamson, 1985; Dyer, 1997; Liu et al., 2009; Shen et al., 2017; Young-Ybarra & Wiersema, 1999; Caniëls & Gelderman, 2007; Schmitz et al., 2016; Liu, Luo et al., 2017; Anderson & Weitz, 1992; Jap & Ganesan, 2000; Shahzad et al., 2017	Interdependence is a significant transactional incentive factor in monitoring relationship exchange and necessitates both partners to invest idiosyncratically in physical and human assets that have a lower alternative value.
Relational mechanisms	Liu et al., 2009; Luo et al., 2015; Liu, Li et al., 2017; Granovetter, 2005; Heide & John, 1992; Li et al., 2010; Hawkins et al., 2008; Poppo & Zenger, 2002	Relational governance mechanisms are manifested as socially embedded organizational instruments, which are derived from social rationality and rely on informal arrangements and practices in the context of economic activities that support the process of managing, monitoring and organizing relationship exchanges.
Level of trust	Dyer & Chu, 2011; Khalid & Ali, 2017; Liu, Li et al., 2017; Liu et al., 2009; Yang et al., 2017; Lui & Ngo, 2004; Brouthers & Brouthers, 2003; Gulbrandsen et al., 2017; Zaheer et al., 1998; Dyer, 1997; Liu et al., 2010; Burkert et al., 2012; Ndubisi, 2011; Shahzad et al., 2017	Trust is depicted as a significant non-contractual force resulting in inter-firm relationship performance improvement, which is explained as the willingness to trust or have confidence in a counterpart concerning their reliability, benevolence and integrity
Communication	Kim & Chai, 2017; Hung & Lin, 2013; Wang et al., 2016; Yang et al., 2017; Yen et al., 2011; Liu, Li et al., 2017; Liu et al., 2009; Phan et al., 2005; Villena et al., 2011; Koza & Dant, 2007; Cai et al., 2009; Shahzad et al., 2017	Communication is depicted as an effective relational instrument in developing collaboration, integration and cooperation and refers to the mutual expectation of formal and informal information exchanges that are meaningful, frequent and timely.

2.4 Ex-post transaction costs

Several researchers have highlighted the importance of transaction costs and argued that they have a major influence on economic effectiveness (e.g., Coase, 1937; North, 1991; Williamson, 1991; Dyer, 1997; Dyer & Chu, 2003; Gulbrandsen et al., 2017). Transaction costs contain all of the expenses occurred in achieving a jointly acceptable agreement (Zaheer et al., 1998; Luo et al., 2015) for carrying out an economic exchange that fluctuates independently of competitive prices and products exchanged (Dahlstrom & Nygaard, 1999), and are divided into ex-ante and ex-post costs (Williamson, 1985; Hennart, 1993; North, 1991). Ex-ante transaction costs can be divided into search and contracting costs, which contain expenses for identifying and evaluating an appropriate relationship partner, as well as writing equally acceptable contracts. On the other hand, ex-post transaction costs can be divided into monitoring and enforcement costs, which contain expenses for monitoring an exchange agreement to ensure that both partners perform their obligatory functions and ex-post negotiating and sanctioning them in the case of their inabilities (Dyer, 1997; Dyer & Chu, 2003; Gulbrandsen et al., 2017). Operational contingencies and constant market turbulence emerge as threats to a static relationship; partners, therefore, carry out renegotiations to handle exchange hazards in order to enhance their operational effectiveness. In this vein, Williamson (1985) argued that relationship firms also have to deal with ex-post transaction costs, even after a jointly acceptable agreement is established.

2.5 Conflict resolution strategies

The operations management literature provides evidence of the paramount importance of inter-firm relationships, wherein relationship partners often have different interests and objectives, meaning that conflicts may arise. These inter-firm conflicts refer to a disagreement between both parties because each party strives to accomplish its own business objectives (Samaha et al., 2011; Yang et al., 2017). As such, conflict is an inevitable feature between relationship partners; firms, however, are lacking any systematic solution to deal with it (Lumineau & Henderson, 2012). Inter-organizational conflict has become a negative force that may lead to confusion and interruptions in business operations (Robbins, 2005). Relationship partners, therefore, need to realize the criticality of these conflicts and employ different CRS when managing successful relationships. Previous studies have highlighted different approaches in conflict resolution, such as integrating, accommodating, negotiating and compromising in buyer-supplier relationships (Lumineau & Henderson, 2012; Ndubisi, 2011), as well as problem-

solving, compromising, enforcing and legalistic strategies in international joint venture contexts (Lin & Germain, 1998; Le Nguyen et al., 2016), which depict firms' behaviour in the case of disagreement. This study adapts problem-solving, compromising and legalistic approaches as CRS because they are more explicit and comprehensive in their nature in terms of resolving buyer-supplier conflicts.

2.6 Synthesis of governance structure: the potential interaction of its determinants

Previous research has provided significant conceptual and empirical evidence regarding the significance of managing these relationships by following the concepts relating to TCE, the resource-based view, SET and institutional theory. However, TCE and SET have emerged as the major theoretical paradigms within research on buyer-supplier relationships. Several studies have suggested that SD approaches contain firms' efforts involved in maintaining competences and a high-performance supply base; firms thus employ SD programs in order to enhance collaboration between buyer and supplier, as well as relationship development (Modi and Mabert, 2007; Sillanpää et al., 2015; Shahzad et al., 2016). This notion urges researchers to examine absolute factors that warrant the success of SD implementation and buyer-supplier relationships. On the other hand, the significantly varying roles of relationship governance mechanisms have dominated discussions on how to manage successful buyer-supplier relationships. Although research on relationship governance has highlighted the effectiveness of both transactional and relational governance mechanisms in governing these relationships, it remains limited to the context of opportunism mitigation (e.g., Liu et al., 2009; Luo et al., 2015) and relationship quality (e.g., Liu et al., 2010). Furthermore, prior research has produced conflicting results of a complementary or substitution nature concerning these governance mechanisms in explaining relationship performance. This situation necessitates further investigation into the relative effectiveness of relationship governance mechanisms in achieving joint objectives. These mechanisms can help to foster inter-organizational relationship performance by supporting firms not only in the choice of the most appropriate CRS when conflict arises, but also in minimizing transaction costs and maximizing relationship commitment. This set of strategies and mechanisms creates a governance structure between relationship partners. The reasons for choosing this governance structure are to cope with the issues regarding transaction costs and inter-firm conflicts, and to develop an environment of successful SD and relationship commitment. Therefore, building on TCE and SET, the theoretical discussion in earlier sections of this chapter makes it explicit that managing successful buyer-supplier relationships can be highly influenced by employing an

effective and interrelated governance structure of SD strategies, transactional and relational governance mechanisms, and CRS.

In sum, prior studies have investigated inter-firm performance in numerous ways, but this diversity of approaches reflects an apparent lack of consensus on what effectively explains the management of buyer-supplier relationships. In other words, in spite of providing several perspectives on relationship performance, SD strategies, governance mechanisms, CRS and ex-post transaction costs, as antecedents to relationship performance, are only found in isolation. The extant literature has overlooked how these strategies and mechanisms are linked to each other and, more importantly, failed to explain the managing process in buyer-supplier relationships. Therefore, a combined framework, based on TCE and SET, which explores and investigates the determinants of a relationship governance structure and their impact on buyer-supplier outcomes should represent an important contribution to the research on inter-firm relationship governance. Figure 2 depicts a conceptual framework of the main determinants of governance structure in managing successful buyer-supplier relationships, as combined in this study.

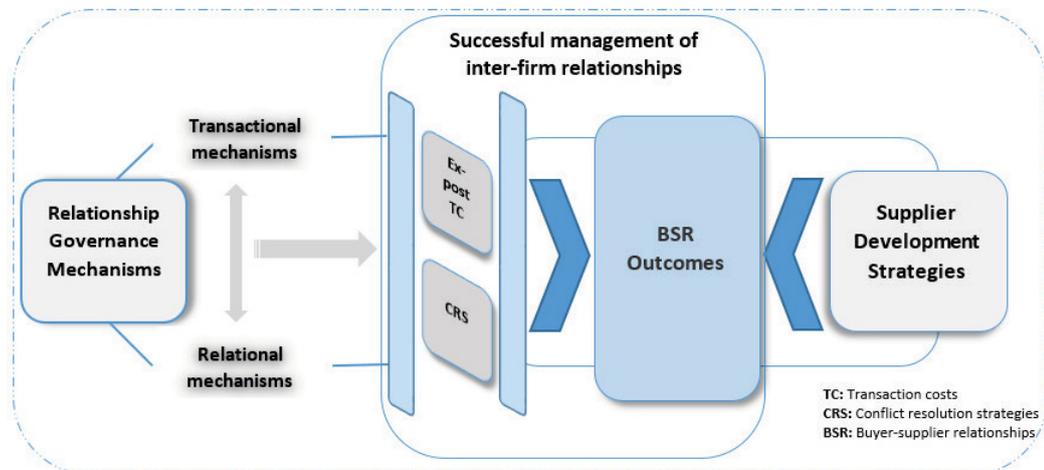


Figure 2. Conceptual framework

3 RESEARCH METHODOLOGY

This chapter discusses the methodological choices and empirical research design of the study, based on the research objectives. Particularly, it provides detailed justifications of the chosen philosophical assumptions, techniques, and research methods and approaches.

3.1 Research approach

In this subchapter, the research approach, in terms of the procedures and decisions, aligned with the research philosophy, design and methods, employed to address the research problem in the best possible manner, is clarified. Prior relationship governance research has examined the roles of governance factors, either quantitatively (e.g., Bai et al., 2016; Yang et al., 2017; Liu et al., 2009; Luo et al., 2015) or qualitatively (e.g., Makkonen, Vuori & Puranen, 2016; Schmitz, Schweiger & Daft, 2016), while mixed methods approaches appear to have been rarely used (Golicic & Davis, 2012). Mixed methods (i.e., a combination of both qualitative and quantitative) have emerged as important research approaches by providing a complete understanding of a research problem (Creswell, 2014; Hall, 2013). Therefore, this dissertation employs mixed methods as its research approach because it integrates both qualitative and quantitative studies in order to present a holistic picture of buyer-supplier relationship development. In the following, the most important intersection of components involved in the research approach is presented.

3.1.1 Philosophical worldview/paradigm

The research philosophy adopted by a researcher encompasses fundamental assumptions of viewing the world, which reinforce research strategy and research methods (Saunders, Lewis & Thornhill, 2009). Philosophical worldviews can be seen as common sets of beliefs influencing the process of research (Morgan, 2007; Creswell, 2014). It guides researchers in the choice of methodology employed to understand the research problem, based on the alignment of philosophical assumptions about ontology, human nature and epistemology, and the research objectives (Hurmerinta-Peltomäki & Nummela, 2004; Collis & Hussey, 2009; Guba & Lincoln, 2004; Cohen, Manion & Morrison, 2011). These efforts elucidate the configuration of research and represent a general philosophical positioning about the world in a study, enabling researchers to build an argument regarding their choices of particular methodological approaches for a research project (Creswell, 2014). Prior research has highlighted differences in philosophical

paradigms and ongoing arguments about “paradigm wars” regarding “what world view or beliefs researchers bring to inquiry”. Several worldviews of a post-positivist, constructivist, transformative, post-modernist and pragmatist nature have emerged in the seminal literature (Creswell & Plano Clark, 2011; Creswell, 2014; Teddlie & Tashakkori, 2003; Saunders, Lewis, Thornhill & Bristow, 2016). Post-positivist assumptions are linked to the quantitative research approach, wherein researchers claim that their understanding is based on the purpose, reductionism and verification of theory. Constructivist assumptions (usually linked with interpretivism) are associated with the qualitative research approach, wherein research is developed from the bottom up, based on the understanding and subjective views of participants’ experiences, social and historical construction, and theory generation. The transformative (also known as participatory) worldview holds that assumptions are influenced by political and societal concerns and often related to qualitative research approach. Post-modernism highlights language and alternative suppressed views, and establishes ways of understanding in the world (Saunders et al., 2016). Lastly, the pragmatist world view is linked with the mixed methods approach, wherein researchers claim that their understanding is based on consequences of actions, as well as problem-centred, pluralistic and real-world practice-oriented assumptions (Creswell & Plano Clark, 2011; Creswell, 2014; Teddlie & Tashakkori, 2003).

Philosophical worldviews contain common components, while adopting different positions on these features. These world views vary and always build upon the researcher’s understanding of the world and the nature of reality (ontology), what establishes acceptable knowledge and how we advance our knowledge of what we know (epistemology), the understanding of the role that values play in research (axiology), the research process (methodology) and the research language (rhetoric) (Creswell & Plano Clark, 2011). These elements frame a debate about the choice of the most relevant research philosophy and guide researchers to conduct and articulate their research, given that these elements describe different ways of viewing the world’s reality and carrying out research. However, efforts to understand philosophical assumptions assist researchers in elucidating the overall configuration of research, and identifying the most suitable research methodology in relation to their research objectives (Easterby-Smith, Thorpe, Jackson & Lowe, 2012). Consequently, this study follows the pragmatist worldview because it integrates both qualitative and quantitative methods and strives to bring together objectivism and subjectivism, facts and values, accurate and valuable knowledge, and real-world practice-oriented assumptions. Table 5 describes the paradigm components of the chosen world view (i.e., pragmatism) for this dissertation.

Table 5. The study's philosophical worldview and paradigm components

Paradigm components	Pragmatism
Ontology (i.e., nature of reality)	External, multiple and practical realities, fluctuation of process and practices to best enable answering of questions (e.g., researchers test hypotheses and provide several viewpoints).
Epistemology (i.e., how we advance our knowledge of what we know)	Practicality of knowledge and theories enabling effective action, problem-focused, incorporating different viewpoints to provide acceptable knowledge (e.g., researchers collect information in terms of “what works” to address questions).
Axiology (i.e., role of values in research)	Multiple positions, value-driven research (e.g., researchers encompass both biased and unbiased viewpoints).
Methodology (i.e., research process)	Integration of methods (e.g., mixed, multiple, qualitative, quantitative, action research), focused on practical results.
Rhetoric (i.e., research language)	Formal or informal (e.g., researchers may integrate both formal and informal styles of writing).

Pragmatism, as the chosen research philosophy in this study, asserts that the research problem and research questions are the most important factors concerning the philosophical assumptions about ontology, epistemology and axiology. A pragmatist research philosophy evolves out of actions, situations and consequences (Creswell, 2014), and if the research problem does not clearly suggest a certain knowledge or method. This view holds that there are multiple realities and supports different techniques of interpreting the world and carrying out research to create a complete picture (Saunders et al., 2016; Saunders et al., 2009). Schoonenboom (2017) argued that the research purpose in pragmatism is to solve temporary problems and include a sequence of experiences where prior beliefs are revised, based on particular research actions. Pragmatist researchers freely choose different methods, techniques and procedures for collecting, analysing and interpreting data in order to arrive at a better understanding of the research problem (Morgan, 2007; Creswell, 2014).

3.1.2 Research design and methods

According to Saunders et al. (2009), methodological choices (i.e., quantitative and/or qualitative) are not made in isolation, but are based on a monomethod (i.e., particular data collection approach and corresponding analysis techniques) or multiple methods (i.e., several data collection and analysis approaches to answer the research question). The research design and methods include the overall plans and strategies for the study, associated with three research designs of quantitative, qualitative and mixed methods, which provide a particular direction for processes on a research project (Creswell, 2014). Several factors inform the research design, such as research objectives, existing knowledge, available resources, techniques and procedures for data collection, analysis and interpretation, and philosophical underpinnings that drive researchers to choose the most relevant research design (Saunders et al., 2009). Quantitative research design is related to a post-positivist world view and includes experimental (true experiments and quasi-experiments) and non-experimental designs, such as surveys. On the other hand, qualitative research design is associated with constructivism and includes narrative and phenomenological research. Mixed methods research design is mainly associated with a pragmatist world view and combines qualitative and quantitative research techniques, procedures and strands, either at the same time (parallel) or one after the other (sequential), thereby neutralizing the weakness of each data set (Saunders et al., 2009; Creswell & Plano Clark, 2011; Creswell, 2014).

3.2 Research approach, design and methods of this study

Managing successful buyer-supplier relationships is a complex and dynamic phenomenon, where the capability of applied research methods is important in order to explain it comprehensively. A comprehensive understanding of this central research phenomenon requires more than one type of approach because single-method research techniques are insufficient (Golicic & Davis, 2012). Several researchers (e.g., Spens & Kovacs, 2006; Golicic & Davis, 2012) agree that any particular research method comprises certain inherent biases, which jeopardize the theoretical development as well as the evolution of any discipline. Therefore, this dissertation follows the pragmatist worldview because it integrates both qualitative and quantitative studies and strives to bring together objectivism and subjectivism, facts and values, accurate and valuable knowledge, and real-world practice-oriented assumptions in order to provide a rich understanding of the complexity and dynamism of buyer-supplier relationship management by addressing the research problem pragmatically. Furthermore, this dissertation

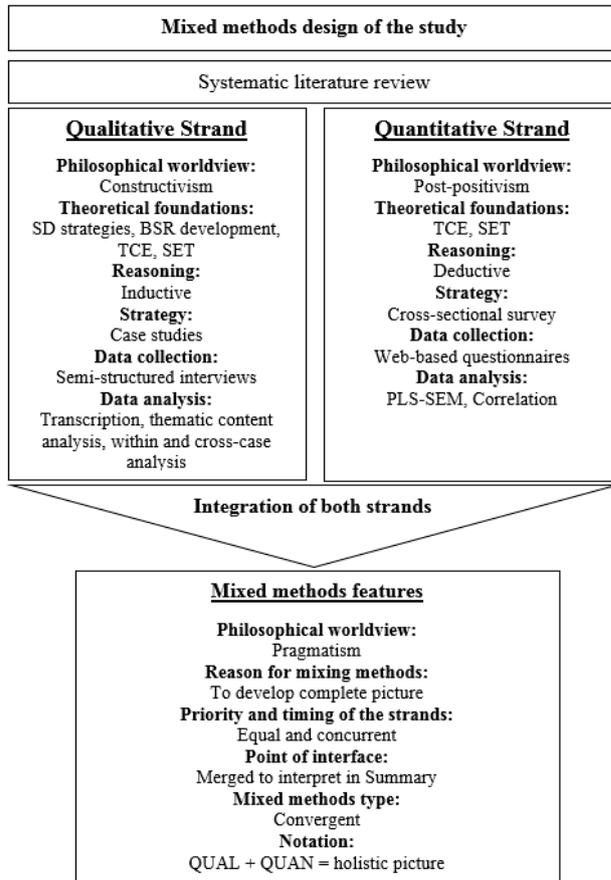
employs a mixed methods research approach because the limitations of either method (i.e., qualitative or quantitative) counterbalance those of the other, while the research questions capture a complete picture of the phenomenon, which covers the important elements of the research problem by finding innovative solutions (Bryman, 2006). The mixed methods approach in this dissertation consists of both participants' views on buyer-supplier relationship management and an investigation into the interrelationship between and among variables, which are appropriate for theory building and theory testing, respectively (Saunders et al., 2009; Creswell & Plano Clark, 2011; Johnson, Onwuegbuzie & Turner, 2007). Both study designs in this dissertation (i.e., qualitative and quantitative) complement and help in verifying the validity of each other (Tashakkori & Teddlie, 2010), while diminishing the likelihood of unanticipated outcomes (Saunders et al., 2009).

This dissertation consists of five articles (focusing on the areas of buyer-supplier relationship governance, conflict management, SD and performance), which include a systematic literature review, and a qualitative and quantitative approach in order to supporting the notion of pragmatism and mixed methods research. The research approach in this dissertation depicts an integrated summary of all the articles, following both qualitative and quantitative methods. This study implements qualitative and quantitative strands/studies in parallel, prioritizes the methods equally, and combines the results from all the articles during the overall interpretation provided in the summary. The final synthesis consists of a pragmatic world view, with an emphasis on mixed methods, and highlights a complete picture of the phenomenon. Table 6 below depicts the research approach, design and methods adopted in each article.

Table 6. Research approach adopted in the articles

Articles	Research designs	Research methods
Article 1	Systematic literature review	Intensive review of supplier management, SD process factors, their impact on buyer-supplier relationship performance, and a comprehensive set of SD strategies. Several of the most relevant and seminal studies are reviewed.
Article 2	Qualitative (single case studies), based on validating the research framework empirically proposed in Article 1	Semi-structured interviews with 20 key executives (11 from buyers, nine from suppliers). Within-case analysis.
Article 3	Qualitative (multiple case study), exploratory case study	Semi-structured interviews, three case studies, qualitative data analysis techniques: data-driven thematic analysis and putting all the information in classified chronological order. Within- and cross-case analysis.
Article 4	Quantitative (survey)	Web-based questionnaire, data collection involving 170 SMEs in Finland. Data analysis: partial least squares (PLS) structural equation modelling (SEM).
Article 5	Quantitative (survey)	Web-based questionnaire, data collection from 170 SMEs in Finland. Data analysis: PLS SEM.

Figure 3 demonstrates how the mixed methods design was implemented in this dissertation, while explaining the philosophical worldview, reasons for mixing methods, priority and timing of the strands, point of interface, type of mixed methods and notation. It also contains both qualitative and quantitative strands, which explain the philosophical view, theoretical foundations, reasoning, research strategy, and data collection and analysis approaches adopted for each design. As mentioned earlier, this dissertation included both qualitative and quantitative methods, the main sources of the data consisted of systematic literature review, semi-structured interviews and web-based survey depending on the scope and nature of the each publication. A comprehensive explanation of data collection and analysis techniques is provided adequately in each publication in addition to Table 6.



Note: SD indicates supplier development; BSR indicates buyer-supplier relationships
TCE indicates transaction cost economics; SET indicates social exchange theory
PLS-SEM indicates partial least squares structural equation modeling

Figure 3. Mixed methods used in the dissertation

3.3 Value and rationale used in the dissertation

This section provides a rationale for the choice of mixed methods and argues that this choice is the most appropriate approach in order to comprehensively understand this dynamic field of buyer-supplier relationship governance, as a single-method approach would be insufficient (Golicic & Davis, 2012). Several researchers have emphasized the importance of mixed methods research and argued that a mixing strategy provides a better understanding of research phenomena than either qualitative or quantitative methods (e.g., Giddings, 2006; Palmer, 2008; Creswell, 2014). With single-method approach (i.e., qualitative or quantitative) has limitations and presents different viewpoints: for example, the generalizability of results can be absent in qualitative results, while the understanding of any individual is limited in quantitative research (Creswell & Plano Clark, 2011). Therefore, the mixed methods approach used in this

dissertation allowed for the limitations and weaknesses of both approaches (i.e., qualitative and quantitative) to be offset at a general level, while offering a sophisticated method to access both qualitative and quantitative data at a practical level. At a procedural level, the mixed methods approach helped us to obtain a holistic understanding of the research problem by comparing or relating different viewpoints drawn from both qualitative and quantitative results (Creswell, 2014). Factors related to procedural intention and practical aspects drive researchers to select a particular mixed methods design, i.e., a convergent parallel, explanatory sequential or exploratory sequential design (Creswell, 2014). This dissertation follows a convergent parallel design because both quantitative and qualitative strands are converged and prioritized simultaneously in order to present a broad analysis of the research problem. Both qualitative and quantitative strands are kept independent in the data collection phase, while analyses are merged in order to display a side-by-side comparison or highlight a relationship between two different stories in order to interpret the overall results (Creswell & Plano Clark, 2011). In this vein, Bryman (2006) argued that a mixed methods approach offers a greater research validity by employing both strands and can be integrated to triangulate results in such a way that these may be mutually corroborated. Accordingly, the mixed methods approach in this dissertation offers utility, draws meta-inferences developed through the complete, balanced and useful findings for both academics and practitioners, and represents the diversity of views drawn from qualitative and quantitative perspectives (Ihantola & Kihn, 2011). Therefore, this dissertation enhances the integrity of the findings by synthesizing the results from both types of study (i.e., qualitative and quantitative) and better achieves the research objectives by answering “what” and “how” questions in significant ways.

3.4 Quality of the research

Research quality consists of the reliability and validity of the research. Reliability and validity are important indicators of valid research and refer to the extent of the repeatability, quality, consistency and accuracy of research findings (Johnson et al., 2007; Creswell & Plano Clark, 2007). This dissertation confirms the reliability and validity of the research whereby all necessary steps were taken for each individual article. Quantitative reliability elucidates the consistency of measurements and can be tested by employing certain procedures (Jordan & Hoefler, 2001; Tashakkori & Teddlie, 1998), while validity is of three types: external, internal and construct validity. However, qualitative reliability refers to the consistency of the researcher’s approach across different research projects (Gibbs, 2007), while qualitative validity refers to the credibility of case studies and the accuracy of research findings from the perspective of the researcher by

employing certain techniques (Creswell, 2014; Ryan et al., 2002). Therefore, each article in this dissertation validates the quality of the research by explaining the respective reliability and validity, and logically develops the consistency and accuracy between meta-inferences and research objectives. External validity is achieved by ensuring the generalization of research findings in quantitative articles across populations, contexts and time (Dellinger & Leech, 2007; Modell, 2005), while internal validity confirms the extent to which the inferences of a causal relationship between variables are effective. Construct validity is achieved by ensuring the measurability of the constructs used in the study (Tashakkori & Teddlie, 1998).

On the other hand, the research quality of the mixed methods approach consists of the components of both qualitative and quantitative approaches, in parallel, in order to draw a meta-inference in the process of achieving the research objectives (Ihantola & Kihn, 2011). Researchers (e.g., Teddlie & Tashakkori, 2003; Tashakkori & Teddlie, 2008) have previously referred to internal validity and credibility as “inference quality”, dividing it into design quality and interpretive rigor. Design quality helps in evaluating the methodological rigor of mixed methods, whereas interpretive rigor relates to the criterion of assessing the validity of conclusions. Furthermore, inference transferability reflects external validity in mixed methods research and generalizes the research findings across populations, contexts and time (Tashakkori & Teddlie, 2008; Lincoln & Guba, 2000). On the other hand, Onwuegbuzie and Johnson (2006) referred to mixed methods validity as “legitimation” and argued that it takes place at every stage of the mixed methods process. Thus, the meta-inference of this dissertation is based on the inference quality (i.e., accuracy of inductively and deductively derived conclusions) and data quality (i.e., quality of collected data considered to be valid and reliable), as well as combines the findings of individual articles by clarifying the notion of mixing methods (Venkatesh, Brown & Bala, 2013).

4 SUMMARY OF THE ARTICLES

This chapter seeks to summarize the articles relevant to this dissertation. The dissertation comprises five articles, which focus on governance structure in the context of managing successful buyer-supplier relationships. Four of the articles are published in refereed international journals whereas one article is included in peer-reviewed conference proceedings. This chapter briefly presents the objectives, research findings and contributions in order to provide an overview of each article. The published articles are attached to the dissertation towards the end.

The present author is both the lead author of each appended article (except for Article 1) and the corresponding author (except for Article 2), and has made important contributions to all articles. For example, as Article 1 was a literature review manuscript, the author was in charge of correspondence with the respective journal and contributed equally in research planning, research design, reviewing the literature, and writing the manuscript along with the co-authors. As Article 2 was a qualitative single case study, the author along, with the second author, significantly contributed to research planning and design, presenting the extended research framework from SD to buyer-supplier relationship, based on the literature, and shaping the research, methods, results and conclusions. The collected research data were analysed by the second author, and the other co-authors contributed by providing their input and valuable feedback. Article 3 comprises qualitative multiple case studies, where the author contributed considerably throughout the drafting of the manuscript. The author was responsible for correspondence with the journal as well as the research design, data collection, analysis and writing the manuscript. The other co-authors provided valuable feedback on the research and helped with data collection and analysis. Articles 4 and 5 were quantitative manuscripts: the author contributed solely to Article 5, while Article 4 was a co-authored manuscript. In Article 4, the author was in charge of research design, data collection and drafting the whole manuscript, while the second author helped with data analysis. The other co-authors put forward comments, concerns and valuable feedback in the course of drafting and revising the manuscript. Table 7 below presents an overview of the key findings in each article.

Table 7. An overview of the key findings in each article

Articles	Title	Key findings
Article 1	Supplier development and buyer-supplier relationship strategies – a literature review	A comprehensive framework based on SD approaches to supplier assessment, competitive pressure, supplier incentives and direct involvement, which are considered as the most important internal and external activities a firm undertakes in order to yield buyer-supplier relationship development.
Article 2	Benchmarking supplier development: an empirical case study of validating a framework to improve buyer-supplier relationship	The findings reveal that supplier incentives and direct involvement are the most important SD as well as relationship development factors. Meanwhile, the top management role of both buyer and supplier acts as a facilitator in trust-building by permitting both partners to share important information. Supplier evaluation allows firms to keep suppliers' operations consistent according to their required operational competency. Consequently, by implanting all the determinants of SD intact, the buyer-supplier relationship is developed along with operational performance.
Article 3	Managing for success: the role of transactional and relational mechanisms in buyer-supplier relationships	Our findings highlight the impact of transactional and relational factors on transaction cost and relationship performance. This study reveals that a trustful atmosphere between parties helps to resolve conflicts and safeguard contingencies, which in turn enhances transaction value and reduces transaction cost. Trust and communication are the most important factors in developing long-term relationships with business partners. Symmetric interdependence reduces the potential uncertainty surrounding outcomes, replicates a level of competitiveness and relationship synergy, and develops a higher transaction value.
Article 4	The varying roles of governance mechanisms on ex-post transaction costs and relationship commitment in buyer-supplier relationships	First, economic and sociological mechanisms are equally important from transaction costs containment to relationship commitment development. Further, this study notably finds that sociological mechanisms and symmetric dependence function in a complementary manner, while sociological mechanisms and contractual governance function as substitutes. Lastly, economic mechanisms perform a more powerful role in minimizing ex-post transaction costs, whereas sociological mechanisms enhance relationship commitment more effectively.
Article 5	Conflict resolution strategies and buyer-supplier relationship performance: the role of governance mechanisms	The results indicate that a problem-solving strategy is the most crucial conflict resolution approach, which firms always prefer to use in a conflict situation. A legalistic strategy may be the least resort (i.e., when relationship partners cannot mutually break out of a deadlock situation), but preferable of specific contract terms have been violated. The use of a compromising strategy is influenced by interdependence, while trust demonstrates that the interdependency between firms drives them to compromise in order to resolve the conflicts. Further, problem-solving and compromising are the most significant CRS for enhancing relationship performance, whereas a legalistic strategy can hurt partners' feelings and diminish relationship performance.

4.1 Supplier development strategies

Article 1 is entitled “Supplier development and buyer-supplier relationship strategies – a literature review”. The purpose of this article is to identify and construct a step-by-step process framework for more comprehensive internal and external SD approaches, in order to provide a pathway towards improved buyer-supplier relationships. Further, this study aims to explore the most relevant and seminal literature on SD efforts that influence buyer-supplier relationships in order to identify future research avenues.

SD and buyer-supplier relationships are important building blocks in inter-firm relationship governance. Firms that support suppliers’ capability development improve relationship commitment, while efforts geared towards influencing the behaviour of suppliers drive relationship satisfaction. Suppliers’ capability development aims to improve operational competence and includes the buying firm’s human and capital investments, training, site visits, personnel exchange and information-sharing in order to achieve short-term as well as long-term needs. Therefore, suppliers’ capability development has emerged as a critical relational investment because such an idiosyncratic investment is difficult to redeploy and makes the relationship important to both firms, which in turn adds unique value to the relationship. Similarly, increased interest in SD activities highlight the importance of strategic collaboration between buyers and suppliers to enhance operational performance and build stronger and longer-term relationship commitment. Transaction-specific efforts, infrastructural matters, education and training, direct involvement, supplier evaluation, incentives, and effective communication are found to be critical SD factors enhancing trustworthiness in the relationship. The competitive advantage and financial performance of both buyer and supplier are crucial sources that determine the strength of ties, survivability and ranking on the market. Thus, SD strategies have been found to reflect the significant efforts that firms undertake for enhancing product development integration, joint planning and integrating information systems.

4.2 Supplier development to buyer-supplier relationship development

Article 2 is entitled “Benchmarking supplier development: an empirical case study of validating a framework to improve buyer-supplier relationship”. This article explores the role played by different SD efforts and highlights the outcomes of implementing and validating an integrated research framework, as developed in Article 1, through a case study. Further, the propositions presented in this study

identify the most critical SD strategies that help in developing buyer-supplier relationships (see Figure 4).

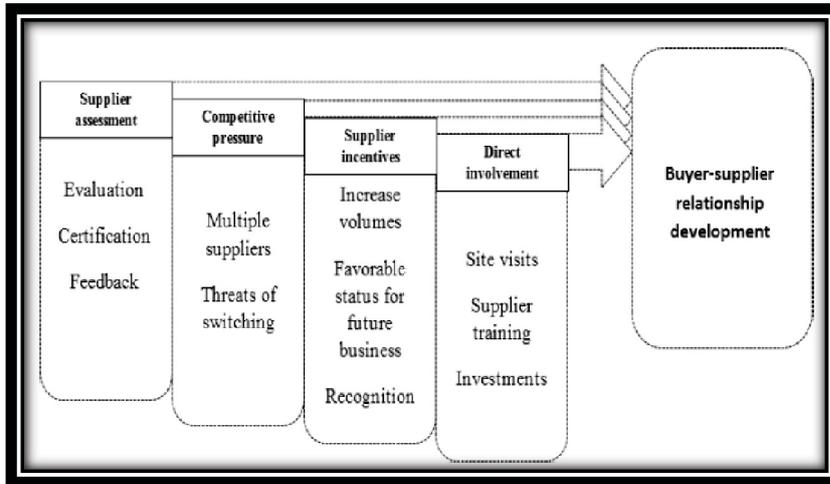


Figure 4. Supplier development to buyer-supplier relationship development

The findings reveal that SD strategies are significant strategic tools to develop buyer-supplier relationships and increase a supplier's performance and capabilities. SD efforts in improving supplier capabilities also benefit buyers with improved products and competitive advantage, thereby enhancing confidence in each other. Furthermore, firms make direct investments in suppliers in terms of on-site meetings, providing training and equipment, and indirect investments in terms of setting up performance targets and incentives for suppliers, and measures for SD activities. Both internal and external factors (e.g., length of buyer-supplier relationship, sharing of power, organizational strategies and technological uncertainties) are involved in implementing successful SD programmes that support long-term relationship development. Meanwhile, the top management role of both buyer and supplier acts as a facilitator in trust-building by permitting both partners to share important information. Supplier evaluation allows firms to keep a supplier's operations consistent according to their required operational competency. Consequently, by implanting all the determinants of SD intact, both parties' willingness towards and interest in SD are important facilitators, which create opportunities for improving operational and relationship performance. Therefore, this study contributes by proposing a combined research framework containing several benefits of cost efficiency, continuous quality progress, better customer services, improved delivery performance and reduced product cycle time.

4.3 Buyer-supplier relationship success

Article 3 is entitled “Managing for success: the role of transactional and relational mechanisms in buyer-supplier relationships”. Strategically managing buyer-supplier relationships has become the most important driver of sustainable competitive advantage, such that firms in a supply chain network identify the significance of business relationships in terms of achieving organizational objectives and success. Therefore, the purpose of this article is to investigate the underlying effect of relationship governance factors in buyer-supplier relationships through multiple case studies. This article develops an integrated framework of transactional and relational factors that influence buyer-supplier relationship outcomes. The findings of this article demonstrate the impact of transactional and relational factors on transaction cost and relationship performance. This study reveals that trustworthiness facilitates relationship partners in safeguarding contingencies and resolving conflicts, which in turn results in achieving transaction value and cost advantage. Trust and effective communication are therefore found to be pivotal mechanisms in developing long-term relationships. Further, symmetric interdependence reflects a higher transaction value through minimizing the potential of uncertainty and replicating a level of competitiveness and cooperation in the relationship. Figure 5 illustrates the combined framework of governance factors influencing transaction costs and relationship performance.

This study provides a new dimension to managers in order to integrate and reconsider the most suitable transactional and relational factors while making decisions that support the minimization of transaction costs and the maximization of buyer-supplier relationship outcomes. Further, it provides insights that help in understanding the importance of these factors in inter-firm operations.

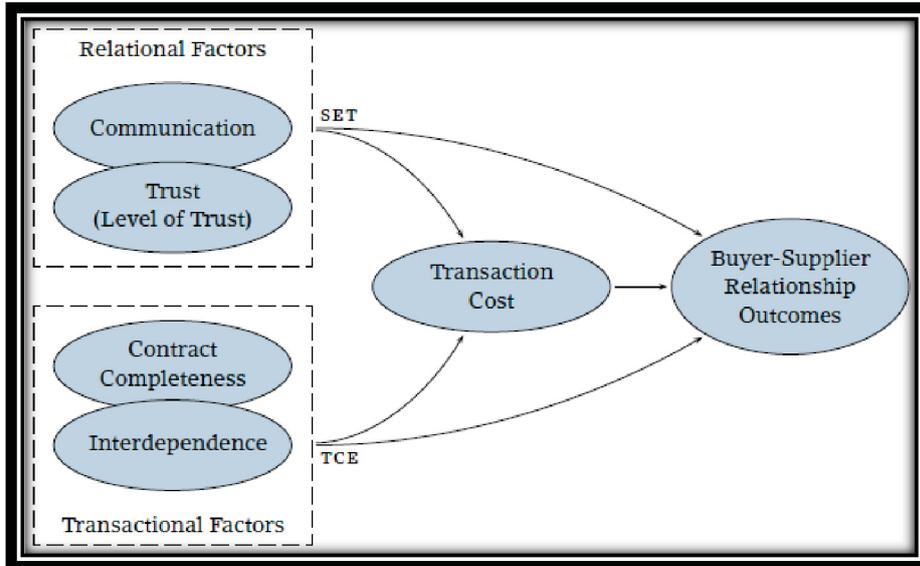


Figure 5. Integrated framework of relationship factors based on two theoretical perspectives

4.4 The varying roles of relationship governance mechanisms

Article 4 is entitled “The varying roles of governance mechanisms on ex-post transaction costs and relationship commitment in buyer-supplier relationships”. Building on TCE and SET, this article investigates the varying roles of economic (i.e., contract completeness and symmetric dependence) and sociological (i.e., trust and communication) governance mechanisms. A theoretical integrated framework is tested by employing a non-parametric technique (i.e., PLS) to SEM and semi-partial correlation. The proportion of the variance in the dependent variable (R^2) that is predictable from the independent variable provides a satisfactory measure of how well observed outcomes are replicated by the model based on the proportion of total variation of outcomes explained by the model that is between 21% - 43%. However, as PLS-SEM does not offer fit indices, a confirmatory factor analysis (CFA) was computed in addition, wherein the results specified a good model fit.

An analysis of data from 170 buyer-supplier relationships established by Finnish SMEs indicates that economic and sociological mechanisms are equally important in terms of transaction cost containment and relationship commitment development. Further, sociological mechanisms function as substitutes with contractual governance and complement symmetric dependence in relation to ex-post transaction costs and relationship commitment. However, economic

governance mechanisms have a more effective role in minimizing ex-post transaction costs, whereas sociological governance mechanisms are more powerful in enhancing relationship commitment. This study contributes to the industrial marketing and management literature by portraying a comprehensive picture of relative effectiveness, as well as the joint use of both economic and sociological governance mechanisms influencing ex-post transaction costs and relationship commitment. The empirically comparative investigation into the concurrent examination of these two effects supports managers in understanding the relative influence of varying governance mechanisms in order to manage successful buyer-supplier relationships. Such techniques provide firms with the opportunity to evaluate the relative effectiveness of various governance mechanisms. Governing successful inter-organizational relationships requires relationship managers to show their willingness and commitment towards planning and operationalizing an optimal governance structure. Firms should consider different governance mechanism choices for different transaction objectives such that managers are encouraged to examine which mechanism is more crucial for a particular task.

4.5 Conflict resolution strategies and buyer-supplier relationship performance

Article 5 is entitled “Conflict resolution strategies and buyer-supplier relationship performance: the role of governance mechanisms”. The purpose of this study is to investigate the relationship between relationship governance mechanisms (i.e., contract, interdependence, trust and communication), the choice of CRS and the effects on relationship performance. This approach is different from earlier conflict management studies and provides a more integrative perspective of the buyer-supplier conflict resolution process. The theoretical integrated framework is tested by employing variance-based PLS-SEM. The proportion of the variance in the dependent variable (R^2) that is predictable from the independent variable provides a satisfactory measure of how well observed outcomes are replicated by the model based on the proportion of total variation of outcomes explained by the model that is between 28% - 42%. However, as PLS-SEM does not offer fit indices, a confirmatory factor analysis (CFA) was computed in addition, wherein the results specified a good model fit except GFI and NFI values that need further analysis.

The results based on empirical evidence show that firms’ choice of CRS depends on the governance mechanisms employed between relationship partners. The problem-solving approach is the most preferable choice, while the legalistic approach remains the path of last resort, influenced by different governance

mechanisms. Interdependence and trust drive firms to compromise in order to resolve inter-organizational conflicts. Further, the strategies selected by firms may also bolster or deteriorate relationship performance. This study contributes to the industrial marketing literature by extending earlier conceptualizations, while linking both transactional and relational governance mechanisms with conflict resolution processes. It also demonstrates the effect of soft and hard CRS on buyer-supplier relationship performance (see Figure 6).

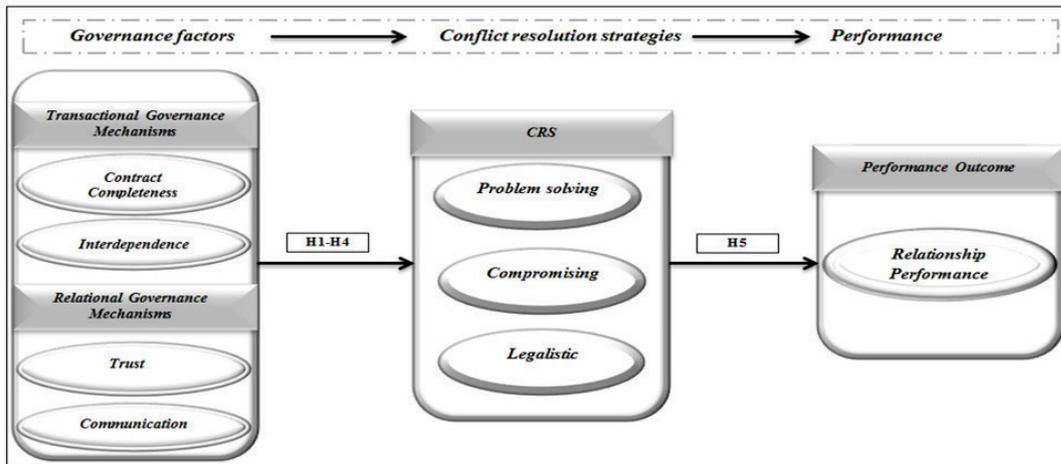


Figure 6. Conflict resolution in buyer-supplier relationships

An awareness of possible actions and behaviours of partners thus prevails in the relationship during conflict, which help managers to achieve resolution effectively. Thus, managers should understand that a cooperative and integrative problem-solving approach is the most crucial of all CRS, as it facilitates open discussion and mutual agreement in order to obtain a “win-win” solution. Further, trustworthy relationships provide both partners with a level of confidence with which to compromise in the interests of the long-term relationship. Similarly, interdependency between firms drives them to compromise because of relationship-specific investments employed in the relationship. A legalistic strategy may be the last resort for managers in cases where partners cannot mutually break out of a deadlock situation. As this is a lengthy and expensive approach and can hurt partners’ feeling, managers should ensure that conflicts are resolved through alternative approaches in order to minimize the impact on relationship performance.

5 DISCUSSION AND IMPLICATIONS

The main purpose of this dissertation was to explore and highlight the effectiveness of governance structure in managing successful buyer-supplier relationships. Therefore, this chapter intends to present a discussion and conclusions concerning the dissertation, based on the findings of each article included in the study. It starts with the theoretical contributions of the dissertation by answering each sub-question, followed by a response to the main research question. The main research question is answered by providing a summary of the main findings of this dissertation in order to develop a comprehensive understanding of the research topic. Furthermore, this chapter intends to offer significant managerial implications to firms that are involved in inter-firm relationships. This dissertation, therefore, advances TCE and SET by providing a holistic view of an effective governance structure in the context of buyer-supplier relationship development. Finally, this chapter outlines the main limitations and suggests potential future research avenues.

5.1 Theoretical contributions

In spite of the significance of buyer-supplier relationships and the effective roles of governance mechanisms, prior research has provided limited understanding and conflicting views of these fundamental strategic boundary decisions affecting business performance. Therefore, this dissertation aims to address the research gaps and investigates the antecedents of governance structure and its impact on inter-firm relationship performance in order to develop a better understanding of how firms can receive manifold benefits from managing successful inter-firm relationships, with a specific focus on the following: relationship development and performance improvement, relationship commitment, reduced ex-post transaction costs and conflict resolution. For this purpose, the dissertation attempts to address the concerns mentioned above in relation to the different relationship governance structure perspectives presented in the five articles. Each article addresses the research problem and contributes to the related research question by offering empirical testimony of the phenomenon.

5.1.1 Answering research sub-question 1

The first sub-question, “What approaches support the development of suppliers’ performance and how do SD strategies significantly improve buyer-supplier relationship development?”, is answered by the first two articles. This research question was so framed because the extant seminal research fails to recognize the

clarity of the process of SD within buyer-supplier relationship development. Particularly, the literature has overlooked the comprehensive framework of systematic SD strategies and approaches, which are employed to steer firms towards supporting buyer-supplier relationship development (Sillanpää et al., 2015; Shahzad et al., 2016; Li et al., 2012). Therefore, Article 1 contributed to the literature by approaching this sub-question through identifying and constructing the most comprehensive set of SD strategies that can enhance suppliers' performance and capabilities and provide a pathway towards improved buyer-supplier relationships. The second article, which is a continuation of Article 1, approaches this sub-question by signifying different roles of SD strategies and investigating how these strategies encourage firms towards developing buyer-supplier relationships by implementing and empirically validating the conceptual framework developed in the previous article.

These approaches include supplier assessment (i.e., evaluation, certification and feedback), competitive pressure (i.e., multiple suppliers and threats of switching), supplier incentives (i.e., increased volumes, favourable status for future business, and recognition and rewards) and direct involvement (i.e., site visits, supplier training and investments). These efforts enhance the level of understanding between firms and encourage information-sharing, suppliers' response to buyers' needs, top management's interest, and cross-functional teams, thereby improving relationship performance (Krause et al., 2007; Blonska et al., 2013). SD strategies can also be employed to enhance suppliers' capabilities, from low involvement activities (i.e., evaluation) to more resource-demanding activities (i.e., investment and training) (Wagner & Krause, 2009; Arroyo-López et al., 2012). Firms that support suppliers' capability development improve relationship commitment (Blonska et al., 2013); as such, it has emerged as a critical relational investment because such an idiosyncratic investments is difficult to redeploy and makes the relationship important to both firms, which in turn adds unique value to the relationship. Thus, theoretical and empirical evidence for a process framework involving a comprehensive set of SD strategies, as well as an explicit set of propositions, demonstrates that firms not only receive competitive advantage by implementing successful SD programmes but also improve operational and relationship performance (Li et al., 2012). Both Articles 1 and 2 clearly position their strands and contribute to the extant literature by linking SD and buyer-supplier relationships, which was missing from or separately discussed in previous articles.

5.1.2 Answering research sub-question 2

The second sub-question, “How do the underlying relationship governance factors affect buyer-supplier relationship outcomes?”, is answered by Article 3. This research sub-question was formulated because existing inter-firm relationship studies fail to provide a complete understanding of how firms in such a relationship are able to minimize their transaction costs and enhance relationship performance with reference to effective transactional and relational governance factors. This article mainly contributes to the existing research by exploring the degree to which effective relationship governance factors influence transaction costs and relationship outcomes. In particular, this article builds on the foundations of TCE and SET and advances the theoretical perspective by integrating their mechanisms of interdependence, contracts, communication and trust in a framework. It also contributes to an evaluation of these factors in combination, in relation to a specific relationship found in multiple case studies, where knowledge can be acquired in detail, and recommends how relationship partners can receive relationship benefits, even if the relationship is not sufficiently matured. In turn, the article reveals that relational governance mechanisms of trust and communication are more effective in enhancing relationship performance, which is a finding that is consistent with those of prior studies (e.g., Liu et al., 2009). Relationship partners intend to create a trustful environment in order to facilitate information sharing, conflict resolution and safeguarding contingencies (Dyer & Chu, 2011; Liu, Luo et al., 2017). Similarly, transactional factors are also important, as symmetric interdependence reflects a higher transaction value through minimizing the potential of uncertainty and replicating a level of competitiveness and cooperation in the relationship (Liu, Li et al., 2017; Shen, Wang & Teng, 2017).

5.1.3 Answering research sub-question 3

The third sub-question, “What are the major relationship governance mechanisms and what are the underlying varying roles of these mechanisms in minimizing transaction costs and inter-firm conflicts, and maximizing relationship commitment and relationship performance?”, is answered by Articles 4 and 5. This research sub-question was framed because, although prior inter-firm relationship governance literature identified ineffective governance as the key reason why relationships fail, it produced mixed evidence and conflicting views, and failed to explain explicitly the varying effective roles of relationship governance mechanisms in minimizing ex-post transaction costs and conflicts, and maximizing relationship commitment and performance. Conflicting empirical results on the nature of governance mechanisms (i.e., complementarity and/or

substitutes) and their isolated existence overlook the significant question about varying roles these mechanisms play. Employing effective relationship governance mechanisms has therefore emerged as a panacea for firms' competitive woes, such as resource scarcity, higher transaction costs, conflicts and relational risks (Corsten et al., 2011). To this extent, these articles advance the theoretical streams by synthesizing two relevant theories (i.e., TCE and SET) and by offering a comprehensive picture of relationship governance mechanisms.

Article 4 approaches this research sub-question by defining the relative effectiveness as well as the joint use of both transactional (i.e., contract completeness and symmetric dependence) and relational (i.e., trust and communication) governance mechanisms influencing ex-post transaction costs and relationship commitment. In particular, this article supports and add to the reasoning of TCE and SET by offering additional insights, while incorporating a complementarity view of sociological mechanisms and symmetric dependence, and a substitution view of sociological mechanisms and contract completeness. Thus, it suggests that forms of contractual governance function as substitutes with sociological governance and can be alternatively adopted, depending upon the objectives of the collaboration (Li et al., 2010; Wang, Yeung & Zhang, 2011). Instead, symmetric dependence more easily complements sociological governance because of its nature of relational embeddedness (Lee et al., 2017). Furthermore, the empirically comparative investigation into the concurrent examination of these two effects support us in understanding the relative influence of varying governance mechanisms in order to manage successful buyer-supplier relationships. Although both governance mechanisms drive cost advantage and commitment, their effects are different (Liu, Luo et al., 2017; Yang et al., 2016). Thus, different governance structures are required for different transaction objectives. A better understanding of relationship outcomes and collaboration goals drives managers to analyse which governance mechanism is more crucial for a particular task (Yang et al., 2016; Liu et al., 2009).

Article 5 sets out to answer this research sub-question by providing new insights into conflict resolutions between buyer and supplier and models, relationship governance mechanisms (i.e., contract completeness, interdependence, trust and communication) as antecedents in the choice of CRS, and their impact on relationship performance. As this article argues that transactional and relational governance mechanisms may be connected to the choice of effective CRS when conflicts arise, firms should rely on these mechanisms in order to diminish conflicts and encourage cooperation. Article 5 significantly contributes to the TCE and SET literature and extends earlier conceptualizations by empirically testing a combined governance mechanism model for influencing conflict resolution

processes and identifying the most preferable strategy, as well as demonstrating the effect of soft and hard conflict strategies, which can suppress or bolster relationship performance. The findings validate and add to the theoretical reasoning by demonstrating that a problem-solving strategy is the most crucial conflict resolution approach (influenced by both transactional and relational mechanisms), and the most popular among firms during a conflict situation as it enables a cooperative environment (Lumineau & Henderson, 2012). A legalistic strategy may be used as the last resort (i.e., when relationship partners cannot mutually break out of a deadlock situation), but preferable when specified contract terms are violated (Cannon et al., 2000; Lusch & Brown, 1996). Influenced by interdependence and trust between relationship partners, firms will seek to compromise in order to resolve conflicts (Han & Harms, 2010; Dyer, 1997; Ndubisi, 2011). Similarly, when trust is in place, relationship partners may compromise in order to pursue a longer-term relationship. Problem-solving and compromising are the most significant CRS that enhance relationship performance (e.g., Lin & Germain, 1998; Le Nguyen et al., 2015; Mohr & Spekman, 1994), whereas a legalistic strategy can hurt partners' feelings and diminish relationship performance (e.g., Le Nguyen et al., 2015; Lin & Germain, 1998; Lu, 2006). Thus, it is important that relationship partners recognize the contextual situation in which choices are made concerning effective strategies (Lin & Germain, 1998) that help to anticipate conflict resolution behaviours (Lin & Wang, 2002).

5.2 Synthesized results and overall contributions

This sub-section provides an answer to the main question of this dissertation: "What factors explain an effective relationship governance structure, and how does this governance structure ensure relationship outcomes when managing buyer-supplier relationships?" In turn, it puts forward an explicit idea about the most relevant pathway for managing successful buyer-supplier relationships through employing and aligning a significant governance structure, which is missing from the literature. Effective inter-firm relationship governance signifies an efficient design of the economic exchange structure within which both relationship partners strive to collaborate and are fully devoted to fulfilling common business objectives, resulting in beneficial outcomes and relational stability (Liu et al., 2009; Luo et al., 2015; Liu, Li et al., 2017; Liu, Luo et al., 2017). As discussed earlier, the significance of buyer-supplier relationships has been documented in relation to fundamental strategic boundary decisions affecting business performance; however, prior research has highlighted the salient governance structure with limited

understanding and conflicting views, thereby reflecting an apparent lack of consensus about the nature of efficiently managed buyer-supplier relationships.

Therefore, this dissertation contributes to the inter-firm relationship governance literature by offering a comprehensively integrated theoretical and empirical framework, which explains the varying roles of relationship governance structure in successful buyer-supplier outcomes, based on the synthesized findings from all five articles. In particular, this dissertation significantly advances the relevant research by incorporating TCE and SET, as well as two relevant concepts of SD and relationship governance, on the premise that SD, and transactional and relational mechanisms are equally important factors in achieving manifold relational benefits. Figure 7 presents an overall picture of the important building blocks in systematic buyer-supplier governance. This framework addresses the research gaps and responds to the calls for systematic research (explained in Chapter 1 in detail) by answering the main research question and linking the missing dots in the literature. Furthermore, an important implication of this dissertation pertains to the empirical setting because it integrates both MNEs and SMEs from Finland into the empirical analysis and provides additional evidence regarding the varying roles of governance structure in buyer-supplier relationships. Finally, this dissertation also makes significant methodological contributions. As prior inter-firm relationship governance research lacked the use of mixed methods (Golicic & Davis, 2012), this dissertation has employed such an approach in order to practically achieve the research objectives and arrive at a holistic understanding of a well-researched field of study by covering important elements of the research problem.

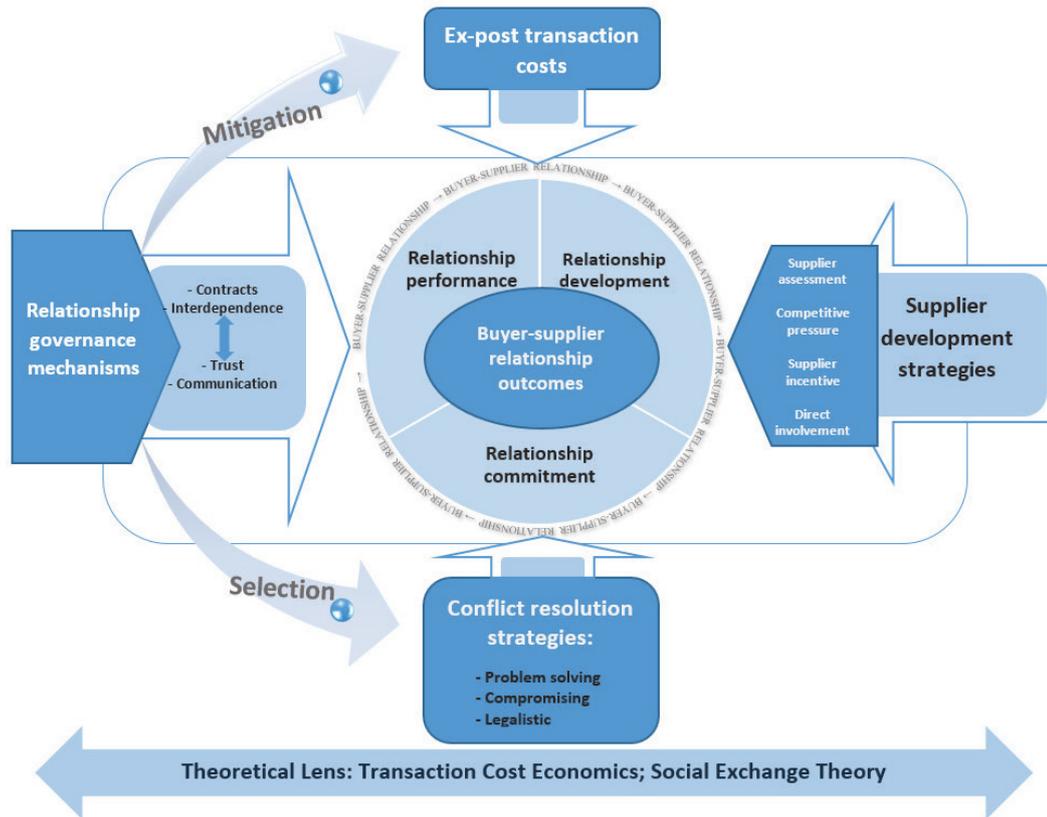


Figure 7. Synthesized research model

5.3 Managerial implications

Firms establish buyer-supplier relationships in order to achieve common objectives and relational benefits. They are also eager to develop these relationships, even in turbulent environments, and effectively cooperate to avoid uncertainties and operational hazards. An effective governance structure between relationship partners is central in terms of attaining transaction value. Therefore, this dissertation has intended to address the significant varying roles of governance structure in developing buyer-supplier relationships, in a way that is of practical value to business practitioners involved directly in inter-firm relationships, as well as innovative start-ups where technology and knowledge dependency is crucial.

The multidimensional framework of this dissertation suggest that managers can receive manifold benefits from managing buyer-supplier relationships (i.e., transaction costs advantage, conflict resolutions, relationship development, long-term commitment and relationship performance) by employing an effective governance structure. In particular, managers should consider implementing SD

programmes and involve suppliers proactively in developing capabilities in order to align their processes. These efforts towards capability development are critical relational investments, which influence suppliers' behaviours that, in turn, help managers to achieve market responsiveness and attain the benefits of improved products/services through more capable and better performing suppliers, resulting in relational commitment and satisfaction. Top management involvement in SD is critical; it can control operational hazards by effective communication and information-sharing, and facilitate collaborative planning, education and training, and trust between them. Therefore, firms' willingness towards and interest in implanting all the SD determinants intact should encourage them to align organizational objectives and construct an effective and competitive supply base. Thus, employing SD strategies, from supplier assessment to direct involvement, not only supports managers in enhancing suppliers' performance, but also drives them towards long-term relationship development.

Furthermore, this dissertation's findings imply that managers should also understand the importance of relationship governance structure and ensure that optimal mechanism decisions are made under different transaction objectives. Cooperation goals will drive managers to make an assessment of the significance of potential factors for particular tasks. Although the level of contract completeness functions as the foundation of a relationship and prevents ex-post negotiations, once trust is developed between relationship partners, it enhances relational governance, resulting in long-term relationships through cost advantage and fostered commitment. Managers should therefore ensure a trustworthy relationship, which provides both partners with a certain level of confidence to compromise on a "middle-ground" when disagreement arises in order to continue pursuing a long-term relationship and align their business objectives accordingly. In addition, this dissertation proposes that managers should ensure the quality of the existing communication system, as this minimizes the possible information asymmetries and allows relationship partners to learn about each other by sharing substantial knowledge about internal operations and external market conditions. These efforts in support of open and timely information exchanges by managers will protect the relationship from conflicts, opportunism and behavioural uncertainty, as well as mitigate ex-post transaction costs, thereby keeping the firms committed to each other. This dissertation also suggests that interdependence between relationship partners hinders any exploitation and opportunistic behaviour because of idiosyncratic investments that are difficult to redeploy, thereby ensuring that the relationship is important to both firms. Similarly, in the case of inter-firm conflicts, interdependency in terms of the investments made in the relationship produces a socially embedded template and drives managers to follow relational norms by inducing a compromising approach

in resolving the issues that helps them to prevent opportunistic behaviour and facilitate integration and coordination.

Notably, the findings also imply that managers should consider the interdependence between partners as a form of relational governance because of its nature of relational embeddedness, as well as adopting relational mechanisms and interdependence simultaneously, so that a perception of confidence, social goodwill and commitment is created between them. As contractual governance functions are substitutes within sociological governance, managers can adopt them alternatively, depending upon the objectives of the collaboration, because the presence of one obviates the use of another. This notion suggests to managers that the simultaneous use of these functions may complicate the understanding of the relationship, which in turn restricts the enhancement of relationship commitment. Another managerial implication of this dissertation is the relative importance of transactional and relational governance mechanisms, which suggests that managers seeking ex-post transaction cost advantages should pay more attention to transactional factors, whereas managers seeking to resolve a large number of conflicts in an informal manner and develop personal ties should refer more to relational factors.

Inter-firm conflicts can never be avoided; however, the way in which managers respond to these situations plays a significant role in conflict resolution. As such, the dissertation's findings also imply that, in the case of any conflict, managers should be aware of the possible actions and behaviours of their partners, as this will help them to understand the situation well and act accordingly. Managers must consider cooperative problem-solving and/or compromise approaches at first, as these are the most crucial CRS as they facilitate open discussion and mutual agreement in pursuit of a "win-win" solution and improved relationship performance. Unlike problem-solving and compromise strategies, a legalistic strategy may be the last resort for managers in cases where partners cannot mutually break out of a deadlock situation. As this is a lengthy and expensive approach, which can hurt partners' feeling, managers should ensure that conflicts are resolved through alternative approaches in order to minimize the impact on relationship performance.

5.4 Limitations and future research

As with any piece of research, this study has some research limitations, which need to be acknowledged. While every single article contains its own discussion on limitations in detail, this subsection sheds light on the overall limitations of the

dissertation in more general terms and offers potential future research suggestions. First, the overall outcomes of this dissertation are based on diverse industries, where the sample in the study consisted of firms in multiple industries, as opposed to focusing on a specific industry. This approach limits the dissertation and opens up avenues for further research in terms of replicating and extending its findings in a specific empirical context in order to investigate the framework and narrow the research scope. Doing so could reveal interesting findings, which would facilitate a comparison between industries (e.g., manufacturing and/or service industry, technology and knowledge depending start-ups, global markets) under different conditions of power, competitive intensity and uncertainty, and an understanding of the extent to which firms are willing to manage these relationships. Second, the meta-inference of this dissertation is based on the integrated findings of two different empirical settings (i.e., MNEs and SMEs), because the empirical data were collected separately. This dissertation suggests that future researchers should conduct a comparative analysis of these two different empirical settings in order to link comparative behaviours of firms with the importance of governance structure in their operations. Given that MNEs and SMEs are highly different in size and have different amounts of resources, the level of dependence varies according to investments made in a relationship. Further, regardless of the chosen data collection methods, some additional techniques, such as holding focus groups and carrying out a review of records and other documents, could have increased the scope and depth of analysis in order to gather additional information about the level of efficacy in a governance structure as an important platform in developing relationships. Third, this dissertation has only focused on upstream business relationships in the supply chain, in which the focal firms were asked to respond in relation to their key supplier during data collection. In this vein, further research is suggested in order to first compare the roles played by governance structure among other suppliers in the upstream, and then perform the same exercise for downstream operations. By doing so, we would assume remarkably different findings because of the different boundary decisions with respect to the acquisition of requisite capabilities.

Fourth, this dissertation has constructed a comprehensive framework and presented conclusions, based on the integration of five articles representing different concepts, which is a theoretically justified approach. However, an attempt to empirically investigate and verify the interaction among these concepts of SD strategies, CRS and relationship governance mechanisms, in order to explain buyer-supplier relationship outcomes, is lacking. To this extent, further studies could endeavour to empirically investigate these important concepts, in parallel, in order to produce more holistic conclusions. Fifth, although this dissertation acknowledges opportunism as one of the major strands of TCE and portrays it as

a potential obstacle to nurturing cooperation, it does not adopt opportunism as its unit of analysis in order to determine what type of relationship governance structure can mitigate opportunism, and in what way. Further studies should attempt to explore and identify the most relevant governance structure for curtailing opportunism in inter-firm relationships, thereby offering important insights into the dynamics of repeated exchange. Sixth, this dissertation is based on a cross-sectional approach, where only Finnish buyers' perspective of employing a governance structure was probed, which limits its capacity to reflect the constant and dynamic process of relationship development. Thus, a dyadic perspective of the Nordic region and/or emerging markets within a longitudinal setting should help researchers to offer a holistic viewpoint of the challenges in managing inter-firm relationships. Lastly, drawing on TCE and SET, this dissertation adds some new factors to relationship governance structures, which impact buyer-supplier relationship outcomes, while leaving out other factors, such as relational norms, uncertainty, complexity, influence strategies and unexplored goal congruence. Further research could provide both theoretical and empirical understandings of the varying roles of these factors, individually as well as jointly, in the process of minimizing operational hazards, conflicts, opportunism and transaction costs, and maximizing dynamic capabilities and knowledge transfer. While there are both ex-ante and ex-post transaction costs, this dissertation only focuses on the latter. As such, future researchers are encouraged to investigate the impact of several governance structure factors on a broad range of transaction costs (i.e., ex-ante and ex-post).

6 CONCLUSIONS

In today's business environment, firms have realized the importance of their 'make or buy' boundary decisions and their preferences for market transactions or hierarchies in the case of high or low opportunism and transaction cost possibilities. When firms decide to procure items/services from the market, their network relationships become a significant source of gaining access to the required resources, as well as fostering joint performance and long-term exchange relationships. Therefore, firms are eager to improve relationship performance by employing an effective relationship governance structure. In prior research, the significance of these network relationships has been documented in terms of strategic boundary decisions affecting business performance, although with limited understanding and conflicting views. Thus, the essential purpose of this study was to investigate the significant varying roles concerning relationship governance structure in order to provide an explicit idea of the most relevant pathway for managing successful buyer-supplier relationships. The mixed method approach adopted by this dissertation enabled us to combine both qualitative and quantitative studies in order to provide a more holistic picture in response to the main research question. The research indicated the importance of the appropriateness of the design of relationship governance mechanisms, within which both relationship partners strive to collaborate and are fully devoted to fulfilling common business objectives, resulting in beneficial outcomes and relational stability. In particular, by combining the building blocks of different concepts, the research findings demonstrate that SD strategies, relationship governance mechanisms and CRS are equally important factors in achieving lower ex-post transaction costs, and improving relationship commitment, relationship development and relationship performance.

This dissertation extends the understanding of inter-firm management and organizations, while positioning itself between the pertinent theoretical concepts of SD, relationship governance mechanisms and conflict resolution processes in buyer-supplier relationships by linking them and offering a critical redirection of existing views. Building on TCE and SET, this study also argues that single-source dependence can be risky in dynamic and turbulent business environments; firms, therefore, should become directly involved by investing in transaction-specific resources, which have a lower alternative value, in order to create a more specialized resource. Supplier governance processes enhance the level of understanding between firms and include SD efforts that encourage suppliers to respond to buyers' needs in terms of cost, quality, delivery and flexibility. Given that operational hazards are incurred in the course of maintaining any relationship, SD efforts can help to deter suppliers from pursuing opportunistic

behaviour and offset buyers' operational uncertainty, thereby resulting in a cooperative buyer-supplier relationship that alleviates operational costs. Similarly, transactional and relational governance mechanisms are of equal importance and provide institutional frameworks for managing inter-firm transactions, although their effects are different. Relationship partners need to understand their relationship objectives and outcomes clearly in order to analyse and employ the most appropriate governance mechanisms for specific tasks. Such approaches also provide opportunities to both partners in terms of determining the relative importance as well as the interaction (complementarity and/or substitutions) of these factors, within which firms can adopt them simultaneously and/or alternatively in order to achieve long-term cost benefits and improved relationship performance by countering conflicts between partners. Furthermore, the varying nature of these governance mechanisms enables firms to adapt effective CRS, which facilitate cooperative behaviour, address their interests and feelings, and satisfy their needs and relationship objectives. Therefore, this dissertation concludes that a critical understanding of how to achieve relational benefits resides in establishing an aligned governance structure between relationship partners.

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Supplier development and buyer-supplier relationship strategies – a literature review

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Abstract: Academic and corporate interest in supplier development and buyer-supplier relationship has increased substantially in recent years. This paper provides a framework for analysing the current understanding of supplier development strategies, its impact on performance, and buyer-supplier relationship approaches. There is an increased need for buyers and suppliers to strategically collaborate to build a stronger and long-term relationship. The goal is to get extended understanding in buyer-supplier relationship and supplier development strategies. Supplier development is a process of understanding including four steps: 1) supplier assessment; 2) competitive pressure; 3) supplier incentives; 4) direct involvement. Future research can be more empirically focused including multiple case study in global environment to validate the supplier development strategy approaches and help the organisation to develop their supplier's strategies. The presented literature review offers supplier development strategies for empirical case studies and a systematic way to build buyer-supplier relationships to improve the performance.

Keywords: supplier management; supply chain integration; buyer-supplier relationship; supply chain management; supplier development; procurement management.

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228 *I. Sillanpää et al.*

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1 Introduction

Supplier development was used by Leenders (1996) first to explain the determination by manufacturers to enhance the supplier's numbers and to improve their performance. After that, researchers in supply chain management started a discussion of supplier development. In the same time, organisational theorists began discussion of complex-product businesses that incline to be considered as high degree of mutual interdependence of transitional module makers and ultimate assemblers (Pfeffer and Salancik, 1978; Thompson, 1967).

One of the supplier development literature part states and explains the actions before supplier development concept takes place called 'the antecedents' (Krause, 1999). He identifies that

- 1 organisations need to manage their suppliers strategically for the competitive market
- 2 buying firms need to take a strategic viewpoint for suppliers, consider the purchasing function as a significant source for competitive advantage, and make investments in development of suppliers' performance and capabilities
- 3 to increase the supplier commitments, buying firms need to consider their suppliers as virtual extensions that helps to motivate them to improve their performance
- 4 a relationship between buyer and suppliers identifies the opportunity to invest into the supplier development programmes
- 5 communication and information sharing between buyer and suppliers is an important prerequisite to supplier development activities (Krause, 1999).

Moreover, supplier performances and capabilities have significant existence and play a pivotal role maintaining the manufacturing firms' competitive advantage (Humphreys et al., 2001; Krause, 1997; Watts and Hahn, 1993). Supplier development may include goal setting, supplier evaluation, performance measurement, supplier training, and other related activities (Krause et al., 2007). Supplier development approaches could be summarised into Table 1.

Table 1 Supplier development approaches

<i>Factor</i>	<i>Author</i>	<i>Explanation</i>
Communication	Krause (1997), Galt and Dale (1991), Wen-Li et al. (2003) and Wagner and Krause (2009)	Interaction between supplier and buyer
Competitive pressure among suppliers	Krause (1997), Galt and Dale (1991) and Wen-Li et al. (2003)	Use of two suppliers to create competition
Contract	Galt and Dale (1991)	Contract between the buyer and supplier
Customer base	Chakraborty and Philip (1996)	Suppliers number of customers
Demographic information	Watts and Hahn (1993) and Krause and Scannell (2002)	Information like gross annual contract sales, number of employees, etc.
Direct involvement	Krause (1997) and Krause and Scannell (2002)	Buyer firm site visits, product knowledge, training of suppliers personnel, investment to suppliers operation
Green supplier development	Blome et al. (2014), Dou et al. (2013), Igarashi et al. (2013), Fu et al. (2012), Lee and Kim (2011) and Bai and Sarkis (2010)	Green and sustainable supplier development
Interdependence	Chakraborty and Philip (1996)	The relationship with buyer and supplier
Level of involvement in supplier development programmes	Watts and Hahn (1993) and Krause and Ellram (1997a)	Management support for supplier development projects
Local versus international sourcing	Galt and Dale (1991)	Product is produced locally or sourced from abroad
Product development involvement	Chakraborty and Philip (1996), Arumugam et al. (2011) and Talluri et al. (2010)	The role that the supplier plays in product development
Supplier base	Krause (1997) and Galt and Dale (1991)	Number of suppliers in buyer firm supplier base
Supplier certification	Galt and Dale (1991) and Krause and Scannell (2002)	Buyer nominate best performing suppliers
Supplier development incentives	Krause (1997) and Krause and Scannell (2002)	Promising current benefits, promising future business, recognition achievement
Supplier development outcomes	Hartley et al. (1997)	Result-oriented, process-oriented

Table 1 Supplier development approaches (continued)

<i>Factor</i>	<i>Author</i>	<i>Explanation</i>
Supplier development programme objectives	Watts and Hahn (1993) and Arráiz et al. (2013)	To improve quality, on time deliveries, technical capability, etc.
Supplier development programme perspective	Watts and Hahn (1993), Krause and Ellram (1997a) and Arroyo-López et al. (2012)	New sources or long term cooperation.
Supplier development programme team	Watts and Hahn (1993)	Nominated teams for supplier development.
Supplier evaluation	Krause (1997), Watts and Hahn (1993), Wen-Li et al. (2003), Krause and Ellram (1997a), Hahn et al. (1990) and Humphreys et al. (2004)	Buyer personal is assigned to study the present system followed by supplier or supplier itself providing the required data about their present system to the buyer
Supplier involvement in product development and innovation	Johnsen (2009)	Supplier involved in product development and innovation which shorter time to market and improved quality.
Supplier satisfaction	Ghijssen et al. (2010)	Indirect influence strategies and promises encourage supplier satisfaction.
Supplier selection	Galt and Dale (1991), Igarashi et al. (2013), Ordoobadi (2009), Ho et al. (2010), Lee (2009), Önüt et al. (2009) and Chen and Li (2008)	Selection of suppliers according piece, quality, on time deliveries, etc.
Supplier training	Krause (1997) and Galt and Dale (1991)	Training programme with supplier organised by buyer firm
Task structure	Chakraborty and Philip (1996)	Unstructured, semi-structured, structured
Vendor selection methods	Chakraborty and Philip (1996)	Open tender, closed tender, direct selection

The term ‘suppliers’ has become a substantial party who are not only suppliers of goods these days but they have become strategic partners for the firm which represents the importance of their role in the value chain (Kwon et al., 2010). Supplier relationship management or buyer-supplier relationship in a global supply environment is the concepts of management network that involves different skills and knowledge into the field and enhance the possibility of performance (Lintukangas, 2011). Therefore, the relationship between buyer and supplier provide a pivotal prospect for firms to develop strategically global competitive advantage. These relationships have developed to the level of strategic partnership relationship rather competitive (Loppacher et al., 2011). There are some success factors which influence supplier development including:

- 1 effective communication
- 2 an attitude of partnership

- 3 mutual commitment
- 4 top management support.

These factors really define the aspect of supplier development and its success which ultimately is a resource to develop buyer-supplier relationship and continuous performance improvement through competitive advantage (Sucky and Durst, 2013).

The process of supplier development is a dimension of supplier development research. For the purpose, Hartley and Choi (1996) suggest a process model which consists of five factors. These five factors are:

- 1 supplier's team leadership
- 2 supplier's top management commitment
- 3 capable joint-development team
- 4 data driven changes
- 5 success of a model line.

Previous studies state that buying firms can communicate more efficiently with suppliers if they put efforts in supplier development including supplier evaluation, supplier training, and supplier award programmes (Krause and Ellram, 1997b). Furthermore, they perceive their suppliers as partners and place a better emphasis on some serious issues (Krause and Ellram, 1997a). Buying firm's tendency to engage in supplier development was affected by its perception of supplier obligation, its anticipation of relationship endurance and operative buyer-supplier communication (Krause, 1999). In the following, there are factors to increase supplier's performance and competences and infrastructure factors of supplier development (Humphreys et al., 2004).

Table 2 Factors to improve performance and supplier development

<i>Infrastructure factors of supplier development</i>	<i>Factors to improve supplier performance</i>
Strategic goals	Increasing supplier performance goals
Effective communication	Providing the supplier with training
Long term commitment	Equipment, technological support and investment
Top management support	Personnel exchanging
Supplier evaluation	Evaluation of supplier performance
Supplier strategic objectives	Recognising supplier progress in the form of awards
Trust	

Source: Humphreys et al. (2004)

More specifically, the determinations of the systematic review are to highlight the supplier development strategies, and buyer-supplier relationships to meet the short and long term supply needs with the help of detailed and updated literature. This will lead to examine the impact of supplier development on buyer-supplier performance and will provide a research framework to identify the step by step process of supplier development and improved buyer-supplier relationships. Moreover, this study explores the examples and literature on supplier development strategies and relationships to

232 *I. Sillanpää et al.*

identify areas for future research to provide a platform based on the detailed literature review (Krause et al., 1998; Krause, 1997, 1999; Giunipero, 1990).

The idea of this study is significantly objective which clarifies the supplier development strategies and approaches, their impacts, and developing buyer-supplier relationships. Thus, this important study collaborates and combines the framework of supplier development approaches which lead to develop a strong relationship and provide the answers to the following research question of the study:

- What approaches support to develop suppliers' performance to improve buyer-supplier relationships?

The main question of the study can be divided into the following sub-questions:

- 1 What are the significant supplier development approaches in the literature which help buyers to improve the performance of suppliers?
- 2 How buyer-supplier relationships can be developed to highlight and to provide the important factors in the relationships for empirical examination?
- 3 Finally, how to combine supplier development strategies with buyer-supplier relationship framework to answer empirical questions?

This research identifies and addresses above mentioned questions by investigating a link between different strategies of supplier development and buyer-supplier relationships performance outcomes.

The following section reviews the research methodology used in this research paper. Based on this review and methodology, a detail literature review is presented in Section 3. Section 4 presents research framework based on the literature. Discussion/conclusions, future research perspectives/implications are discussed in Section 5 and Section 6 respectively.

2 Research methodology

A literature review is a critical summary and assessment of the range of existing materials dealing with knowledge and understanding. The purpose is to discover the research project, to customise its context or background, and to provide insights into previous work (Blaxter et al., 2010). One of the critical primary responsibilities of a researcher is to find out and analyse the existing literature concerns to a research topic (Kumar, 2011). It consists of a comprehensive research through a variety of resources such as books, journals, electronic journals, and abstracts. According to Kumar (2011), a literature review has three functions. First, it explains and emphasis the research question helping researcher to understand the subject area completely and different theoretical approaches applied previously. Secondly, it may develop the methodology. Literature review helps researcher to observe the other investigators' approach to study the chosen phenomena and validity of methodologies. Third, a literature review helps to expand the researcher's knowledge of the area and provide a better command of the chosen area and relevant issues. The greater understanding on existing research area reinforces the validity and findings (Rudestam et al., 2007).

This research paper follows the ideologies for systematic literature review proposed by Tranfield et al. (2003) to ensure the consistency and significance to the practice. In this study, a literature review was employed as the research methodologies to develop a supply chain strategy framework. The literature on supply chain strategies was composed primarily from journals in the areas of strategic management, supply chain management, operations research and operations management. The target was to focus on latest journals from last decade and that is why dissertations, textbooks, unpublished working papers, and conference papers were excluded. The literature search incorporated journals published by numerous publishers and research was done using Scopus which is one of the largest abstract and citation database of research literature. Several hundreds of journal articles were found and that is why the research has to focus the most relevant, cited and newest journals.

3 Supplier development

3.1 *Supplier development strategies*

Hahn et al. (1990) proposed a theoretical model for supplier development and document industry practice. Krause et al. (2000) characterise following useful supplier development strategies:

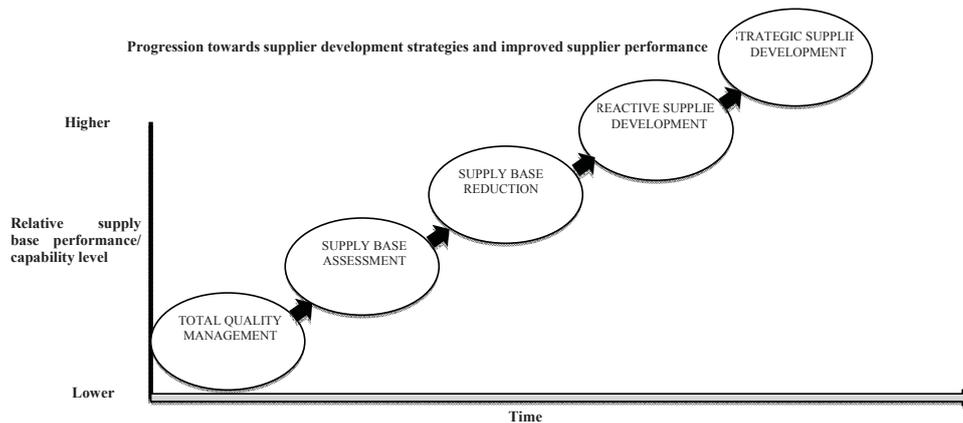
- *Competitive pressure*: Multiple suppliers are more important to develop competitive pressure which help and motivate other suppliers to enhance quality and maintain improved performance (Tezuka, 1997).
- *Evaluation and certification systems*: Supplier evaluation and certification system ensures the suppliers' performance and organisation's expectation of performance. It motivates suppliers to improve performance consecutively (Krause et al., 2000; Carr and Pearson, 1999).
- *Incentives*: Buying firm can offer incentives to motivate suppliers to develop their performance and capabilities which include achieved cost savings sharing, increased volumes consideration, future aspects for business, and recognising them through awards (Monczka et al., 1993; Krause et al., 1998).
- *Direct involvement*: Organisations follow a pre-emptive method to develop suppliers' performance through direct involvement (Krause et al., 2000; Monczka et al., 1993). Direct involvement can be investments in operations or manufacturers can acquire supplier firm (Dyer, 1996).

According to Krause et al. (1998), buying firms follow an evolutionary path to develop suppliers' performance. In the adoption of TQM, respondents specified that they had implemented many or all of the TQM involvements, i.e., focus on customer requirements, supplier partnerships, cross-functional teams, use of scientific methods for performance measurement, and use of quality tools. Moreover, external suppliers focus helps companies to conduct a thorough supply base evaluation of acknowledgment to develop material quality, lower development costs, reduce purchase prices, and improve supplier responsiveness. After the supply base evaluation, organisations emphasis on amalgamation of purchased volumes with fewer suppliers to remove the suppliers'

234 *I. Sillanpää et al.*

incapability of meeting expectations. To further improve the performance and capabilities of their supply bases, respondent firms engaged in supplier development (Krause et al., 1998).

Figure 1 Progression towards supplier's development strategies and improved performances



Source: Krause et al. (1998)

Table 3 Overview of differences between reactive and strategic supplier development

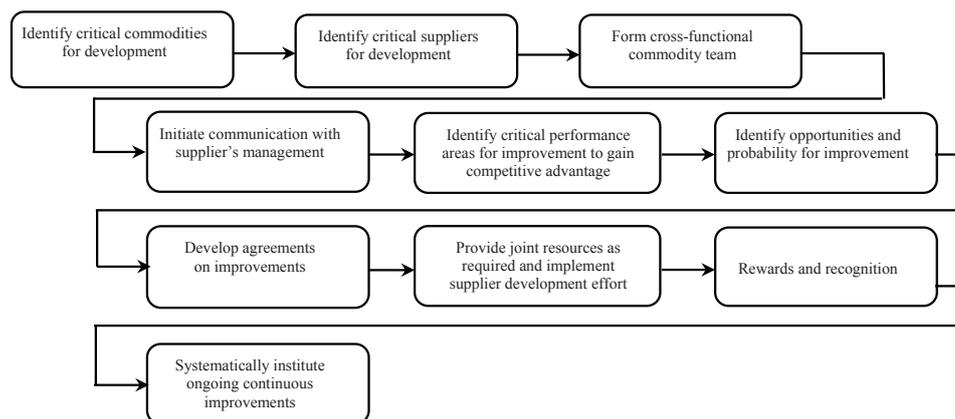
<i>Factors</i>	<i>Reactive</i>	<i>Strategic</i>
Primary question	A supplier performance problem has occurred – what is needed to correct the specific problem?	We have dedicated resources to develop the supply base – where should resources be allocated for the greatest benefit?
Primary objective	Correction of supplier deficiency	Continuous improvement of supply base
Unit of analysis	Short-term improvements Single supplier	Long-term competitive advantages Supply base
Selection/prioritisation process	Supplier development project Supplier self-selects through performance or capability deficiency Problem-driven	Supplier development programme Portfolio analysis Pareto analysis of commodity/suppliers Market-driven
Drivers (examples)	Delivery dates missed Quality defects Negative customer feedback Competitive threat for buying firm Production disruptions Change in make/buy decision	Supplier integration into the buying firm's operation Supply chain optimisation Continuous improvement Value-added collaboration Technology development Seek competitive advantage

Source: Krause et al. (1998)

Krause et al. (1998) presents reactive and strategic supplier development approaches. In the strategic supplier development, initiatives are typically carried out by an executive-level team, with an execution plan being articulated and carried out by a cross-functional commodity team. In this way, reactive firms were not efficient enough in supplier performance assessment and further they recognised as candidates for supplier development only after a problem actually occurred. Table 3 explains some of the major differences between strategic (systematic) and reactive (remedial) approaches to supplier development (Krause et al., 1998).

Krause et al. (1998) present a generic process model for supplier development including ten steps to make systematic supplier development in process-oriented way. It includes critical commodities for development, identify critical suppliers for development, form cross-functional commodity team, initiate communication with suppliers management, identify critical performance areas for improvement to gain competitive advantage, identify opportunities and probability for improvement, develop agreements on improvements, provide joint resources as required and implement supplier development effort, rewards and recognition and finally systematically institute ongoing continuous improvement (Krause et al., 1998).

Figure 2 Strategic supplier development process



Source: Krause et al. (1998)

3.2 The impact of supplier development on buyer-supplier performance and relationship

Supplier development activities can be categorised into transaction-specific and organisational structure of supplier development. The factors of supplier development infrastructure affect the performance of buyers and suppliers (Humphreys et al., 2004). In this vein, transaction-specific supplier development is the basic practice for buying organisations to develop suppliers' performance and capabilities (Krause, 1999). Moreover, supplier development includes direct investment in assets focused to buyer and supplier perspective and training with transaction-specific knowledge (Joshi and Stump, 1999). Krause (1999) explains that buyer's direct involvement to develop suppliers' performance is a key approach for the development and improved quality performance.

The clarity of long-term strategic goals determines the effectiveness of supplier development. Supplier development efforts should focus on future capabilities in technology and product development rather than on current quality and cost (Watts and Hahn, 1993). Effective communication plays a key role between buyers and suppliers to motivate them (Newman and Rhee, 1990; Giunipero, 1990); it enhances the mutual understanding of both parties and reassures the conflict resolution (Spekman, 1988). A long term commitment of buying firm assures a relationship with suppliers where suppliers willingly can make changes in their operations to fulfil the requirements of buyer (Lascelles and Dale, 1989). Supplier evaluation is another important strategy to improve buyer-supplier performance. For the purpose, buyers should select suppliers carefully and evaluate them regularly. Supplier evaluation results could provide valuable information about general areas of weakness where performance improvements were needed. When suppliers follow further developments of its performance and capability by itself to improve competence, a rational and tactical match come into exist between buyer and supplier management which increases possibilities of success in the cooperation (Stuart and McCutcheon, 1995). Trust between buyer and supplier is needed to improve the performance and capabilities of supplier and specially when they jointly investing into a business. Transaction-specific investments help to increase the buyer's reliance on the particular trading association and expose them to larger risk and uncertainty (Krause, 1999). Buyers must safeguard themselves against the hazards of opportunism of suppliers. Buyer trust in the supplier would enhance the effect of buyer assets specificity on joint action in buyer-supplier relations (Humphreys et al., 2004).

According to Humphreys et al. (2004), performance consequences are defined in various extents in the purchasing literature. Giunipero (1990) suggested that capability to handle suppliers' quality, delivery, and lead time, and also to control the acquisition cost has a significant dimension where purchasing function's efficiency can be measured. Watts and Hahn (1993) explained that supplier performance improvement indicator is most important factor to measure the result of supplier development. Moreover, Monczka et al. (1993) stated the key objectives supplier development which a buying firm initiate to increase the competitive advantage of buyer and to improve the relationship between buyer and supplier. In this vein, Humphreys et al. (2004) presented three dimensions of supplier development outcomes, i.e.,

- 1 supplier performance
- 2 buyer competitive advantage
- 3 buyer-supplier relationship improvement (Humphreys et al., 2004).

Furthermore, Hahn et al. (1990) state that upgrading existing suppliers' performance and capabilities help in supplier development to fulfil the changing competitive requirements. Improvements in supplier performance focus on perception of buyers about the quality, delivery, cost, inventory, lead time, and the rate of new product introduction aspects. Further, linking a purchasing strategy with buying firm's overall corporate competitive strategy objectively develops the long-term relations and suppliers' performance and capabilities. Competitive advantage development of a buying firm should be one indicator of efficiency in supplier development (Hahn et al., 1990). Thus, Stuart and McCutcheon (1993) suggested that competitive advantage of buying firms includes market share gains, quality, cost reduction and quick product development. On the other hand, Heide and John (1990) noted that firms efficiently make alliances when

there is some scope and possibility of joint activities. For the purpose, the performance results of buyers are mainly reliant on the performance outcomes of their suppliers. In manufacturing industries, buying firms have four key competitive priorities in their end markets, i.e., cost, quality, delivery time and reliability, flexibility, and outcome of promise (Krause et al., 2007).

Buying firms' development in the product cost is reliant partially on subcomponent suppliers' improvement that means it can be a reduction in rework, scrap, and downtimes. The benefits by reducing the supplier's cost should be partially transferred to the industrial customers in low prices form (Clark, 1989; Human and Provan, 1997; Turnbull et al., 1992). In automotive and electronics industry, the manufacturer follow a low costs of their supplied inputs, lower in final assembly and to provide a competitive price to the consumers (MacDuffie, 1995). Organisations have a key concern about the manufacturing flexibility to meet the changing needs of their customers but flexibility of assembler can be perceived to be a function of suppliers' quality, delivery time, reliability, and flexibility (Krause et al., 2007; Dyer, 1996; Liker and Wu, 2000; Meredith, 2000; Womack et al., 2007).

Performance improvements are often only possible required by buying firms when they make a long-term relationship commitment with their key suppliers (Krause et al., 2007). Previous research suggests that suppliers will be reluctant to promise or commit a relationship specific investment if buying firms are unwilling to sustain long term relationships and mutual investments to improve suppliers' performance (Krause, 1999). Moreover, suppliers consider relationship specific investments as susceptible to resourcefulness when commitments are not tangible or approaching from buying firms (Krause et al., 2000). In this way, supplier development efforts from a buying firm for a purpose to develop the performance or capabilities are more significant to analyse the influence on the its performance and competitive strategy within the buyer-supplier relationship domain (Krause et al., 2000, 1998; Wagner, 2006). For the purpose, Wagner and Krause (2009) stated that to understand the performance improvements in cost, quality and delivery and advantage from increased supplier capabilities, the buyers and suppliers need to jointly involve in relationship focused investments. They may also contribute resources for the development, i.e., information sharing and investing in physical and human assets (Hunter et al., 1996; Dyer and Nobeoka, 2000).

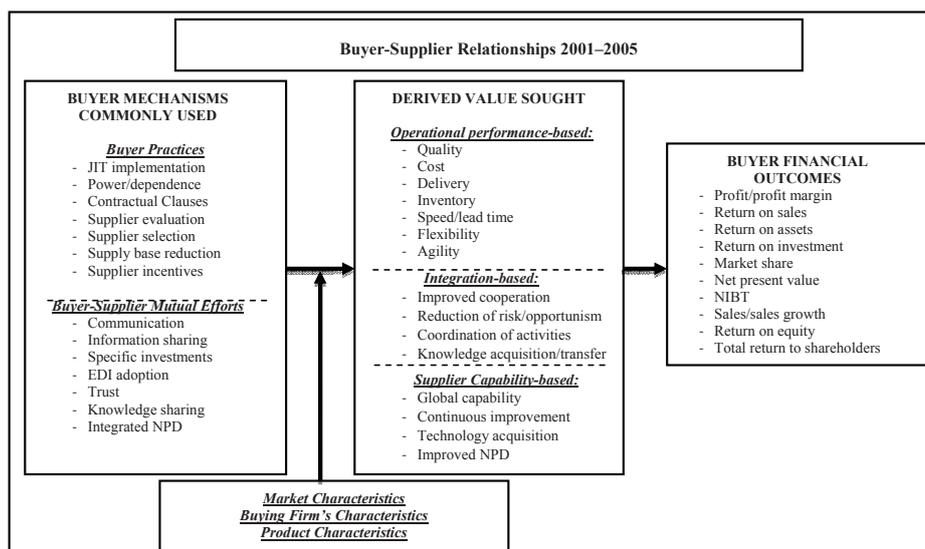
Wagner and Krause (2009) highlighted the research gap in supplier development and explained that research has been lacking because of missing distinction in between supplier development objectives and performance achievements. The relatively less research does not clarify the various goals for supplier development efforts that can be affected on the relationship between buyers and suppliers. For the purpose, Wagner and Krause (2009) presented the important study of supplier development goals. They presented a study where the difference between goals which are short-term in nature and immediate (delivery, order cycle times, and quality) and long-term goals in nature (strengthening a supplier's managerial, product development, and processes competences) are highlighted (Wagner and Krause, 2009). Further, supplier development goals will emphasise and focus on the measurable results of suppliers. On the other hand, a combined value creation needs much more efforts from buyers and suppliers; harmonised and combined capabilities, and a long-term focus on suppliers' performance and capabilities (Wagner and Krause, 2009). Supplier evaluation and feedback may be the significant activities to develop suppliers while training them, by sharing and

transferring employees from one to another, and some other related activities (Monczka et al., 1993; Wagner, 2006).

Moreover, Terpend et al. (2008) explained that empirical outcomes of studies propose the performance of a purchasing organisation which is achieved through integration of buyer/supplier firms generally and specially by integration of product development, collaborative planning, and integration of information system (Ellram and Liu, 2002; Frohlich and Westbrook, 2002; Narasimhan and Kim, 2002; Rosenzweig et al., 2003; Droge et al., 2004; Petersen et al., 2005b). Further, supplier development factors effect an organisation financially, i.e., it has effect on sales of buying company, return on equity (ROE), total return to shareholders, and net present value (NPV). Many studies explain that supplier development also has a significant impact on operational performance improvement, i.e., cost, quality, and cycle time (Rosenzweig et al., 2003; Tracey, 2004; Petersen et al., 2005a).

Park et al.'s (2001) propose that suppliers with maximum performance assessment have a strong impact on process development competences but those who emphasise conformance quality; they will not have strongest process development capability. In this vein, McGinnis and Vallopra (2001) established that a strong connection of purchasing function of buying firm assists supplier process development competencies and making sure supplier participation with high priority which is significant for the supplier development to improve performance and capabilities. Moreover, Krause and Scannell (2002) stated that product-oriented organisations are more expectedly depend upon the encouragements, drives, motivations, direct connection, and participation than service-based organisations. Further, operational factors like communication develops the performance of suppliers and play a key role in supplier development whereas collaborating and sharing information endorses reduction in cycle time and improve financial performance of buying firm and expand supplier's commitment (Rosenzweig et al., 2003; Tracey, 2004; Petersen et al., 2005a).

Figure 3 Buyer-supplier relationships



Source: Terpend et al. (2008)

Liker and Choi (2004) presents a research on supplier relationships in automotive industries Toyota and Honda. He suggested that supplier relationships are followed by six distinct steps: First, they understand how their suppliers work (supplier's business, works, capabilities and commitment). Secondly, they turn supplier rivalry into opportunity by (sourcing, compatible production and system, and setting up joint ventures). Third, they supervise their vendors by (monthly reports, constant feedback, and involving managers to solve problems). Fourth, they develop their suppliers' technical capabilities by (building up skills, a common lexicon, and innovation capabilities). Fifth, they share information intensively but selectively considering (specific time and place, rigid formats for sharing information in a structured fashion, and accurate data collection). Lastly, they conduct joint improvement activities (i.e., exchange best practices, initiate kaizen projects, and supplier study groups). Toyota and Honda have succeeded not because they use one or two of these elements but because they use all six together as a system (Liker and Choi, 2004).

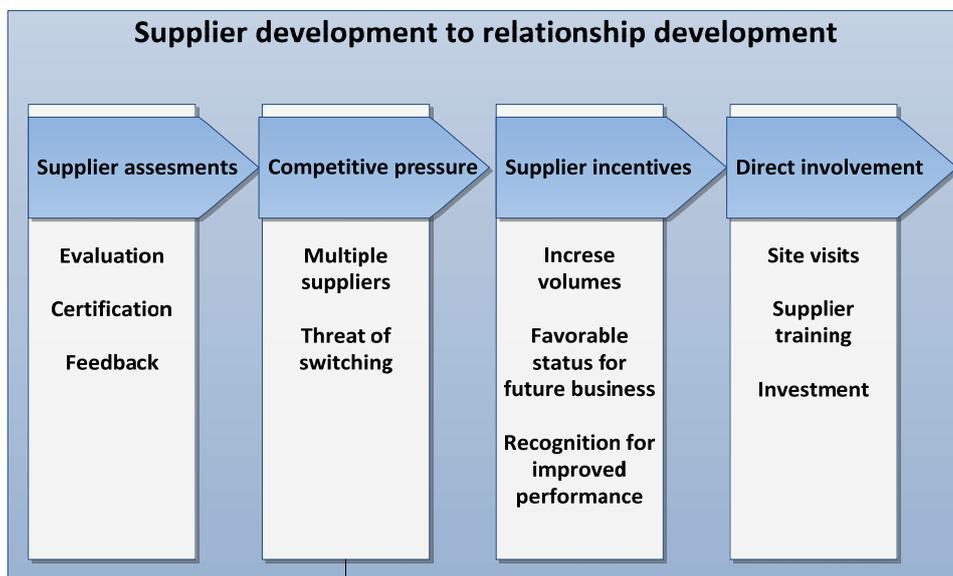
Prahinski and Benton (2004) presents that buyer-supplier relationship is the supplier's perception of the buying firm's behavioural and operational relationship attributes: buying firm's commitment, cooperation and operational linkages. Moreover, he presents two buyer-supplier relationship approaches. The first approach explains the relationship which is based on transformation process, i.e., from awareness, exploration, expansion, and commitment to dissolution whereas second approach is based on the mechanism of buyer-supplier relationship at one point in time, i.e., organisational governance ranging from a transactional-based relationship to a strategic association or vertical integration (Cooper and Gardner, 1993; Webster, 1992), or the continuum between competitive and cooperative positioning (Ellram, 1995).

4 Research framework

Reviewing literature there are researches which examine supplier development from supplier's perspective through buyer-supplier relationship studies and highlights the important supplier perspective. Therefore, Krause (1999) highlights the importance of suppliers and emphasises that buying firms consider its suppliers as virtual extension of the firm which will in result increase the motivation of suppliers towards the buying organisation. Moreover, communication between buyer and supplier firms is significant prerequisite which creates an environment of supplier development (Wagner and Krause, 2009; Krause et al., 1998; Krause and Handfield, 1999). Some authors suggest that supplier commitment and a level of inter-firm communication are seen as antecedents to supplier development. The successful supplier development factors are focused on perception of suppliers as partners and their virtual extensions. For the purpose, higher management collaboration and commitment along with supplier acknowledgment, direct investments into the operations of suppliers, effective communications in between the buyer and supplier firms, and a secure multiple contact point are the success factors for supplier development to improve their performance and capabilities (Krause, 1997; Krause and Ellram, 1997a, 1997b). Further, critical success factors included supplier commitment, trust, and alignment of organisational cultures which are more important in supplier development strategy (Handfield et al., 2000; Hartley and Choi, 1996).

Moreover, purchasing literature emphasizes the significance of supplier development favouring an organisation's operations strategy and makes sure the suppliers performance and competences. The focus remains on supplier development drivers and it helps to explore the impact of these initiatives on performance and competences (Hahn et al., 1990; Monczka et al., 1993; Hartley and Choi, 1996). Figure 4 elaborates a detailed research framework and a structural analysis which concludes the literature review and explains different steps for the supplier development process and supplier-buyer relationship.

Figure 4 Operational breakdown of the values of buying firms' approaches to develop supplier performance (see online version for colours)



Supplier development and buyer-supplier relationship need to be in a systematic way which helps firms to organise the process and collaborate with suppliers for the improvement of product manufacturing capabilities. Supplier development carries a process including:

- 1 supplier assessment
- 2 competitive pressure
- 3 supplier incentives
- 4 direct involvement that elaborates a detail version of steps to get a competitive advantage and to develop buyer-supplier relationship.

In the same vein, research framework indicates that companies follow an evolutionary route to develop their supplier's performances and relationships. They try to focus on adoption of total quality management (TQM) followed by evaluation and culmination in

supplier development strategies (Krause et al., 1998). Moreover, Modi and Mabert (2007) stated following supplier development strategies:

4.1 Competitive pressure

Companies use different supplier sources and market forces to develop competitive pressure. This strategy not only helps the organisations to analyse their suppliers' competence and performance and to build the long-term relations but motivates others develops their performance quality. Purposefully, firms use multiple suppliers to keep a competitive pressure among different suppliers. This support buying firms to get improved quality process services and they can inspire suppliers to keep the quality, delivery, or whatever supplier performance characteristics high by rewarding them with huge volume of the business over time (Tezuka, 1997). Therefore, buying firms apply this method to its suppliers when they need competitive offers from different suppliers to attain a comparatively cheaper purchase price (Krause et al., 2000). The threat of switching suppliers or losing business to other supplier creates a possibility or condition to provide suppliers a motivation to keep the competitiveness up with high quality supply at a low cost. Buyers expected to have developed relations with more than one supplier while dealing with manifold or parallel sourcing but buyers try to develop a strong relation with only one supplier dealing with sole sourcing. However, if there are certain switching costs (firm specific investment costs) involved, the buyer will hesitate to threaten supplier for a specific deviation in quality (Richardson and Roumasset, 1995).

4.2 Evaluation and certification

Evaluation and certification system supports the organisational strategies regarding current and expected performance of suppliers and ensures the suppliers about their performance and business prospects of organisation. For the purpose, evaluation and certification system is an important tool of communication between buyer-supplier and a motivational process for the suppliers to improve their performances. This evaluation and certification system comes under supplier assessment which is a key enabler in between supplier development activities and buyer-supplier relationship development. Supplier assessment is not only an important tool for buying firms to calculate the performance of suppliers in comparison of several other suppliers but it also allows buying firms to set future direction standards of suppliers' performance (Krause et al., 2000). Supplier assessment tool explains and elaborates the detailed evaluation of suppliers' managerial competencies, quality, technical competencies, cost, and delivery capabilities (Giunipero, 1990; Hahn et al., 1990). Therefore, it is very useful in providing feedback to its suppliers about their performance index and competencies. In fact, feedback is the evaluation and comparison of expectations and outcomes of suppliers' activities which integrates the competitive strength of the market to address the current performance and encourage them in improving performance (Krause et al., 2000).

4.3 Incentives

Incentives play a vital role in developing the motivation and interest of suppliers towards their capabilities and competence including; awards, cost savings, consideration for

increased volumes, etc. Supplier incentives are the key motivators for suppliers to improve their performance and in building strong and long-term relationships. Moreover, if incentives are not offered and awarded, suppliers are unwilling or reluctant to keep up and build long-term relations with buying firms. Therefore, literature suggests that supplier incentives may enhance the possibility and suppliers' will and satisfaction to follow the buyers' required demand (Ghijssen et al., 2010). However, supplier assessment and supplier incentives have indirect influence on performance of suppliers (Krause et al., 2000). Positive supplier's incentives for improved performance can be in the form of *increased business volume* and vice versa. Keeping this in view, suppliers focus more on the delivered performance to the buyer and maintain the required standard for *future business considerations* which usually has a positive impact on operational knowledge transfer activities (Modi and Mabert, 2007). These activities involved in suppliers' incentives allow buying firms to evaluate continuous improvements in suppliers' performance by increasing the performance expectations and *recognition for improved performances*. Thus, supplier's incentives activities foster the momentum of suppliers to provide continued performance to strengthen the buyer-supplier relationship (Krause et al., 1998).

4.4 *Direct involvement*

Companies use proactive method through direct involvement and make sure their existence by making capital and equipment investments, acquiring supplier firm operations partially, and by investing human and organisational resources to develop suppliers' performance and competence. Buying firms are eager to get directly involved in the supplier development programmes which include different activities and actions regarding investments in supplier development resources. In this vein, Williamson (1985, 1981) provides a holistic picture of transaction-specific investments in buyer-supplier relationship and supplier development activities and direct involvement can be a reason to reduce transaction cost and uncertainty of buying firms. On the other side, suppliers' involvement into buyer-supplier relationship also enhance the strength of relationship (Ghijssen et al., 2010). Many variables in direct involvement label the supplier development activities and enhance the performance of both buyers and suppliers (Krause and Ellram, 1997a, 1997b; Humphreys et al., 2004; Sánchez-Rodríguez and Martínez-Lorente, 2004). These supplier development activities involve *site visits, training and education programmes, technical assistance* and *investments with suppliers*. Continuous site visits allow suppliers to focus on the required quality by the buyers and enhance the process capability. These efforts are really important in supplier development actions which lead to enhance the performance (Modi and Mabert, 2007).

Firms are employing the supplier development programmes and strategies progressively to develop suppliers' performance and to build strong relationships with them to continue competitiveness in the market. According to Modi and Mbert (2007), supplier's development strategy has a strong link in developing suppliers' performance and capabilities and involving top management into the process to build purposeful relationship with suppliers. This link creates operational knowledge transfer activities and assistance to select a set of suppliers which triggers supplier development activities.

Therefore, this paper explores the possible supplier development strategies that are useful for buying firms for supplier development. Moreover, this study develops a

research framework where each building block explains different ideas to develop strong relationships with suppliers. Finally, overall research framework provides the opportunities where supplier development and buyer-supplier efforts ultimately improve the performance of firms.

5 Discussion/conclusions

In this paper, a detailed literature overview of supplier development strategies and buyer-supplier relationship is presented. Many of different activities can be used to improve the performance of suppliers including low involvement actions (supplier evaluation) to more elaborative and resource demanding action (investing in production equipment and supplier's employees training) tasks (Wagner and Krause, 2009; Arroyo-López et al., 2012, Modi and Mabert, 2007). Supplier development activities can be summarised as:

- 1 introduction of competition to the supply base
- 2 supplier evaluation for further development
- 3 supplier certification
- 4 elevation of performance expectations/goals
- 5 recognition and rewards
- 6 promise of future benefits
- 7 training and education of suppliers' staff
- 8 direct investment in the supplier by the buying firms
- 9 exchange of personnel between buyer and supplier organisations
- 10 supplier plant visits
- 11 intensive information exchange with suppliers
- 12 collaboration with suppliers to improve the material and development of new materials
- 13 involvement of suppliers in new product development process (Krause, 1997; Krause and Ellram, 1997a, 1997b).

One objective for supplier development is to transfer competences from the customer to the supplier. These capabilities gradually develop the basic skills to guarantee the performance index towards continuity of development and innovation. For the purpose, this transmission of competencies may be accomplished through different actions and the execution of organisational procedures facilitating an association and interactions, sharing the information, and integration of best practices to strengthen or enhance the

quality of knowledge to be transferred (Hartley et al., 1997; Krause et al., 2000; Sako, 2004; Dyer and Hatch, 2004). Moreover, there are some critical elements in supplier development that play an important role to improve supplier performance. These elements include the involvement of buyer building a perception as partners. Moreover, two-way multifunctional communication, top management interest, and building cross functional teams are most significant factors making supplier development strategies (Krause and Ellram, 1997a).

Furthermore, supplier development has an effect on financial performance indicators such as sales, ROE, total return to stakeholders, and NPV (Rosenzweig et al., 2003; Tracey, 2004; Petersen et al., 2005a). For the purpose, it is examined that supplier development has a vital impact on operational performance improvement, i.e., cost, quality, and cycle time. Supplier development is a key factor and positively effects on buyer's performance specially in product development integration, collaborative planning and information system integration (Frohlich and Westbrook, 2002; Narasimhan and Kim, 2002; Rosenzweig et al., 2003; Droge et al., 2004; Petersen et al., 2005b; Ellram et al., 2002). Suppliers with high performance rating have strong process improvement capabilities with involvement of purchasing function and considering it with top priority (Frohlich and Westbrook, 2002; Narasimhan and Kim, 2002; Rosenzweig et al., 2003; Droge et al., 2004; Petersen et al., 2005b; Ellram et al., 2002). In the same vein, information sharing is a significant factor which foresees the competitive existence of a buyer and helps to measure the process of supplier assortment (Kannan and Tan, 2002).

Most of the firms prioritise their supplier development goals according to the delivery, order, cycle times, quality, product development, and operational capabilities (Wagner and Krause, 2009). For the purpose, companies follow an evolutionary path to increase supply base performance. They consider TQM interventions, i.e., supplier collaboration, customer requirements, cross-functional teams, measuring performance through scientific methods, and quality tools usage. Therefore, external suppliers are also much more important to be focused to conduct a supply base evaluation on the acknowledgment to develop the material quality, lower development costs, reduction in purchasing prices, and to improve the responsiveness of suppliers. Once supply base performance is assessed, companies focus on the consolidation of purchased volumes with fewer suppliers in order to eliminate suppliers incapable of meeting expectations (Krause et al., 1998).

6 Future implications

Most of the organisations hold a relationship and develop a key strategy for constant competitive achievement. In the supplier development process, buyers and suppliers need to consider the amount of investment and aligning processes and cultures to improve the supplier performance and capabilities. After the formation of buyer-supplier relationship, buyers need to realise the structure to maintain a reasonable relation with better suppliers how to develop them for long-term relations. On the other hand, suppliers need to be proactive and focused with the mutual interest and development processes of buyers.

This study elaborates the theoretical point of view for the supplier development and buyer-supplier relationship and gives only a theoretical proof. Future research should consider a comprehensive case study with the given theoretical research framework adding empirically analysis of transaction cost economics and social exchange concept.

Buyer-supplier relationship analysis with variables of transaction cost and social exchange theory will help organisations to get a detailed view of supplier development and sustainability of buyer-supplier relationship. Moreover, future empirical research will help organisation to form cross-functional teams, involving top management role, checking alternative rewards and recognitions, determining the criteria to identify better suppliers and efforts towards sustaining the long-term relationship with suppliers. For the purpose, the structural factors of transaction cost economics (i.e., bilateral investments in specific assets to reduce the transaction cost and enhance the transaction value) and social factors (i.e., trustworthiness, information sharing) will be beneficial for the academia to understand the concepts of supplier development process. In fact, knowing the social factors and structural arrangements of buyer-supplier relationships that lead to reduction of transaction costs and enhancement of transaction value will help the managers to effectively manage their buyer-supplier relationships and development.

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246 *I. Sillanpää et al.*

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248 *I. Sillanpää et al.*

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250 *I. Sillanpää et al.*

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BENCHMARKING SUPPLIER DEVELOPMENT: AN EMPIRICAL CASE STUDY OF VALIDATING A FRAMEWORK TO IMPROVE BUYER-SUPPLIER RELATIONSHIP

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ABSTRACT

In today's dynamic business environment, firms are required to utilize efficiently and effectively all the useful resources to gain competitive advantage. Supplier development has evolved as an important strategic instrument to improve buyer supplier relationships. For that reason, this study focuses on providing the strategic significance of supplier development approaches to improve business relationships. By using qualitative research method, an integrated framework of supplier development and buyer-supplier relationship development has been tested and validated in a Finnish case company to provide empirical evidence. It particularly investigates how supplier development approaches can develop buyer-supplier relationships. The study present a set of propositions that identify significant supplier development approaches critical for the development of buyer-supplier relationships and develop a theoretical framework that specifies how these different supplier development approaches support in order to strengthen the relationships. The results are produced from an in-depth case study by implementing the proposed research framework. The findings reveal that supplier development strategies i.e., supplier incentives and direct involvements strongly effect in developing buyer-supplier relationships. Further research may focus on considering in-depth investigation of trust and communication factors along with propositions developed in the study to find out general applicability in dynamic business environment. Proposed integrated framework along with propositions is a unique combination of useful solutions for tactical and strategic management's decision making and also valid for academic researchers to develop supplier development theories.

KEYWORDS

supplier development, supplier management, strategic competitive advantage, buyer-supplier relationship, supply chain management, case study.

Introduction

In recent years, supplier development activities are defined as the most important effort that firms undertake not only to gain competitive advantage but to develop suppliers for long term partnership and relationship enhancement. Several strategic sus-

tainable activities are involved in developing the core capabilities of suppliers' that are utilized across industries [1]. Reference [2] argues that different supplier development efforts exist but they fluctuate based on the firm's commitment and dedication towards supplier development. Similarly, the increased interest in supplier development and buyer-supplier re-

relationship result in highlighting the importance of strategic collaboration of buyers and suppliers to enhance the operational performance and to build-up stronger and long-term relationships [3]. Suppliers are the most important capability and critical input resource for firms to produce a significant product or service and that is the reason now firms are implementing supplier development programs. This does not provide only competitive advantage to the firms but also long-term relationships with their potential suppliers [4].

Supplier development efforts increase the competencies of both buyers and suppliers that results in successful operational performance. The success aspects include but not limited to: effective two-way communication, an attitude of partnership, shared promises and management support [5] and [6]. Those factors lead toward successful supplier development, continuous performance improvement and strategically developing buyer-supplier relationships [7]. Similarly, the process model of reference [8] proposes five successful factors (e.g. supplier's team leadership, top management commitment, capable joint-development team, data driven changes, and success of a model line) that influence in enhancing the supplier development efforts. In the similar way, top management commitment has become a critical success factor in value-based supply chain innovation which provides a wide range of opportunities to become competitive. Reference [5] and [9] have come up with the conclusion that supplier development programs including supplier evaluation, training and awards help to communicate with supplier effectively. These efforts develop a narrative of successful partnership with suppliers and to remain competitive.

Suppliers signify critical resources which provide essential materials and services to a firm for production. The quality and cost of a product is always on the stake and firms are more careful to evaluate the capabilities and competencies of suppliers because it also provides opportunity to suppliers to develop their capabilities. Therefore, organizations are more eager now than ever to implement supplier development programs not only in maintaining competitive advantage but also to develop strong buyer-supplier relationships [4] and [10]. In the same vein, reference [4] provide some successful corporate examples where supplier development has been implemented successfully to achieve continuous improvement; reduced supply based cost, improved quality and delivery, lead time, and improved productivity.

Further, reference [11] state that developing suppliers need efforts for long term cooperation which leads towards the improvement in suppliers' techni-

cal, quality, delivery, and cost capabilities. Firms are eager to take supplier development initiatives and transfer knowledge into their supply base to improve supplier performance [12]. On the other hand, [4] discover a research gap by highlighting the ineffectiveness of those efforts and initiatives in supplier performance. They have highlighted the critical role of communication in buyer-supplier relationship which is untested in context of supplier development.

Despite the much appreciation of importance of efficiently developing suppliers and buyer-supplier relationship, gaps remain in understanding the significant supplier development factors that strategically develop buyer-supplier relationship. Theoretical and empirical evidence of supplier development strategies and buyer-supplier relationship is highly fragmented; focused separately with little understanding, and hence limited cumulative learning. This research addresses this research gap by implementing and validating a developed integrated research framework through a case study. Reference [3] proposes an integrated research framework based on detailed theoretical literature review, and this study is a step forward to implement and validate the research framework in a case study. This study compliments their research and provides the empirical evidence of step by step supplier development strategies, approaches and their strategic impact on business relationships.

This study is quite important in its nature because it fills the research gap by providing empirical evidence of integrated framework of supplier development strategies that become important reasons to develop long-term relationships. Such an integrated research approach helps to uncover rich explanations about the management of suppliers and buyer-supplier relationships. As a consequence, this study investigates the following research question: *How supplier development framework leads towards strategic value-added buyer-supplier relationships?*

This research identifies and addresses above mentioned question by empirically investigating a link between step by step supplier development program and buyer-supplier relationship performance outcomes. The remainder of this study is organized as follows. In the next section, literature review is presented in order to develop an understanding of the link between supplier development and buyer-supplier relationship. This is followed by a description of empirical section which presents research methodology used in this study. Next section provides results with discussion of supplier development strategies and their impact on business relationships. After presenting the discussion and implications of the results, the paper concludes with some manage-

rial implications, limitations and suggestions for further research.

Literature review

Supplier development and buyer-supplier relationship are significant fields of research in global supply chain management where diversity of skills and knowledge provide effective competitiveness and improved performance to both parties [6]. Firms are more eager in supplier development programs not only to continue long term relationship with their suppliers but also to develop strategically global competitive advantage [13]. Further, [8] proposed a model consisting five supplier development factors. Those factors include; supplier's top executives commitment, capable joint-development team, supplier's leadership, accomplishment of a model line, and data driven changes. Reference [14] highlighted the buyer's inclination to involve in supplier development programs where communication, buyer-supplier relationship endurance, and obligations of suppliers are taken under consideration.

The concept of supplier development was originated by [15] to describe the willpower of manufactures in enhancing the numbers of suppliers for the purpose of improved performance. This idea was then left with an open discussion platform for the researchers in supply chain management where the discussion started with the complex product businesses and their suppliers [16] and [17]. On the other hand, [14] provided a different aspect of supplier development called "the antecedents" which explains the actions to be taken before supplier development programs. He highlighted those antecedents as the important inputs for supplier development including strategic supplier management, purchasing functions as a source of competitive advantage, investments in supplier's competencies, commitments, supplier as partners, communication, and information sharing.

Several researchers have highlighted the importance of supplier's competencies and capabilities in manufacturing firm's competitive advantage. Similarly, researchers pointed the important aspects of supplier development programs in supply chain management literature (i.e., performance measurement, supplier evaluation, setting goals for suppliers, training etc.) that play a pivotal role in maintaining improved performance of manufacturing firms [18, 5, 11] and [19].

Supplier development approaches

Recent trends in manufacturing firms show refocusing strategies on the core capabilities while in-

creased outsourced activities and effectively using all resources to gain competitive advantage [20] and [4]. Supplier performance has become very important for manufacturing firms' long term relationships, quality and cost of the products and services, efficient supplier network and successful outcomes. For that reason, buyers are eager to implement increasingly supplier development strategies and approaches in their operations to sustain proficient and high performance supply base. Those approaches include assessment of suppliers, performance incentives, initiating suppliers' competition, and buying firm's own direct interest in development of suppliers through training of supplier's personnel [20] and [4].

In a very rich literature of supply chain management, researchers have examined supplier's perspective in discussion of business relationships for supplier development approaches. For the reason, many researchers highlighted the importance of suppliers for buying firms operational performance and suggested to consider suppliers their virtual extension. Further, they have found combined inter-organizational communication as the most important prerequisite in converting an organization's efforts in supplier development [14, 21–23] and [4]. On the other hand, supplier commitment, trust, and alignment of organizational culture have been noticed by many researchers as antecedents to supplier development [24] and [8]. While, others highlighted suppliers as partners through motivations of their acknowledgement, buying firms' direct involvements, efficient communication between them, and multiple contracts to keep the competition up between suppliers. These factors transform buying firm's efforts not only into supplier development but to improve operational performance and competencies [2, 5] and [9].

Reference [25] proposed a benchmarking model of supplier development where they identified the most significant critical success factors (CSFs) and classified into four groups; 1) supplier related factors, 2) secondary factors related to supplier, 3) manufacturer related factors, and 4) manufacturer and supplier related factors in order to adopt successful supplier development. Moreover, researchers have focused on the firm's operations strategy inclined towards supplier development and improved supplier performance. They highlighted some supplier development approaches and drivers that are most important supporting factors in transforming buyers' efforts into supplier development and performance improvement [26, 27] and [8].

Supplier development strategies include the most significant supporting approaches that help buyers to enhance the overall operational performance. These

approaches include; supplier assessment, competitive pressure, supplier incentives, and direct involvement. This process of supplier development was discussed and tested by [20] and [4] in their articles but later on, [3] developed a conceptual framework for supplier development and improved buyer supplier relationships.

Reference [3] highlighted an evolutionary supplier development route which leads towards improved relationship performance. Supplier development framework was developed based on a detailed literature review on supplier development and buyer-supplier relationship which provides the successful strategies not only to develop suppliers but to improve long term relationships with suppliers [3]. It identified four main steps lead toward supplier development; 1) supplier assessment, 2) competitive pressure, 3) supplier incentives, and 4) direct involvement. Each of the steps includes several activities that ensure supplier development to enhance firm's competitive advantage.

Supplier assessment

In supplier development strategic framework, supplier assessment is the first part to be started with supplier development process. Reference [28] stated that supplier selection, supplier assessment, and their involvement are the most important actions a buying firm should concentrate on. Therefore, many researchers provided a notion of supplier's assessment in strategic decision making process [29–31] and [32] to attain operational supply chain [33]. Similarly, when firms are focused to utilize their resources in a best possible way, they try to improve inter-organizational performances. This way, suppliers can be involved into the new product development processes which lead towards supplier assessment to improved business relationship performance [34] and [35].

Further, [36] presented a detailed literature review of performance criteria in supplier selection and evaluation in order to sustain competitive advantage. He identified the most significant supplier evaluation and selection criteria models from an in-depth literature review. Three main supplier evaluation methods (i.e. categorical method, weighted point, and cost ratio) which are helpful for companies to implement supplier evaluation. Based on intense literature review, he argued that weighted point model is more appropriate supplier evaluation model because of its precise and clear outcomes to the decision makers.

Certification and evaluation guarantee firm's performance by motivating suppliers to produce at their best and to enhance their capabilities [20, 37] and

[38]. Further, it supports to evaluate supplier's current and expected performance and helps in better communication between the parties to improve their business performance. Reference [20] highlighted the importance of certification and evaluation in supplier development process and stated that it provides not only a competitive edge to buyers to assess their suppliers' performance but a strategic way to set a vision for suppliers. Similarly, supplier assessment is a critical success source of evaluating the competency, quality, technical know-how, cost, and delivery capability of suppliers [39] and [26]. Feedback in supplier assessment is a useful tool which contains the important information about the suppliers' performance. It helps suppliers to improve their operations intact with buyer firm's requirements [20].

Competitive pressure

Buyers implement another supplier development approach competitive pressure which ensures the quality and improved performance of suppliers [41]. In this vein, firms utilize different market forces to build a competitive pressure for suppliers to deliver their best. This supplier development strategy provides three folded advantages to the firms, 1) to analyze supplier's capability and performance, 2) provide motivation to other suppliers to improve quality in their operations, and 3) build long term business relationships [20]. Further, competitive pressure is a key source of getting improved suppliers' performance in terms of quality, cost, and delivery [40] and [41].

Therefore, supplier development strategies include multiple suppliers' assessment and threats of switching to other suppliers which help buying firms to get higher standard products and services from their suppliers. This approach develops a healthy and competitive environment for suppliers and motivates them by providing high quality supplies with a low cost. Competitive bids from several suppliers, short term contracts, and use of developed bidding details help buying firms to attain a comparatively low price [20, 42] and [26]. However, buyer will resist threatening suppliers in case of some certain switching costs [43].

Supplier incentives

Supplier incentives are another useful supplier development approach. Buyers motivate their suppliers by offering supplier incentives in different forms. This strategy keeps suppliers motivated and intact with buyers' requirements and help suppliers to improve their supply base and operational capabilities [27] and [22]. Similarly, this approach becomes key

motivators and critical success factor to suppliers to develop their production competency with improved performance and also to build strong relationship between both parties [25]. On the other hand, suppliers will resist or will be unwilling to keep high quality products and services and long term relationships if incentives are not offered to them. Therefore, this strategy plays a pivotal role by transforming buyers' incentives into suppliers' high quality products and services and improved operational performance [44].

Suppliers' performance is influenced indirectly by supplier assessment and supplier incentives efforts by buying firms. This results in improved business performance in form of increased business volume and future business for suppliers. These efforts foster the thrust of suppliers to perform well through providing best supply to buyers not only for their benefits but also to build long term relationships. Literature has focused more on operations and provides the required supplies to buyers which positively influence knowledge transfer activities [22, 4] and [27].

Direct involvement

Direct involvement is a preemptive strategy which helps buying firms in developing suppliers and relationships [27] and [20]. Different direct involvement methods are important success factors for companies to implement successfully supplier development programs [25]. These methods include by investing capital and equipment in supplier operations [40] and [27], partially acquiring the suppliers as [45] exemplified about the acquisition ratio of Toyota and Nissan. Similarly, investments in human and organizational resources motivate organizations to be involved and develop supplier performance [4]. This novel idea is not only used in supplier development but it also offers a holistic depiction of long term buyer-supplier relationships. Reference [46] and [47] concluded with the importance of transaction specific investments as a useful factor in transaction cost and uncertainty reduction between buyers and suppliers.

Reference [19] also highlighted the importance of suppliers' involvement in business relationships which result in empowering buyer-supplier relationships. Several researchers in literature have underlined the most significant direct involvement' factors that help in enhancing the supplier development performance. For example; site visits, training and education, technical support, and capital and human resources investments are the most substantial ones that transform suppliers in producing good quality products along with enhanced process capability [5, 48] and [49].

Further, [4] also have discussed the importance of these factors in supplier development process. They also have highlighted the important role of top management into supplier development programs to provide a strategic view of supplier's performance and competency [4]. Reference [20] operationalized the concept future business incentives to operational knowledge transfer prior to establish direct involvement which allows firms to continue longer term relationships with their suppliers to transfer tacit knowledge and excel competitively.

Supplier development to buyer-supplier relationship development

Firms are eager to implement supplier development programs not only to benefit operational performance through improved product manufacturing competencies but also to develop buyer-supplier relationships. Strategic supplier development activities are utmost important drivers of developing long term buyer-supplier relationships. A conceptual framework of [3] is a useful example of supplier development process towards buyer-supplier relationship performance. The concept of supply chain network is a support for organizations to employ the available resources in such a successful manner where businesses focus on inter-organizational cooperation [34].

Therefore, several researchers have explained the logic behind the supplier development and buyer-supplier relationship factors of supplier selection and supplier involvement in strategic decision making and efficient supply chain separately [29–32] and [33]. Reference [29] developed a performance measurement system (PMS) in order to enhance supplier relationship management activities in a successful way. They argued that PMS supports to evaluate the performance gap better which ultimately provides a platform in strategic decision making to meet the challenges successfully. The efforts of supplier development including capital and human resource investments positively impact the relationship performance of buyers and suppliers [48]. Consequently, this study develops and implements an integrated framework of supplier development activities to buyer-supplier relationship development.

Transaction specific investments in education and training and direct involvement of buyers and suppliers in supplier development programs are a foundation of developing business relationships [14] and [50]. Moreover, effective communication, long term strategic goals and cooperation between buyers and suppliers lead towards twofold benefits; 1) supplier development, and 2) relationship development [11, 51] and [39]. In the same vein, supplier evaluation

has a vital role in developing buyer-supplier relationships which demands careful evaluation of suppliers regularly. After careful and successful supplier' evaluation, buyers can propose improvement requirements to gain and maintain competitive advantage. These efforts help suppliers not only to improve their competences but also develop a rationale of operational performance between them [52].

Similarly, developed trust between buyers and suppliers support them in supplier development programs to improve capabilities and in relationship specific investments. These efforts are classified as important actions in the literature of supply chain to improve the relationship performance [14]. Trust always resist the opportunism and increase the impact of buyer's assets specificity in business relationships [48]. In result, they concluded with three dimensions of supplier development consequences; competitive advantage, supplier performance, and buyer-supplier relationship development.

Integration of buyers' purchasing strategies with corporate competitive approaches establishes an environment of supplier development as well as competitive advantage. It includes; market acceptability, quality, cost and improved product development process. These factors are quite important in supplier development programs that lead towards relationship developments [53]. Likewise, [19] pointed out key competitive priorities; cost, quality, time and flexibility that result in competitive advantage for buying firms. They have stated that supplier commitment is another important factor for continuous performance improvement. In this way, [14] argued that suppliers will resist in relationship specific investments if buying firms do not show a potential interest for a relationship or investments. Thus, employed supplier development efforts for long term business relationships will create an opportunity for both buyers and suppliers to improve their capabilities and performances [20, 22] and [54].

Supply chain literature on buyer-supplier relationship and supplier development is fragmented and lacking because of missing link between the objectives of supplier development and business relationships. Reference [54] has also mentioned a research gap close to this research where differences exist in supplier development approaches and performance. The process of supplier development approaches and their objectives are missing towards developing relationships. Therefore, [21] mentioned the different short term but immediate and long term objectives of supplier development approaches and their effects in developing relationships. This study integrates and fills the research gap by not only combining the sig-

nificant factors of supplier development efforts to relationship development but also validate the following extended research framework empirically.

The extended framework in Fig. 1 clarifies the process of current research. By extending the research framework provided by [3], this study provides an empirical evidence of validating the proposed research framework. In supplier development process, buyers and suppliers need to develop relationship focused investments and information sharing activities that will improve the performance in four key competencies (cost, quality, time, and flexibility) as well as supplier's competency will be increased [55, 56] and [25]. All important factors of supplier development approaches are important in developing buyer-supplier relationships in supply chain networks. Integrated value creation requires actions from both buyers and suppliers to synchronize the collective competencies to develop the operations and relationship performance [21].

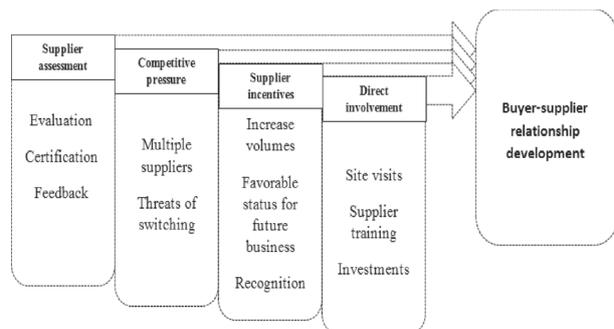


Fig. 1. Extended research framework of supplier development to buyer-supplier relationship.

Similarly, several studies have been published explaining the empirical outcomes of supplier development approaches towards improved buyer-supplier relationships through suppliers' integration, collaborative product development and planning, and information system etc. [57–62] and [63]. Further, the results of supplier development approaches clearly demonstrate not only a positive impact on firm's financial performance but also enhancing the operational competencies [61, 64] and [65]. Likewise, [1] argued that product oriented firms are more eager to implement supplier development approaches than service oriented. Communication, top management, supplier evaluation, and supplier strategic objectives are the key factor in the process of supplier development and buyer-supplier relationship development [61, 63, 64] and [10].

Supplier development approaches have been dominated in building deep supplier relationships. Reference [66] presented a detailed study of build-

ing supplier relationships along with six distinct steps. They argued that developing supplier's competencies, commitments, threats of switching, feedbacks, innovative capabilities, information sharing, and joint investments to improve operations provide significant opportunities to buyers in developing strong relationships with their key suppliers. In the same way, [67] proposed two approaches of developing buyer-supplier relationships through supplier development and integration action plans. A generic process model of [22] also demonstrates the supplier development through ten systematic steps to implement and develop relationships with suppliers.

Our study offers an in-sight of supplier development strategies, but particularly focuses upon how supplier development strategies can be implemented successfully and how they effect on buyer-supplier relationship. We identify critical supplier development factors within the strategic supply chain strategies, and demonstrate their mutual support implementing supplier development programs and buyer-supplier relationship. Therefore, this study extends the framework provided by [3] and implement and validate the extended research framework in a case study. This study provides the opportunities to firms to implement supplier development approaches strategically and develop business relationship to improve operational and relationship performance.

Research design and methods

This study adopts exploratory case study as the methodological approach for the research where the purpose is to improve a detailed understanding of supplier development approaches and their implementations for buyer-supplier relationship development in the selected case [68, 69] and [70]. This study is based on extending the research framework provided by [3] by implementing in this case to find out how instigated supplier development approaches develop buyer-supplier relationships. Case study method is a suitable research method to employ when the research phenomenon is complex and challenging. Therefore, this method assists in this study to highlight the significant supplier development approaches in buyer-supplier development in a real world context [71, 68] and [70]. Thus, a case study is advantageous where the possibility of evolving accurate results extracted from data collection process to categorize supplier development approaches and strategies in development of business relationships [72] and [73].

The purpose of qualitative research is to comprehend the research field being studied [74]. Reference [75] has explained that inductive reasoning is a re-

search method which is the most significant part of the research and starts a cluster of observations to develop theory or generalization. The deficiency of qualitative studies on this topic directed us to highlight the importance of question "how" and "what" factors effecting in supplier development and to identify the process of supplier development based on real practice [76]. This research design permits a comprehensive within case analysis to describe the generalizability level of evolving results [77].

A manufacturing Finnish case company and its key supplier were selected to acquire data related to supplier development approaches through interviews. The reason of selecting this case company and its supplier was a part of dynamic project of supplier development implemented in this case. This supplier produces capital products for the case company and purchasing volume is very high. A total of twenty interviews (11 from buyer, 9 from supplier) were conducted in 2013 from the top management of buyer and supplier to increase the richness of information. The respondents held top and mid-level positions in the firms including strategic managers, operation managers, and project managers who were directly involved in decision making and implementation. Semi-structured interview questionnaire including measurement substance of supplier development approaches was utilized to attain the comprehension from both buyers and suppliers [78]. Each interview lasted an average of 1–2 hour and conducted face-to-face with voice recording. It was transcribed later on to ensure high degree of reliability and traceability [72, 79] and [80]. This technique helped us to cover different functional areas with a different perspective of supplier development approaches and their impact on buyer-supplier relationship. By following the recommended process of [79] and [81], one author was truly engaged with data collection process throughout.

Table 1
List of Respondents with their Position in Case Company.

Job title	No. of interviews	Approximate time of interview
Buyer's Interviews		
Strategic Managers (Top management)	3	1:30 hours/interview
Operational Managers	5	About 1 hour/interview
Supplier Development Mangers	3	2 hours/interview
Supplier's Interview		
Top Management Team Members	2	1:30 hours/interview
Operational Managers	7	1–2 hour/interview
Total	20	

Propositions based on case analysis

The proposed supplier development framework is tested empirically in dynamic business environment. The case company is operating in engineering high technology business, where the main customers are global corporates. Business environment in case company is extremely dynamic where production load is fluctuating $\pm 30\%$, which means that supplier should be extremely flexible and agile. Case company has a wider suppliers network (50 suppliers approximately) in Europe and Asia. One of its key suppliers was chosen for this study where the case company implemented supplier development program. The propositions suggested in this study were derived from the in-depth case study and the most critical supplier development approaches in buyer-supplier relationship were identified.

Supplier assessment

Supplier assessment is a significant part of supplier development program [4]. The most common phase in supplier assessment is when the relationship between buyer and supplier get formulated. In this case, this key supplier was evaluated using supplier evaluation process including the evaluation of its technical capabilities, quality, and delivery performance. Quality of the delivery was the most important criteria in supplier assessment process because of case company's high market integrity. Acceptance certification was provided to communicate their expectations to supplier after fulfilling all the required standards. Continuous supplier evaluation and feedback for supplier's awareness of performance and case company's expectations are ensured. Top management respondents from both (buyer and supplier) were convinced about the importance of constructive feedback in supplier development program. Discussion with respondents from buyer and supplier reveals that

"...feedback and certification are extremely important for supplier assessment to develop the operational competency, performance and process development. Moreover, it provides a baseline to set standards for supplier's improvements and operational knowledge transfer activities."

Assessing current performance of suppliers provides enough knowledge about the development potential of supplier which in result enhances supplier development activities [4] and [26]. Similarly, in this case supplier assessment has been a resourceful action for continuous improvements in quality and production process. These activities help not only in developing suppliers and operations but also a signif-

icant source of relationship development. Trust likely stimulates and continuously improves supplier development process which has been seen in this case as one of the significance factors. It has found a very helpful tool for buyer in order to measure the supplier's performance and to develop buyer-supplier relationship. The role of top management is quite crucial in this case. As one top manager of top management from buyer mentioned that:

"...supplier assessment always contributes in required performance outcomes for both buyer and supplier to build strong relationships with our supplier. Because this firm is our key supplier, we always are keen to launch such actions which ultimately enhance the coordination with suppliers to develop strategic long-term relationships."

Moreover, evaluation and certification process implementation in buying firm create the opportunities to ensure the quality standards and a significant part of supplier development program. Discussion with respondents reveals the fact that this step stands first in supplier development program which ultimately support in continuing the following steps but most importantly a baseline for relationship development. Accordingly:

Proposition 1: The stronger the supplier assessment including evaluation, certification, and feedback, the successful supplier development program implementation comes to an existence with a moderate impact on relationship development.

Competitive pressure

Competitive pressure is another significant tool in strategic supplier development approaches where firms utilize external forces to keep up the pressure on suppliers [40, 41] and [4]. This motivational and competitive factor helps in improving the supplier's process competency and in extracting price benefits. In this case while implementing supplier development program, we found interesting and sensitive notions. Because the supplier is the key actor in buying firm's operations, competitive pressure strategy was found in a negative association with buyer-supplier relationship development but only in favor of buyer. This approach keep supplier cost competitive and efficient in its operations as Project Manager from buyer mentioned that:

"...competitive pressure is one of the key approaches to keep suppliers cost competitiveness and efficiency. Practically, this means that there should be multiple suppliers which could deliver same component or sub assembly which will cause to keep the competition up and create the threat of switching situation for supplier."

The competitive pressure was seen in the case company as well, which validates this approach well. Competitive pressure motivates supplier to develop its operational processes, production methods, supply chain management, operative efficiency, and customer service. These are the key standard requirements of case company from their supplier. In this case, there are two more suppliers who could deliver the same products to the firm. Therefore, it creates a threat of switching in buyer-supplier relationship environment and keep supplier motivated. Case company always communicates the resources of other suppliers to its key supplier in order to let its supplier keep engaged with required quality.

From buyer-supplier relationship aspect in this case, this strategy of supplier development negatively effects on relationship development. This interesting finding was revealed while talking to one of the management team members from supplier as he mentioned that:

“...threat of switching can demotivate our operations at the times and create reluctance between us, but we still try to do our best in fulfilling the requirements from buyer. Further, we have invested our resources for our potential buyer and want to do business for longer term.”

Even though, buying firm keeps developing its suppliers equally and measuring and evaluating their performances. Performance is monitored by utilizing the most significant measures; quality, cost, and punctuality. In this case, buying firm try to develop its key suppliers equally and introduce new technologies by knowledge transfer activities. The developed production and delivery process method by supplier is not shared with other supplier to keep them intact in improving their production and technological advances as well as to be cost competitive for buying firm. Moreover, during relationship with supplier, the cost efficiency has been developed enough which is a important evidence to show that competitive pressure in supplier development is very useful practical approach. Competitive pressure could develop buying firm and supplier relationship especially when supplier is confident that they are able to continue deep cooperation with buying firm. Therefore:

Proposition 2: Competitive pressure strategy including multiple suppliers and threats of switching in supplier development approaches positively effects in favor of buyer firm, but negatively impact buyer-supplier relationship development.

Supplier incentive

Supplier incentive is another significant supplier development strategy to keep the suppliers moti-

vated which includes cost savings, recognition in increased volumes, and favorable status for future business [27, 67] and [4]. This case study is a successful example of implementing supplier incentives in order to gain competitive advantage and improved business relationship performance. Case company assists its key supplier by sharing knowledge to improve operational outcomes. Incentives have been found very successful strategy in knowledge transfer as well as positive performance improvement in this case. In discussion with buyer's top management, it reveals that:

“...supplier incentives ultimately provide us better operational performance from our key supplier and it keeps them motivated in improving their process and technological developments. We rate their performance accordingly and provide an opportunity and incentives in increased business volume.”

In the supplier development and buyer-supplier relationship framework, supplier incentives are increase volumes, favorable status for future business and recognition for improved performance. In this case study, the case company's strategy is to grow their business volume with supplier every year, which means that the company is seeking to develop business relationship. Case company's business volume has been increased already about 10–20% per year since the relationship started. This has been a significant motivator for supplier to develop their operational processes and keep cost efficiency up. Similarly, when the volume has been increased, the capacity utilization was more efficient which in result created cost efficiency.

Increased purchasing volume is very important approach in developing buyer-supplier relationship. Case company makes sure by giving a favorable status to its supplier for future business growth. Consequently, this strategy has been developed in this case study so that possibilities of incentives were provided to its supplier in order to develop buyer-supplier relationship performance. Recognitions from buying firms to its supplier made high business performance possible along with a longer term relationship. Moreover, this strategy has been seen a very useful tool in developing trust between buyer and supplier which in due course results in supplier development success and buyer-supplier relationship development. For the reason, supplier development project manager argued that:

“...recognition has been important for us to improve our operations towards buyer. This strategy is very useful and satisfied with our strategic goals which always motivate us to enhance the production and delivery quality continuously. Further, it allows

us to open up our capabilities in front of buyer to implement operational improvements accordingly.”

Thus, the analyzed supplier incentives strategy provides the following proposition:

Proposition 3: Continuous supplier incentives strategy enhances the business performance of both buyer and supplier. The most frequent supplier incentives strategy implements, the strongest buyer-supplier relationship will be developed.

Direct involvement

Direct involvement is the last and important step of our framework in supplier development strategies and transaction-specific supplier development [27] and [14]. Direct involvement from buyer plays a significant role not only in developing suppliers but also improves buyer-supplier relationship performance [20, 48] and [82]. This study includes site visits, supplier training, and investments as supplier development strategies to implement supplier development program. While implementing direct involvement strategy in this particular supplier development program, it was found that buyer acted proactively and directly in these activities to show up their interests in developing supplier for better performance. Investments in supplier operations by buyer made supplier more committed towards the required operational quality. It also supports supplier's potential to enhance their operational competency which made a win-win situation for both buyer and supplier. Operational manager from buyer highlighted the importance of direct involvement in following statement:

“...our direct involvement provides an opportunity to supplier to think in combined strategic way which in result demonstrates the commitment from both parties. This kind of activities always cause in developing longer term business relationship. Supplier's site visits have significant value in our operations because of the nature of product our supplier provide.”

Site visits are important especially when ready-made product are produced in the supplier production facility and the quality assurance of readymade products are done in suppliers premises. During the site visits, production process was evaluated visually and developed according to the feedback. This case demonstrate frequent supplier's site visit (at least once in a month) to follow agreed development activities in order to develop the whole supply chain. Supplier training is another important part of direct involvement from buyer to integrate supplier and enhance the relationship trust. In many cases, suppliers which produce ready products are small and medium

sized companies. They do not usually have enough resources to organize specialized trainings for their employees; buyer therefore plays an extremely important role here. Consequently, discussion with a top management member from supplier reveals that:

“...training is extremely important in our operations which support us to fulfil the required quality and operational performance by buyer. Supplier training is done in many ways for example; technological training and process quality training which is resourceful in developing our performance. Buyer organizes the resources for training and all the related employees participate to learn different operational innovations and technologies.”

One very intensive training was “lean training” organized by buyer in this case which was a tailor-made project for supplier to develop production processes and increase performance. Typical investments have also been made in production for example machining centers tools and measurement systems in this case company to enhance the production efficiency. These investments are a significant part in developing collaboration with supplier which in result enhances the relationship performance. It could be stated that buyer-supplier relationship is developed well during activities like site visits, supplier training, and investments for the suppliers. Accordingly:

Proposition 4: The higher the direct involvement activities by buyer are, the higher chances of supplier development success are along with a positive impact on buyer-supplier relationship development.

Table 2 summarizes the results of this study and highlights the most interesting findings. It clearly demonstrates the impact of supplier development determinants on supplier development program implementation and buyer-supplier relationship. The results in Table 2 indicate that implementing supplier development programs, supplier assessment activities are the prerequisites in providing opportunities to evaluate supplier continuously in order to kick start a successful supplier development project along with competitive advantage. This finding is consistent with [4] where they found it the most important factor for undertaking operational knowledge transfer activities. On the other hand, it has a moderate impact on developing buyer-supplier relationship because of being a prerequisite in supplier development program. Similarly, competitive pressure keeps the supplier intact with the required quality and production efficiency. The results posit that competitive pressures are in favor of buying firm to keep their supplier motivated toward quality and competency and can be an important part of supplier develop-

ment. However, because of threats of switching, it negatively influences buyer-supplier relationship development.

Table 2
Supplier development strategies and their impact on SD and BSR.

Supplier development strategies	Impact on supplier development project	Impact on buyer-supplier relationship
Supplier Assessment	Successfully implemented with positive impact on SD	Moderate impact on BSR development
Competitive Pressure	Successfully implemented with positive impact on SD	Negative impact on BSR development
Supplier Incentives	Successfully implemented with positive impact on SD	Highly Positive impact on BSR development
Direct Involvement	Successfully implemented with positive impact SD	Highly positive impact on BSR development

Moreover, supplier incentives in current supplier development programs have been perceived interestingly positive from both buyer and supplier. Supplier appreciated the effort of incentives made by buyer and highlighted as an important prerequisite for buyer-supplier relationship development. It does not only keep supplier motivated towards quality and operational competency but also motivate them to cooperate in any case. A high impact on buyer-supplier relationship was seen, which demonstrate the importance of this factor in supplier development program. Lastly, direct involvement from buyer in supplier development program has been seen quite important in current case study. Top management's strategic involvement in supplier development results in longer term relationships and commitments and tacit knowledge transfer. This result is consistent with [10] and [4] who found the top management involvement/direct involvement strongly effecting longer term commitment. In our case, it implemented successfully in supplier development program and provided a strong support in developing business relationship.

Therefore, the analysis indicates that direct involvement and supplier incentives are the strong strategies of supplier development program which have a strong positive impact on developing business relationship. Although, supplier assessment moderately effect relationship development, it strongly effect in supplier development implementation. Com-

petitive pressure has interestingly become a complex determinant of supplier development in our framework implementation where case company needs to undertake it seriously to come up with the most suitable solution to gain competitive advantage.

Conclusions and findings

Supplier development and buyer supplier relationship development are dominant in today's global and dynamic business environment. Buying firms are keen to develop long-term relationships with their business partners to overcome the challenges postured by current market environment. In this scenario, practitioners are more focused towards cost minimization to improve the competitiveness by developing proper supplier integrations' projects. For the purpose, this study focused on implementing a unique combined framework of supplier development strategies to develop buyer-supplier relationship. Four significant supplier development strategies (i.e. supplier assessment, competitive pressure, supplier incentives, and direct involvement) were empirically tested and verified in order to develop business relationship with an in-depth case study methodology. The results of our case study supported the theory based supplier development research framework.

Supplier development is a strategic process followed by buying firms to develop their key suppliers in order to enhance the punctuality, shorten lead times, and operational quality and to decrease total cost of ownership. Therefore, this empirical case study research results in a developed framework of supplier development being tested and validated based on extensive literature review. The research tested a supplier development framework providing numerous strategic in-sights concerning how implementing supplier development strategies result in developing buyer-supplier relationship. The findings reveal that supplier development strategies are significant strategic tools to develop buyer-supplier relationships and increase the supplier's performance and capabilities. Most interestingly, supplier incentives and direct involvement were found as strategic significant strategies for overwhelming business relationship. Suggested framework along with propositions is a unique combination of useful solutions for tactical and strategic management's decision making and also valid for academic researchers to develop supplier development theories.

Organizations always strive to construct effective and competitive supply chain networks by enhancing the competency and operational quality of their key suppliers [4]. Similarly, implementing supplier devel-

opment strategies develop operational performance of suppliers which in return supports the buyer's successful and effective supply base. Top management role of buyer and supplier in implementing supplier development strategies acts as a significant facilitator in trust building. This permits both buyer and supplier to share important information to achieve their business objectives and to develop the operational capabilities. Moreover, supplier evaluation is a significant determinant of supplier development program which allows firms to keep the supplier's operations consistent according to their required operational competency. Consequently, by implanting all the determinants of supplier development intact, buyer-supplier relationship is developed along with their operational performance. In addition, both parties' willingness and interest in supplier development program is an important facilitator which ultimately create opportunities to improve operational and relationship performance.

This study provides a unique research framework along with empirical evidence. It contributes in provision of two-folded competitive advantage: successful supplier development implementation and developed buyer-supplier relationship. Firms that successfully progress implement supplier development strategies in order to attain several benefits: cost efficiency, continuous quality progress, better customer services, improved delivery performance, and reduced product cycle time [10]. Therefore, this study provides a combined framework of strategies to cope with these crucial operational achievements. Furthermore, this study provides an in-sight of supplier development strategies and their impact on suppliers while implementing. Most interestingly, their impact on developing buyer-supplier relationship is presented.

Further research

Further research should focus on considering in-depth investigation of trust and communication factors along with the proposed supplier development approaches in a global business environment. The propositions developed in our study need to be investigated further whether these are generally applicable to other dynamic business environment. Moreover, this study represents a single manufacturing case in Finland only. It will be interesting to apply these propositions in several cases across the Finland and in other industrial settings. It will provide an opportunity to analyze how supplier development strategies influence buyer-supplier relationship in different industry contexts. Further studies can interestingly find out whether firms can build up strong

relationships with their suppliers using these supplier development approaches, and if such improvements need further stages and factors. All in all, our study has presented that supplier development approaches include critical strategies exposing at the same time new opportunities for additional qualitative and quantitative research.

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Managing for Success: The Role of Transactional and Relational Mechanisms in Buyer-Supplier Relationships

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Firms are collaborating more in supply chain network and identified the importance of business relationships. This idea was embraced by academic and empirical research in operations management since last decade. Therefore, the purpose of this study is to develop a comprehensive integrated conceptual and empirical framework which elaborates the role of transactional and relational factors to highlight buyer-supplier relationship performance. While, limited studies explored these factors separately neither provide the dynamic interactive role of transactional and relational factors in an integrated framework. Through multiple case studies, findings reveal that impact of relational factors of trust and communication has constructive influence in reducing the transaction cost and improving relationship performance. This study contributes to debate on managing complex business network relationships by providing a combined theoretical setting (transaction cost economics and social exchange theory) and empirically proven integrated model. Managers can enhance the operational performance by selecting the most suitable constructs.

Key words: buyer-supplier relationship, transactional mechanism, relational mechanism, case study, operational performance, transaction cost

Introduction

Pressures to build and sustain global competitive advantage during the last two decades have changed the way firms engage in business.

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Strategically management of buyer-supplier relationships have become most important drivers of sustainable competitive advantage and observed in both academic and practitioner literature. Particularly, the role of transactional mechanisms and relational mechanisms in supply chain network is becoming more and more crucial (Roden and Lawson 2014). As a result, there is a shift from 'hierarchical capitalism' to 'business networks' (Li et al. 2010). Buyer-supplier relationships have become a panacea for foreign firm's competitive and innovations anguishes; resource constraints; rising costs and risks (Corsten, Gruen, and Pekinghaus 2011).

However, despite their popularity and importance, research and anecdotal evidence show that managing buyer-supplier relationships have become a challenge in supply chain network (Dyer 1997). This has led researchers to investigate a wide range of factors that ensure the success of these relationships. Recently, meta-analysis studies have been conducted on purchasing and supply chain management (PSM) and supply chain integration (SCI) linking these factors positively related to firm's performance (Leuschner et al. 2013; Zimmermann and Foerstl 2014). While these limited studies have richly probed the role of transactional and relational factors on buyer-supplier performance, there is need to develop a comprehensive framework that explains transactional as well as relational forces within an integrated theoretical and empirical model to explain the performance of buyer-supplier relationships.

Therefore, the purpose of this study is to examine the underlying impact of transactional and relational factors in buyer-supplier relationships through multiple case studies. Two theoretical perspectives; transaction cost economics (TCE), and social exchange theory (SET) are integrated in this study to see how effectively firms manage their relationships with their suppliers. Such a theoretical pluralistic approach will help to uncover rich explanations about the management of buyer-supplier relationships. In order to get in-depth understanding about the impact of transactional and relational factors on buyer-supplier relationship performance and transaction cost, this study is based on qualitative investigation. For the purpose, three Finnish companies were interviewed in 2014 that are involved in developing business relationships with their key suppliers (local and international). Thus, this study contributes in a discussion of managing and developing business relationships by providing empirical explanation of combined transactional and relational factors and their impact on transaction cost and performance.

As a consequence, we investigate the following research question:

How do the transactional factors of contract completeness and interdependence, and relational factors of trust and communication affect the buyer-supplier relationship outcomes?

The main research question can further be divided in the following sub-questions. First, *how and why do transactional factors effect transaction cost between buyer and supplier?* Second, *how and why do relational factors influence cost between buyer and supplier?* Third, *how can transactional and relational mechanisms and reduced transaction cost enhance the overall firm's performance?*

The remainder of this study is organized as follows. In the next section, literature review is presented. This is followed by a description of empirical section which presents research methodology. Next section provides results with discussion of these factors. After presenting the discussion and implications of the results, the paper concludes with some managerial implications, limitations and suggestions for further research.

Literature Review

Over the past decades, several theories have been applied to explain the rationality of buyer-supplier relationships. Among the utmost, transaction cost economics, resource based view, institutional theory and social exchange theory are the most important and vibrant theories in this field commonly. In this study, theoretical framework is drawn from the transaction cost economics and social exchange theory. In general, both theories have a common aim of explaining how buyer-supplier relationships are managed. However, the tools, each theory proposes to manage the buyer-supplier relationships are different. Transaction cost economics focuses on the structural mechanisms (i.e., contract between buyers and sellers, specific asset investments between buyer and supplier) to efficiently manage the buyer-seller relationships (Williamson 1985; Brouthers and Hennart 2007). On the other hand, social exchange theory focuses on the social mechanism of trust and level of information sharing to manage the buyer-supplier relationships (Madhok 1995; Johnson et al. 1997; Muthusamy et al. 2007; Lin and Wang 2008).

As the purpose of this study is to find out how transactional and relational factors regulate buyer-supplier relationship outcomes, these factors can be justified rationally by integrating these two theories together. Similarly, structural mechanisms are principally rooted in TCE (Williamson 1985), and social mechanisms mainly exist in SET (Blau 1964). Choice of theory depends upon the nature of problem that is why; this paper integrates both perspectives (TCE and SET) to

Khuram Shahzad, Josu Takala, Tahir Ali, and Ilkka Sillanpää

encounter the objectives. In the supply chain literature, transaction cost economics (TCE) and social exchange theory (SET) provided a rich explanation of transactional and relational factors. Several researchers highlighted and used the theoretical perspectives of transactional (structural) and relational (social) rationale separately but in detail (Dyer 1997; Liu, Luo, and Liu 2009; Li et al. 2010; Nyaga, Whipple, and Lynch 2010; Corsten, Gruen, and Peyinghaus 2011; Roden and Lawson 2014). Consequently, resource-based view was not integrated because the factors under research question cannot be addressed according to the objectives of the study.

Sillanpää and Sillanpää (2014) developed a strategy framework explaining supply chain which combines corporate strategy, supply chain demand strategy, and business environment together. While the framework by Sillanpää, Shahzad, and Sillanpää (2015), explains the analysis of supplier development and buyer-supplier relationship strategies (supplier assessment, competitive pressure, supplier incentives, and direct involvement) influencing the business performance. Therefore, several researchers have highlighted the important role of supplier selection, and supplier's involvement in strategic decision making process (Choy, Lee, and Loo. 2002; Song and Di Benedetto 2008; Ho, Xu, and Dey 2010; Hammami, Temponi, and Frein 2014) to achieve effective supply chain.

Dyer (1997) study on United States and Japan supplier-automakers international cooperative alliances depict that trust and mutual hostages help to reduce automakers transaction costs and enhance transaction value. In the same vein, Zaheer, McEvily, and Perrone (1998) study on United States buyer-supplier relationships depict that presence of organizational trust reduces negotiation costs and increases performance of buyer-supplier relationships. Similarly, Artz and Brush (2000) study on 393 original equipment manufacturer (OEM) supplier relationships in United States depict that presence of collaboration, continuity expectation, and communication strategies lower negotiation costs in OEM-supplier relationships. Finally, the Dyer and Chu (2003) study on 344 Supplier-automaker relations in United States, Japan, and Korea show that presence of trust reduces monitoring and enforcement costs and positively relates with buyer's profit performance.

Hence transaction costs are measured as negotiation costs (Zaheer, McEvily, and Perrone 1998; Artz and Brush 2000), and contractual costs, monitoring and enforcements costs (Dyer and Chu 2003). In some studies, (1) the presence of trust is considered to reduce transaction costs (Dyer 1997; Zaheer, McEvily, and Perrone

1998; Artz and Brush 2000; Dyer and Chu 2003), (2) and trust and the presence of hostage are considered as both reducing transaction costs (Dyer 1997) and enhancing performance. Apart from measuring transaction cost in these few empirical studies, there are some studies which have identified the structural mechanism (i.e. contract, symmetric dependence, hostages) to manage the buyer-supplier relationships and linking them with buyer-supplier performance (Poppo and Zenger 2002; Woolthuis, Hillebrand, and Nooteboom 2005; Williamson 1985).

TRANSACTIONAL AND RELATIONAL MECHANISMS

Transactional mechanisms explain the economic rationality and governing these relationships through monitoring and incentive based structures (Heide and John 1992; Jap and Ganesan 2000). Moreover, the relevant literature of buyer-supplier relationship performance and the factors involve including the literature of transactional mechanisms inspired by the transaction cost economics (TCE) of Williamson (1985). On the other hand, relational mechanism focuses on governing and managing these relationships through moral control and in cooperative environment (Liu, Luo, and Liu 2009). Further, relational mechanisms manage and supervise the social connection and cooperation based on relational norms in business relationships. In this way, trust and relational norms from social exchange theory (SET) are to find out the impact on performance and opportunism (Liu, Luo, and Liu 2009; Heide and John 1992). This contributes in the literature by highlighting the relative effectiveness of these mechanisms in reducing the opportunism and enhancing the relationship performance and explores these mechanisms (Liu, Luo, and Liu 2009; Heide and John 1992; Jap and Ganesan 2000).

Li et al. (2010) highlighted the important antecedents that lead to the adoption of social and formal control in long term buyer-supplier relationships. Control mechanisms are the structural arrangements between the organizations to manage the behaviour of both parties in the relationship (Fryxell, Robert, and Maria 2002). Further, Li et al. (2010) used formal control (relies on contracts) and social control (relies on informal means) to find out their impact on the performance. In this paper, the authors filled the research gap by adding the view of social network theory and institutional view in addition to transaction cost economics (TCE). Most of the existing literature has been applying transaction cost economics and identified several control factors in buyer-supplier relationship (Poppo and Zenger

Khuram Shahzad, Josu Takala, Tahir Ali, and Ilkka Sillanpää

2002; Reuer and Ariño 2002; Williamson 1985; Wuyts and Geyskens 2005).

Moreover, existing literature has been generated the significant insight into the control mechanisms but the findings are not consistent over time. In this vein, Zhou et al. (2003) highlighted three logics to manage the behaviour of firms in relationship 1) transactions costs, 2) social relations, and 3) institutional constraints. Existing literature argue that formal control and social control mechanisms are substitute (Dyer and Singh 1998; Gulati 1995; Uzzi 1997). On the other hand, some argue that these control mechanisms are not substitute but complementary in explaining the firm's performance (Luo 2002; Mesquita and Brush 2008; Poppo and Zenger 2002; Wuyts and Geyskens 2005).

Similarly, Corsten, Gruen, and Peyinghaus (2011) presented the understanding of buyer-supplier identification role in operations management. They applied the construct of buyer-supplier identification in the relationship by using social identity theory by mentioning different constructs of buyer-supplier identification like trust, information sharing, knowledge sharing, and relation specific investment. This factor of supply chain which provides competitive advantage, theoretically proposed (Ireland and Webb 2007) but not empirically tested and analysed so widely. Recently, some scholars have extended the conceptual framework of identification in supply chain research (Dyer and Hatch 2006; Ireland and Webb 2007).

Moreover, Corsten, Gruen, and Peyinghaus (2011) argued that supplier-to-buyer identification has an impact on the behaviours between the organizations which lead towards the operational performance. On the other hand, this identification of inter-organizational partners can be linked with information exchange which helps to explain the operational performance of the firms. Furthermore, if there is a trust in place between these notions, it would impact directly in both relationship factors by enhancing the operational performance. Importance of management of trust has become more vibrant in the organizations. Paliszkievicz (2011) evaluated the advancements and setbacks of trust management in organizations. There is a comprehensive consensus among trust scholars that trust is clearly a sociological phenomenon which principally emerges among individuals, however, it can also be established between organizations if 'the positive expectations of the intentions or behaviour of another [organization]' are shared by a dominant coalition of the individuals in both organizations engaged in the collaborative transaction (Zaheer, McEvily, and Perrone 1998).

Transactional and relational factors still can be seen in literature as both complements and substitutes in buyer-supplier relationship. However, prior empirical studies have been unsuccessful to reveal *how* and *why* these transactional and relational factors are substitutes or compliments in buyer-supplier relationship. Several studies have presented quantitative and cross sectional data about the buyer-supplier relationship development but *how* and *why* these relationships can be developed are not uncovered explicitly. This study provides an insight of this phenomenon in a case study method where three cases were analysed profoundly to identify the impact of transactional and relational factors in buyer-supplier relationships.

RESEARCH FRAMEWORK

Prior literature presents clear understanding of transactional and relational mechanisms, widely used in several supply chain research papers. A rhetoric discussion of successfully managing supply chain management and business networks provides a concrete knowledge of significant factors supported by different theories. Though, these factors are scattered on the canvas of rich supply chain literature with different behaviours but today's need is to collate those factors in order to streamline and develop strategic buyer-supplier relationship. The framework combines all the mentioned significant features that help companies to enhance the operational performances in inter-organizational relationships and to reduce the transaction cost. Figure 1 presents the research framework based on the research objectives and collate transactional and relational factors from prior literature.

The important factors in research framework do not only have interaction between them but also have a significant impact to hinder opportunism and transaction cost (Williamson 1985) in explaining the performance of relationships. Moreover, this study not only advances the understanding and importance of inter-organizational networks but also provides an analytical framework as a synthesis of significant transactional and relational mechanisms.

Research Design and Methods

This study employs a case study approach (Yin 1994; Eisenhardt 1989; Eisenhardt and Graebner 2007) to get insight under question phenomenon. This study is framed within the background of TCE and SET to testify how the identified key variables behave in different business environments. Similarly, the research question is strictly scoped within the context of TCE and SET to get an insight of

Khuram Shahzad, Josu Takala, Tahir Ali, and Ilkka Sillanpää

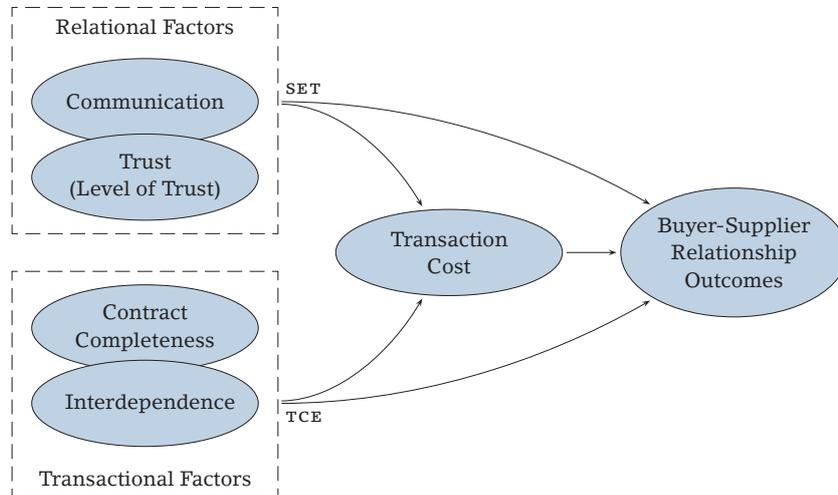


FIGURE 1 Research Framework

transactional and relational mechanisms (Eisenhardt and Graebner 2007). Therefore, this research design helps us to get a better understanding and real-world context of buyer-supplier relationship outcomes in natural setting (Bonoma 1985; Yin 1994; Eisenhardt and Graebner 2007).

A multiple case study provides the external validity because of comparative analysed results by within case and cross case analysis thereby employing replication logic (Yin 2003; Eisenhardt 1989). It provides the advantage in increasing the likelihood of developing accurate findings extracting from collected data and better information to identify the transactional and relational factors and their pattern in particular (Ghauri 2004; Yin 2003). The lack of qualitative research in this topic led to identify the significant factors and select an exploratory method based on grounded theories (Glaser and Strauss 2009).

THE THREE CASE STUDIES

Three manufacturing cases from Finland were selected based on the equal level of operations, cultural closeness and suitability of relationship factors which prevails the logic among constructs (Eisenhardt and Graebner 2007). The cases are not selected to be representative of the population of buyer-supplier relationships, but as explanatory substance to validate the testability of transactional and relational factors.

Case A is a global leader based in Finland and compelled by an urge to produce, manufacture, and sell electric drives and inverters in the world. It has a huge suppliers' network with hundreds of key suppliers selected based on quality level, costs and capability to handle 'high mix low' volume that provide capital component supplies to run their daily operations. *Case company B* based in Finland leads in power and automation technologies and success was driven by a strong concentration on research and development along with long track record of innovation. This case started relationship with this key supplier three years ago and selected based on quality assurance, cost, and dynamic capability. *Case company C* is engaged in products and services for customer's value and effectiveness globally and one of the global leaders in their operations and serves a huge number of customers. They have established a supplier development system to enhance the operational performance between buyer and supplier to strengthen their supply base. This relationship was started in 2000 and case company considered many parameters during the selection (e.g. outsource production facility, quality, cost, delivery time etc.).

DATA COLLECTION

As purpose of this research is to find out insight impact of transactional and relational mechanisms in developing buyer-supplier relationship, data was collected from selected cases keeping the importance of these mechanisms in mind. Semi-structured interviews including measurement items (see appendix 1) were conducted to collect data in order to achieve a certain level of comparability (Bryman 2004). Each interview was held face to face with voice recording and then transcribed to ensure high degree of reliability and traceability (McCutcheon and Meredith 1993).

This study contains a high level of dependability and reliability because of the process followed recommended by Miles and Huberman (1984) and Hill, Thompson, and Williams (1997), where two authors collected data from the cases in order to enhance the creative potential. One informant (top management level) from each selected case company was picked up for interview (three interviews in total). Interviews lasted an average of two hours where each interview was recorded and transcribed. The primary focus was to obtain the information regarding transactional and relational factors in their buyer-supplier relationship that could not be retrieved from secondary sources. The informants in selected case companies were at top level managerial positions, all of whom were typically respon-

Khuram Shahzad, Josu Takala, Tahir Ali, and Ilkka Sillanpää

sible in daily operations, and having direct strategic interaction with suppliers. Anonymity of company sources was confirmed in report findings to communicate openly with the respondents which provided a comfort level to respondent.

CONSTRUCT OPERATIONALIZATION AND DATA ANALYSIS

A case protocol was written as recommended by Yin (1994) to establish a comparison between selected cases and quality of case analysis. The idea of case protocol was written to identify the transactional and relational factors and their impact on relationship outcomes and to measure these factors through in-depth interviews.

Contract completeness was measured by asking overall nature of the contract in terms of its importance between two parties, operating procedures, types of conflict resolution clauses, termination, unanticipated contingencies, and quality of distributed resources between buyer and supplier. Further, *interdependence* was measured using a systematic approach in buyer-supplier relationship where the amount and ratio of resources invested by two parties were analyzed. *Communication* was measured by asking quality, frequency, and openness of communication between the parties. *Trust* was measured by inquiring the overall assessment of this phenomenon between the parties in respondent's perspective. *Transaction cost* was measured by asking the frequent cost occurred in terms of negotiation, consumed time in handling conflicts, and monitoring the supplier's operations. On the other hand, *relationship outcomes* have been measured by using the criteria of overall performance, profitability, just in time delivery, manufacturing/quality, cost control, cost compared with other suppliers, and satisfaction level of this relationship.

The collected data was analyzed using qualitative data analysis techniques: data-driven thematic analysis and putting all the information in classified chronological order to uncover the detailed elements of transactional and relational mechanisms in relationship outcomes (Miles and Huberman 1994). We followed the recommended steps to analyse the collected data where recorded interviews were broken down in the context of constructs accordingly. Each case was analyzed separately, then a cross-case analysis done to identify the similarity and differences of these mechanisms in different cases (Ragin 1994; Eisenhardt 1989). The consistency analysis between empirical findings and theoretical arguments across cases were utilized to draw conclusions. Figure 2 elaborates the complete process of research methodology employed for this research.

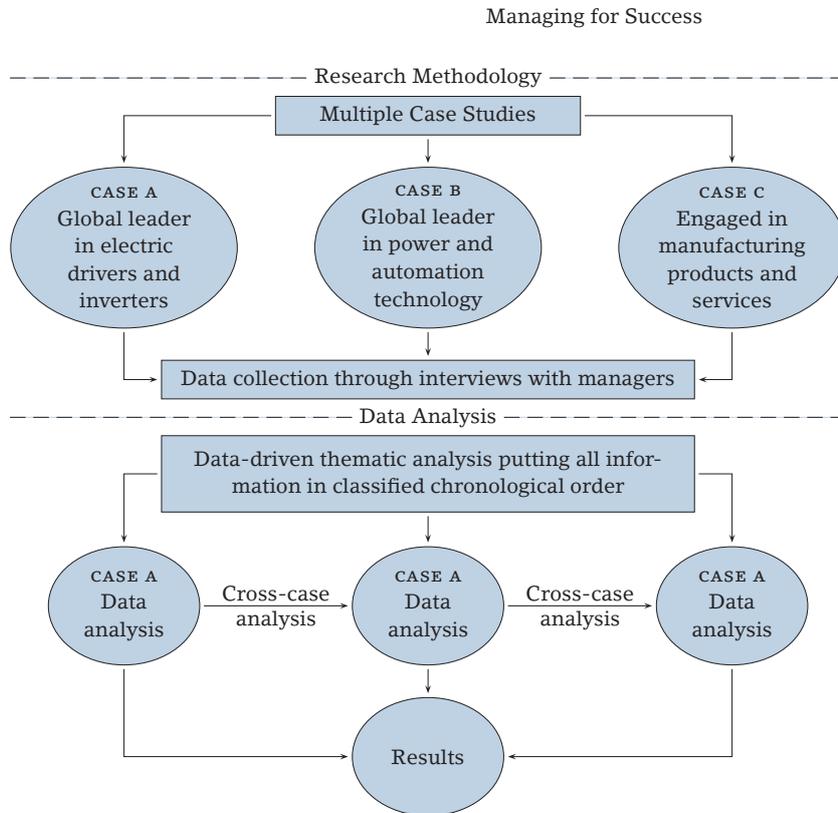


FIGURE 2 Research Design

Research Findings

Supplier and respondent names were decided to keep anonymous, so with analyzed results of transactional and relational factors in buyer-supplier relationship outcomes are presented. This section describes how these mechanisms are perceived and operationalized case by case, and then comparative analysis findings are presented.

CASE A

Transactional Characteristics of Relationship in Case A

Interview with respondent from Case A has revealed that they trust their key supplier significantly which makes their position very strong in this relationship, they deal and negotiate openly in the time of crises. A written contract is emplaced between buyer and supplier but at the same time they prefer the organizational culture and communicate openly if they need to resolve a conflict between them. In this case, they have very strong bonding with their key sup-

Khuram Shahzad, Josu Takala, Tahir Ali, and Ilkka Sillanpää

plier and contract has a low impact in managing this relationship which effectively influences the relationship outcome positively.

In this cooperation, both parties have invested massively to manage and to keep the operations smooth. Both parties have invested in knowledge transfer, know-how, quality testing systems, automated order transactions, lean production, training, engineering drawings etc. This huge investment by both parties makes the more independent on each other. Interdependence is quite high in this case where both parties have invested capital resources for the relationship. The ratio of these resources is about 50–50% by investing financial, managerial, technological, and physical resources for relationship development.

Relational Characteristics of Relationship in Case A

The quality, frequency, and openness are considered to be important while communicating with their suppliers. Similarly, in this case communication employed is formal and informal to solve the conflicts timely which always help for better operational results. So, this shows the high frequency level of communication between two parties in this particular case. In this particular case, trust was not built from very first day but developed gradually. Similarly, trust has developed and become a strong reason to eliminate several problems and costs.

Relationship Outcomes in Case A

The impact of transactional and relational factors on reducing the transaction cost show that situations may differ case by case. Transactional and relational factors provide the opportunity to run the business smoothly and build strong bonding with suppliers. Following this approach, they are helpful in reducing the cost but sometimes negotiations on different issues can be a reason to bear extra costs. Because this relationship started in 1999, they have therefore built trust, communication, asset specific investments, and action plans in their operations. The opportunism factor has been almost vanished from this relationship. In the following table 1, respondent's view upon transactional and relational factors in Case A is stated.

CASE B

Transactional Characteristics of Relationship in Case B

In this case, interdependence is asymmetric in nature even both parties have invested little resources for this relationship and they are

TABLE 1 Respondent's View upon Transactional and Relational Factors in Case A

Respondent's view upon Contract	'Of course contract has a significant value in any of the relationship and sometimes it becomes really important when unanticipated events happen but in our case, the most important thing is relationship and way of thinking rather contracts.' The respondent further explained that: 'Contracts do not contain everything so, we only need to come on table to discuss about any unpredicted situation.'
Respondent's view upon Interdependence	'Both of us (buyer and supplier) have invested in a huge amount of resources for this relationship where dependence level is very high because they have our product drawings (tailor made product) and we are their giant customer.'
Respondent's view upon Communication	'We communicate with our key supplier very frequently about any specific issues in our monthly meetings and I do not find any problem while communicating with us from their side.'
Respondent's view upon Trust	'Trust is everything in personal level relationship as well as in company level relationship and we are happy that our supplier fulfils the promises in time and we have a great confidence on its integrity.'
Respondent's view upon Relationship Outcomes	'Sometimes, companies need to bear the costs of continuous improvement in operations while dealing with their key suppliers.'
Respondent's view upon Relationship Outcomes	'Communication atmosphere is quite open to improve the operations and to solve the problem which means we are not bearing the high level of negotiation, decision making, monitoring, and information sharing cost but we have to be more cost effective tomorrow than today. Costs, quality, time, and technology are the elements that should be improved all the time to build strong and long term relationship.'

one of the main customers for the supplier. The reason behind of being asymmetric interdependence is that the age of relationship is just three years and both parties want to share their resources more. Further, if relationship dissolves, the tangible resources can be recovered and used again. Most important issues regarding operations, management, conflicts, and contingencies plans are being followed in this relationship as stated in the contract.

Relational Characteristics of Relationship in Case B

Both parties carry quite the same organizational culture, so they are familiar with each other's way of working where they can trust on. This shows that there is a medium level of trust developed in this relationship which is quite obvious due to lesser years of this relationship. Moreover, communication in this relationship is also integral part and they usually do not face problems because of same cultural

Khuram Shahzad, Josu Takala, Tahir Ali, and Ilkka Sillanpää

values in communication and understandings. Both parties are quite accustomed with organizational norms. In this buyer-supplier relationship, communication part is more open and frequent because of turbulent business type where product and production line change in short time and they need frequent and open communication to keep it updated.

Relationship Outcomes in Case B

In this specific relationship, both parties carry some costs in terms of negotiations, combine decision making, monitoring quality of supplied components and information sharing cost. So, the transaction cost overall is a bit higher because of newly made relationship. The relationship performance is at the medium level even the supplier in this relationship is a capital supplier. They have good relationship but both parties still want to improve their operations between them and trying to balance between the cost, just in time (JIT), quality and dynamic capability in a way that they achieve a reasonable level of relationship performance. In the following table 2, respondent's view upon transactional and relational factors in Case B is stated.

CASE C

Transactional Characteristics of Relationship in Case C

It is already stated that Case company C owns 50% of the shares of its key supplier, so quite obviously they have invested a huge amount of resources in terms of financial, managerial, technological know-how, and physical resources in this relationship. Similarly, in this relationship, both parties are dependent on each other and an asymmetric dependence exists because it is quite difficult for both parties to find new supplier and buyer respectively. Huge investments do not allow both parties to dissolve this relationship and recover the invested resources which reduce the fear of opportunism at the same time. Exploiting the invested resources seems difficult in this relationship because of a high level of investment for the relationship. Contract also describes the situations therefore, if any conflicts between parties arise, both parties try to solve a conflict by negotiation or by court in worse situation.

Relational Characteristics of Relationship in Case C

In case C where communication between parties is the key factor, it always tries to be open and keep informed their supplier about changes that may affect other parties to avoid any ambiguity and vagueness. This fluent and frequent communication poses that both

TABLE 2 Respondent's View upon Transactional and Relational Factors in Case B

Respondent's view upon Interdependence	'We want to share our knowledge and resources with our suppliers but it will be built gradually. Our supplier also has reformed their production to fulfil our quality requirements.'
Respondent's view upon Contract	'Contract is very complicated and in detailed all about the operations and management but still we do business according to the written clauses of the contract for most important issues but I still believe that in a problem situation, trust plays an important role.'
Respondent's view upon Trust	'Trust is not of course enough, operations must be transparent to build up trust in a relationship. Suppliers need to be very open in any situation and if they are transparent, then trust comes in the relationship.'
Respondent's view upon Communication	'According to my understanding, we try to fulfil our promises and I think due to same norms and values, our supplier also do the same. Our supplier communicates honestly and openly if they are not able to fulfil promises and they do their best for it.'
Respondent's view upon Relationship Outcomes	'It depends upon the conflict, but we put all the related issues under considerations and try to solve it as soon as possible. Our supplier is expert but if we are unhappy with the operations, we consider negotiating for related issues and decision is made by the managements of both parties.'
Respondent's view upon Overall Performance	'I cannot see big issues in this relationship overall and we are quite happy and satisfied but we expect that our supplier will improve their operations in future to prolong the relationship and to develop good terms.'

parties provide important and timely information each other to avoid any unprecedented conflicts. Further, trustworthiness in a relationship is significant and no relationship could be developed without trust. Case company C has a high degree of trust on their supplier and vice versa.

Relationship Outcomes in Case C

This case however faces challenges in strategic decision making for being global company but supplier is very efficient and it compensates the transaction cost. Quality standards are already agreed between them, which means no extra cost for monitoring the quality level of components exists. Thus, this relationship has developed already a certain level of understanding between the parties for their capital transactions and interfaces for supplier integration are developed for information sharing that allows both parties to reduce their transaction cost. The respondent rated high for overall performance and both parties are quite satisfied with their relationship. They are

Khuram Shahzad, Josu Takala, Tahir Ali, and Ilkka Sillanpää

TABLE 3 Respondent's View upon Transactional and Relational Factors in Case C

Respondent's view upon Transactional Characteristics	'All the clauses regarding termination and operating procedures of contract are agreed between the parties but we cooperate and build relationship with our supplier based on trust and fair communication which we consider is a key aspect for relationship development.'
Respondent's view upon Transactional Characteristics	'Both of parties need to solve a conflict if any by negotiating or compromising otherwise we can follow the legal clause of the contract by knocking the court's door but it has been very seldom in our case because we never face this kind of situation in this relationship.'
Respondent's view upon Communication	'Both of the parties try to be open in communicating any changes in procedures or operations to avoid conflicts and we do not feel any resistance or hesitation because relationship is working perfectly for last 11 years and further we do not spend a lot of time for meetings etc.'
Respondent's view upon Trust	'First of all, our supply chain is integrated and of course there are issues every now and then but they do not affect our relationship because we understand each other's operations and mostly our supplier fulfil all of its promises which enhance the trust level in our business relationship.'
Respondent's view upon Relationship Outcomes	'We have developed supplier integration program where both of the parties have easy access to the technical documents, product drawings, information sharing etc., and overall transaction cost between the parties is very low.'

committed to continue the relationship for longer term and want to enhance the transaction value.

COMPARATIVE CASE FINDINGS

Table 4 summarizes the comparative impact of degree of transactional and relational mechanisms in three analyzed case companies. It describes the level of these mechanisms in their operations for relationship outcomes. Based on the results, we have described the degree of these mechanisms in buyer-supplier relationship as low, medium, and high which identify the factors need to be improved. This rating of low, medium, and high in table 4 was achieved and determined by particular existence level of transactional and relational mechanisms in the cases. This is followed by Woolthuis, Hillebrand, and Nooteboom (2005) who selected the extremes of low versus high to discover the research question. Hereby, we have divided the degrees into three extremes low, medium, and high to achieve the comprehension and rationale of research objectives. Further, the answers were analyzed and transcribed into the ratings to make it more clear and understandable. This clarifies not only the developed per-

Managing for Success

TABLE 4 Degree of Transactional and Relational Mechanisms in Cases

Mechanism	Category	Case A	Case B	Case C
Transactional mechanisms	Interdependence	Symmetric	Asymmetric	Symmetric
	Contract	Low	High	Low
Relationship Mechanisms	Communication	High	Medium	High
	Trust	High	Low	High
Buyer-Supplier Relat. Outcome	Transaction cost	Medium	High	Low
	Overall performance	High	Medium	High

ception of these mechanisms into respondents' mind but also identify what the significant factors to be improved.

Based on the analyzed results summarized in table 4, this study provides comparative findings of transactional and relational factors. As we can see that in Case A, interdependence between parties is symmetric which help to reduce the opportunism level in relationship. Further, the impact of contract is quite low which illustrates that both parties try to resolve their conflicts based on the trust. Similarly, communication and trust in Case A have high impact in developing the relationship that posits the positive impact on relationship performance. Finally, transaction cost has a medium impact in this relationship, which recommends that they need to further think about their transactions with supplier more in detail to evaluate how they can reduce transaction cost.

Case B posits results unlike Case A, where transactional mechanisms need to be improved. These results endorse the both parties to invest more for the relationship, which will affect their interdependence level and reduce opportunism between the parties. Because this relationship is newly made (3 years), they need to develop trust between each other to enhance the transaction value of relationship. If relational mechanisms have developed in an organization, companies mutually solve conflicts and unpredicted situations. Symmetric interdependence provides the opportunity for both parties to prolong relationship with good terms and to enhance relationship performance.

On the other side, Case C is quite unique between three cases because it does not only have good relationship with supplier but it also has ownership in supplier's assets. In this situation, interdependence will always be symmetric and fear of opportunism will be very low. Contract between both parties will exist but they will try to solve all the problems and conflicts in a win-win situation. In this case, trust and communication has a high impact on relationship

Khuram Shahzad, Josu Takala, Tahir Ali, and Ilkka Sillanpää

performance because they do not need to negotiate frequently for certain issues. Trust always reduce the possibility of negotiation and transaction cost.

Conclusion

This paper empirically demonstrates the impact of transactional and relational mechanisms on transaction cost and buyer-supplier relationship performance. To examine the role of these mechanisms in relationship performance, this study produces an empirically tested research framework based on two major theoretical perspectives: transaction cost economics and social exchange theory. Previous research lacks in identifying generally the role of transactional and relational factors in developing buyer-supplier relationship and more specifically measuring the transaction cost. It also lacks in evaluating these mechanisms together for a specific relationship in multiple case study where the knowledge can be acquired in detail.

This study uncovers that relational mechanisms are more effective than transactional mechanisms on relationship performance. Trustful atmosphere between parties facilitate to resolve the conflicts and safeguard the contingencies that in result enhances transaction value and reduces transaction cost. The collected data from Finnish cases with same organizational culture indicate that trust and communication are the most important factors in developing long-term relationships with business partners. Findings also show that transactional factors have significant effect in developing buyer-supplier relationship. This means that symmetric interdependence reduces the potential of uncertainty of outcomes, replicates a level of competitive and synergetic relationship nature and develops higher transaction value (Mahapatra, Narasimhan, and Barbieri 2010; Hendrikse and Windsperger 2011; Pfeffer and Salancik 2003, 41).

Most importantly, this study presents empirically tested integrated framework which combined significant factors of TCE and SET. This kind of combination does not only highlight the importance of these factors but also to answer the question of how and why these factors influence the buyer-supplier operations. Our findings show the impact of transactional and relational factors on transaction cost between buyer and supplier and how to hinder the opportunism. Because this study examines these factors from buyer perspective, it provides a new dimension to buyers to integrate and reconsider these factors while making decisions to get competitive advantage.

The findings contribute to existing research on the management of buyer-supplier relationship by developing an integrated framework

of social exchange theory and transaction cost economics. Moreover, a case study explores the significance of transactional and relational mechanisms for buyer-supplier performance. This finding provides an insight for the managers to understand the importance of these mechanisms in their operations to build up strong relationships not only to improve performance but also to reduce transaction cost. Managers can enhance the operational performance by selecting the most suitable construct in developing long-term relationship with their suppliers.

FURTHER RESEARCH

It is important to note that this study contains limitations which provide future research prospects. Our study focuses on Finnish manufacturing industry by selecting three case companies. Interesting future research can be done by adding more cases to get a comprehensive overview of the constructs used in the study. Future research can be developed a full set of characteristics within the model along with a strong aspect of culture to be tested in Nordic countries. This viewpoint will provide more generalized and interesting findings due to different cultural norms. For example, *trust* and *communication* play a crucial role in developing buyer-supplier relationship in Finnish organizational culture. It would be interesting to see the extent and effectiveness of this framework in other countries too. Finally future research should attempt to identify some other supplementary factors contributing to reduce transaction cost and to develop buyer-supplier relationships. Quantitative study with a sufficient number of respondents is quite an interesting idea to test the proposed integrated framework in further research.

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Khuram Shahzad, Josu Takala, Tahir Ali, and Ilkka Sillanpää

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Appendix 1: Measurement Items

BUYER'S BACKGROUND INFORMATION

1. Name of your company?
2. Type of the industry?
3. Number of employees (in 2014)?
4. Ownership: (family-owned, state-owned, local Plc. MNE)?
5. When was your company formed?

SUPPLIER'S BACKGROUND INFORMATION

1. Name of the key supplier?
2. Supplier's home country?
3. Number of employees in your supplier company approximately (in 2014)?
4. Supplier ownership type: (Family-owned, state-owned, local Plc. MNE)?
5. When did relationship start with supplier?
6. Why did your firm select this supplier?

TRANSACTIONAL CHARACTERISTICS OF RELATIONSHIP

1. What kind of resources have your firm and supplier invested in this relationship (e.g., financial, managerial, technological, physical, or others)? If yes, then what is the ownership ratio?
2. Suppose if your relationship with this supplier dissolves today, to what extent you and your supplier can recover the invested resources: (a) very low, (b) moderately low, (c) slightly low, (d) medium, (e) slightly higher, (f) moderately higher, (g) very high?
3. If your relationship with this supplier dissolves today, can your firm find another supplier for same components?
4. If your relationship with this supplier dissolves today, can your supplier find another buyer for the same components?

Khuram Shahzad, Josu Takala, Tahir Ali, and Ilkka Sillanpää

5. What is importance of contract in your relationship with supplier and what sort of things you have included in contract (operate and manage the relationship, resolve conflicts, terminate the relation, unanticipated contingencies, quality of resources contributed, and avoiding exploitation)? What is the impact of contract on actual dealings between companies?

RELATIONAL CHARACTERISTICS

1. Communication is very important ingredient for developing the relationship between buyers and suppliers. How do you describe the quality, frequency, and openness of communication between your firm and supplier:
 - (a) keeping informed each other about events or changes that may affect the other party,
 - (b) providing important and timely information that might help the other party,
 - (c) exchange of information in this relationship takes place frequently and informally.
2. How important is trust in your relationship with supplier? How do you describe the overall trustworthiness of supplier in this relationship? Does he fulfil his promises? Does he sometimes try to hide some important information from you?
 - (a) Cannot be trusted at times
 - (b) Is perfectly honest and truthful
 - (c) Can be trusted completely
 - (d) Can be counted on to do what is right
 - (e) Is someone I have great confidence in
 - (f) Has high integrity

RELATIONSHIP OUTCOMES

Transaction Cost

1. Developing relationship always carry some cost in terms of negotiations, combine decision making, monitoring the quality of supplied components, and sharing information. How efficiently your relationship handles these kinds of costs?
 - (a) How effective your meetings are with your suppliers in terms of time spent and making important decisions?
 - (b) Do you spend a lot of time in monitoring the quality of supplier's deliveries?
 - (c) Do you spend a lot of time together with supplier in order to solve conflicts?
 - (d) How easy it is to understand the information provided by supplier?

Buyer-Supplier Relationship Outcome

1. How do you evaluate the performance of your relationship? (Overall performance, profitability, just in time delivery, manufacturing quality, cost control, achieving goals, performance compared to

Managing for Success

other suppliers, and relationship with supplier)? How satisfied is your firm with this relationship:

- (a) Has the relationship been satisfactory?
- (b) Has the relationship been very successful?
- (c) Has the relationship met your firm expectations?
- (d) Has your firm achieved the set objectives?

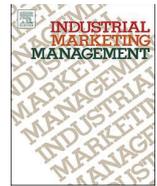


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Target and position article

The varying roles of governance mechanisms on ex-post transaction costs and relationship commitment in buyer-supplier relationships

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ABSTRACT

Inter-firm relationship governance is becoming increasingly fragmented and complex in industrial marketing and management. There is a need to develop an integrative framework, which describes the nature of the relationship (complementary or substitutes) between economic and sociological governance mechanisms, and their relative effectiveness in explaining ex-post transaction costs and relationship commitment. Building on transaction cost economics (TCE) and social exchange theory (SET), we investigate the varying roles of economic (i.e., contract completeness and symmetric dependence) and sociological (i.e., trust and communication) governance mechanisms. The deductive-nomological framework is tested by employing a nonparametric technique (i.e., partial least squares - PLS) to structural equation modeling (SEM) and semi-partial correlation. The analysis of data from 170 buyer-supplier relationships established by Finnish SMEs indicates that sociological mechanisms function as substitutes with contractual governance and complementary with symmetric dependence in relation to ex-post transaction costs and relationship commitment. Further, economic governance mechanisms have a more effective role in minimizing ex-post transaction costs, whereas sociological governance mechanisms are more powerful in enhancing relationship commitment.

1. Introduction

Minimizing transaction costs and maximizing relationship commitment have become the central research phenomena in inter-firm relationship management. Transaction cost is defined by Williamson (1985) as all of the ex-ante and ex-post contracting, monitoring and enforcement costs connected with conducting exchange activities between firms (Gulbrandsen, Lambe, & Sandvik, 2017). Relationship commitment, on the other hand, is considered as a central ingredient of the relationship marketing model affecting the behavior of partners (Shi, Shi, Chan, Liu, & Fam, 2011), and involves a need to develop and maintain a stable relationship (Anderson & Weitz, 1992). However, the uncertainty of buyers and suppliers regarding the expectations whether the counterpart abandons opportunistic behavior and acts cooperatively in bargaining and negotiation is an inevitable dilemma in relationship exchange (Gorton et al., 2015). Similarly, incomplete contracts, distrust, asymmetric information sharing and interdependence, differences in objectives as well as unanticipated changes in the market are depicted as negative forces influencing transaction costs and relationship commitment.

Governance, therefore, becomes pivotal in buyer-supplier relationship development (Liu, Li, Shi, and Liu, 2017; Luo, Liu, Yang, Maksimov, & Hou, 2015). Prior inter-firm governance literature suggests that, in order to achieve joint objectives, firms need to erect appropriate governance factors, namely; economic and sociological mechanisms (e.g., Bai, Sheng, & Li, 2016; Liu, Luo, & Liu, 2009; Yang, Gao, Li, Shen, & Zheng, 2017), rooted in transaction cost economics (TCE) and social exchange theory (SET). Economic mechanisms, in line with TCE, include certain governance factors, firms employed to avoid transactional uncertainties through adequate structural implications. Whereas sociological mechanisms as SET factors help to govern inter-firm relationships by developing a cooperative environment between firms (Liu et al., 2009; Liu, Li, Shi, and Liu, 2017).

Although prior empirical research has extensively documented the effective roles of governance mechanisms, it remains in limited context of opportunism mitigation (e.g., Liu et al., 2009; Luo et al., 2015), relationship performance (e.g., Yang, Zhao, Yeung, & Liu, 2016; Liu, Li, et al., 2017) and conflict management (e.g., Lee et al., 2017; Lumineau & Henderson, 2012; Yang et al., 2017). A growing number of empirical studies demonstrate that economic structure of relationship exchange is

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sociologically embedded (e.g., Dyer & Chu, 2011; Granovetter, 2005). Some past empirical studies have investigated only a few governance mechanisms i.e. trust and transaction-specific investments, their roles remained in isolation in explaining governance cost (Bharadwaj & Matsuno, 2006; Corsten & Felde, 2005; Dyer & Chu, 2003) and commitment (Chang, Wang, Chih, & Tsai, 2012; Shi et al., 2011). Moreover, several recent studies on inter-firm have called for a systematic research on distinct roles of relationship governance mechanisms in relation to transaction costs and relationship commitment in different types of buyer-supplier relationships (e.g., Burkert, Ivens, & Shan, 2012; Gulbrandsen et al., 2017; Liu, Li, et al., 2017). Therefore, researchers have different opinions as well as they found conflicting empirical results on whether these mechanisms function as complementary (Liu et al., 2009; Van der Valk, Sumo, Dul, & Schroeder, 2016) or substitutive forces (Li, Xie, Teo, & Peng, 2010; Wuyts & Geyskens, 2005). On the other hand, the relative effectiveness of these mechanisms is characterized by nuanced understanding of different transaction objectives driving governance structures, which is missing in the literature.

Different governance structures are required for different transaction objectives in governing relationship exchange (Burkert et al., 2012). Better understanding of relationship outcomes and collaboration goals drive managers to analyze which governance mechanism is more crucial for a particular task (Yang et al., 2016). Therefore, the varying roles of economic and sociological governance mechanisms in minimizing ex-post transaction costs and maximizing relationship commitment has yet to be addressed. Such mixed evidence and conflicting views on complementary-substitutive perspective and relative effectiveness of governance mechanisms, therefore, necessitates further investigation of the phenomenon. Thus, an interesting question now is concerned with whether sociological governance mechanisms function as complementary or substitutes with contractual governance and symmetric dependence respectively in minimizing ex-post transaction costs and fostering relationship commitment.

To fill these gaps and provide further insights, this study aims to address the concerns mentioned above. Therefore, this study contributes to the industrial marketing and management literature by portraying a comprehensive picture of relative effectiveness, as well as the joint use of both economic (i.e., contract completeness and symmetric dependence) and sociological (i.e., trust and communication) governance mechanisms influencing ex-post transaction costs and relationship commitment. Further, it develops and empirically tests a nomological framework by employing a nonparametric technique (i.e., PLS) to SEM and semi-partial correlation. The empirically comparative investigation in concurrent examination of these two effects alongside will support us in understanding the relative influence of varying governance mechanisms in order to manage successful buyer-supplier relationships. Such techniques provide firms the opportunities to evaluate the relative effectiveness of various governance mechanisms (Yang et al., 2016). The study's findings generally support our argument that economic mechanisms are relatively more effective at minimizing ex-post transaction costs, while sociological governance mechanisms are more effective at maximizing relationship commitment. Further, when sociological mechanisms interact with contract completeness and symmetric dependence, interesting findings emerge related to their complementary and substitutive nature.

2. Theoretical background and hypotheses

2.1. Governance mechanisms in buyer-supplier relationships

Governing successful buyer-supplier relationships in a systematic way is found to be pivotal in enhancing beneficial outcomes and stability (Liu et al., 2009; Liu, Li, et al., 2017; Liu, Luo, Huang, and Yang, 2017). The main question, therefore, is how to design an effective governance structure where both parties are fully devoted to fulfilling

their common business objectives (Luo et al., 2015). For this reason, several recent studies have highlighted the significance of multiple governance mechanisms (e.g., Bai et al., 2016; Liu et al., 2009; Yang et al., 2017). These mechanisms are mainly found embedded in both economic and sociological mechanisms (Liu, Li, et al., 2017; Liu, Luo, et al., 2017).

2.1.1. Economic governance mechanisms

Economic governance mechanisms are explained in terms of economic rational organizational measures, which support managing, monitoring and harmonizing partners' behaviors in relationship exchange (Liu et al., 2009; Williamson, 1985). Contract completeness and symmetric dependence, as economic mechanisms, demonstrate mutually specified contractual clauses and relationship specific investments (Brown, Dev, & Lee, 2000; Liu, Luo, et al., 2017). Contractual governance is albeit ubiquitous and offers an institutional framework regulating course of relationship exchange (Luo, 2009; Liu, Luo, et al., 2017), it varies in the level of completeness, complexities (Crocker & Reynolds, 1993), rigidity, and flexibility (Sande & Haugland, 2015). Several researchers have maintained that contracts will always be incomplete due to inevitable unpredictability (Crocker & Reynolds, 1993; Luo, 2009). Therefore, a relatively complete contract minimizes the boundary spanners' uncertainty and risks of opportunisms. A well-defined contract is considered as a comprehensive instrument (i.e., explaining rules and regulations, rights and obligations of both parties) for safeguarding specific assets against opportunism (Luo, 2009; Liu, Luo, et al., 2017). Moreover, the level of completeness in a contract stipulates the extent to which contractual terms and future contingencies are specific and detailed. Term specificity highlights each partner' rights, duties and responsibilities in order to organize and manage the relationship whereas contingency adaptability concerns the contractual response to future problems, conflicts and contingencies (Luo, 2002; Reuer & Ariño, 2007). Hence, this level of contract completeness delineate exchange substance and structure resulting in maximum pay-off.

Whereas symmetric dependence entails both relationship partners to invest idiosyncratically in physical and human assets that are less valuable to alternative uses (Ali & Larimo, 2016; Khalid & Ali, 2017; Kumar, Scheer, & Steenkamp, 1995). These co-specialized investments create interdependence between partners, prior research, therefore argued that symmetric interdependence is a product of both partners' equal dependence on each other by investing jointly in a relationship (e.g., Kumar et al., 1995; Wu & Wu, 2015). On the other hand, asymmetric dependence effects on coercive power of less dependent partner to exploit, and creates prospects for opportunism and conflict (Liu, Luo, et al., 2017; Shen, Wang, & Teng, 2017). Therefore, high level of symmetric dependence enhances the joint motivation of forbearance and relational embeddedness between partners, and discourages individual private goal seeking by binding and locking firms to a particular course of action (Schmitz, Schweiger, & Daft, 2016; Young-Ybarra & Wiersema, 1999).

2.1.2. Sociological governance mechanisms

Sociological governance mechanisms are defined as socially embedded organizational measures in economic activities, which help in managing, monitoring and organizing relationship exchange (Granovetter, 2005; Liu, Luo, et al., 2017). Based on existing research, we categorize two sociological governance mechanisms (i.e., trust and communication), which underlie the impact of relational ties between buyer and supplier. Trust is a non-contractual mechanism and defined as the willingness to trust or confidence that a partner holds about the other partner's reliability, benevolence, and integrity (Zaheer, McEvily, & Perrone, 1998). Prior research on relationship trust has distinguished different conceptualization and presented influential perspectives. Such as, Dyer and Chu (2011) highlighted trust as the level of confidence of a relationship partner for other partner's fair behavior of not exploiting its

vulnerabilities. On the other hand, Williamson (1993) presented important economic perspective of trust and distinguished between calculative, personal and institutional trust. Calculative trust includes “relational” frame of trust nurtured by mutual hostages and considered as “risk”. Personal trust implicates in personal relationships and portrays as non-calculative. Institutional trust refers to social and organizational embeddedness and appears also as being calculative. Both the relational calculation and the “leap of faith” comprise trust in business relationships. While effective communication, is considered as a useful tool in developing collaboration, integration and cooperation between relationship partners (Kim & Chai, 2017). It refers to the bilateral expectation of formal and/or informal sharing of meaningful and timely information exchange between relationship partners (Wang, Wang, Jiang, Yang, & Cui, 2016). Building on SET, we conceptualize that communication strengthens the confidence of both parties in a relationship in terms of formal and informal availability of particular information (Yang et al., 2017) that is timely and offered frequently (Hung & Lin, 2013).

In this study, both economic and sociological mechanisms are anticipated to mitigate ex-post transaction costs and to enhance relationship commitment. Transaction costs include the costs involved in order to attain jointly acceptable agreement (Luo et al., 2015; Zaheer et al., 1998). Notably, ex-post transaction costs contain the negotiation time and efforts required to define effective arrangements and to determine divisions of costs and benefits (Gulbrandsen et al., 2017). On the other hand, relationship commitment is defined as relationship partners' confidence regarding the importance and efforts of maintaining the long-term relationship by willingly making short-term sacrifices. We conceptualize relationship commitment as a sense of loyalty and the continuity of business for a longer time to strengthen the relationship (Anderson & Weitz, 1992; Tellefsen, 2002). Fig. 1 summarizes our theoretical model and hypotheses.

2.2. Economic governance mechanisms, transaction costs, and relationship commitment

The level of contractual completeness makes the relationship contractually explicit by mitigating partners' anxiety and exchange hazards (Wuyts & Geyskens, 2005), and functions as a safeguard against higher transaction costs. Previous research has argued that detailed contractual terms and clauses, as comprehensive instruments, effectively regulate behavioral boundaries, operational risks and opportunism, thus, developing relationship commitment and cost performance (Liu et al., 2009; Yang et al., 2017). Dyer and Chu (2003) maintained that contracts minimize ex-post monitoring and enforcement costs because all the expectations and obligations are explicitly indicated during the contracting phase. On the other hand, some authors (e.g., Crocker & Reynolds, 1993) suggested that contractual completeness is the optimal balance between ex-ante (e.g., writing the contract) and ex-post transaction costs (e.g., managing disputes). The former increases when environmental uncertainty increases, the latter increases when the risk of opportunism increases. Therefore, relatively more complete contract provides a framework for guarding against ex-post transaction costs and performance problems by controlling the private objectives of partners at the cost of mutual benefits (Crocker & Reynolds, 1993; Liu, Luo, et al., 2017). The more the extent to which a contract is complete, the less the ex-post transaction cost will be. Further, previous empirical studies (Liu et al., 2009; Reuer & Arino, 2002; Woolthuis, Hillebrand, & Nooteboom, 2005; Wuyts & Geyskens, 2005) have suggested that complete contracts, by clearly specifying the promises and obligations of each partner, enhance long-term commitment by mitigating opportunism. Based on the focus of our study, we thus argue that relationship partners may mitigate ex-post transaction costs and enhance relationship commitment by using more complete and detailed contractual design.

Symmetric dependence corroborates the idiosyncratic relationship-

specific investments by both partners (Khalid & Ali, 2017; Shen et al., 2017; Liu, Luo, et al., 2017) and enhance relationship commitment by creating interdependence between them. A high level of symmetrical interdependence is characterized by mutual investments indicating loyalty and cooperative long-term relationship (Caniëls & Gelderman, 2007). Furthermore, it prohibits the market mechanism deployment and private control in the relationship and becomes critical for improving cost performance and learning (Chang & Gotcher, 2007; Liu, Li, et al., 2017). Previous seminal research has presented both positive and negative aspects of mutual investments in relation with transaction costs. For example, several researchers (e.g., Dyer, 1997; Williamson, 1985) argued that increase in asset specificity escalates opportunism, transaction costs and hold-up problems during the early stages of relationship. However, once the relationship is developed and adequate level of trust and symmetrical interdependence is attained, relationship partners become more loyal to each other (Liu et al., 2009) and expect continuous future transactions, thereby resulting in lower transaction costs. On the other hand, asymmetric interdependence can be counterproductive because less dependent partner dominates the relationship and exploits its weaker counterpart (Caniëls & Gelderman, 2007; Shen et al., 2017) thereby resulting in lower commitment and higher transaction costs (Casciaro & Piskorski, 2005). A fear of high switching costs enhances the relationship partners' interest in maintaining a quality relationship and commitment (Morgan & Hunt, 1994). Following transaction cost reasoning, researchers argued that higher level of symmetric dependence displays strong and cooperative bond and provides incentives for not abandoning the exchange and for developing the relationship as successfully as possible (e.g., Caniëls & Gelderman, 2007). Based on this theoretical examination, we argue that increase in the level of symmetric dependence creates mutual hostage and stabilizes the relationship by realigning the self-interest (Liu, Luo, et al., 2017), that influence ex-post transaction costs and serves as a structural rationale for long-term committed relationship. Hence, we hypothesize that.

H₁. There is a negative relationship between the use of economic governance mechanisms of (a) contract completeness and (b) symmetric dependence, and ex-post transaction costs.

H₂. There is a positive relationship between the use of economic governance mechanisms of (a) contract completeness and (b) symmetric dependence, and relationship commitment.

2.3. Sociological governance mechanisms, transaction costs, and relationship commitment

As sociological governance mechanism, trust is a significant factor for developing transaction cost performance, with the importance of a cooperative atmosphere having been emphasized in some empirical studies (e.g., Khalid & Ali, 2017; Liu, Luo, et al., 2017). The willingness to trust or confidence in a partner, with regard to the other partner's reliability, benevolence, and integrity, significantly influence ex-post transaction costs and relationship commitment. The propensity of trust between relationship partners may determine their reliance on trust to minimize transaction costs (Brouthers & Brouthers, 2003; Gulbrandsen et al., 2017). Ex-post transaction costs are minimized more effectively if a high level of inter-organizational trust is emplaced, as negotiations can be quickly and easily successful because of relationship partners' readiness (Zaheer et al., 1998). While low level of mutual trust enhances the complexities in a relationship, thereby resulting in higher transaction costs and lower commitment. Further, trusted partners spend less time in haggling over problems, adapting to unforeseen circumstances and spending fewer resources monitoring each other's behavior (Burkert et al., 2012; Dyer & Chu, 2011). Williamson (1993) argued that if the degree to which associated investments between relationship partners are not cost effective, calculative form of trust

becomes the solution in order to economize transaction costs. Trust being multidimensional concept functions as a substitute for hierarchical control and minimizes both ex-ante and ex-post transaction costs by attenuating the efforts required to preempt the trustworthiness of counterpart. On the other hand, trust should positively impacts on relationship commitment. Trust is the main determinant of relationship commitment and firms seek only trustworthy relationship partners, therefore, the more the relationship partners trust each other, the more they feel committed and secured (Burkert et al., 2012). This narrative develops a perception of good faith, care and commitment for their counterpart rather than opportunistic behavior (Dyer & Chu, 2003).

Communication as bilateral expectation of formal and informal information exchanges (Wang et al., 2016), can influence ex-post transaction costs and relationship commitment (Hung & Lin, 2013). These bilateral expectations refer to the partners' beliefs regarding excellent communication, function as useful safeguards to deter conflicts, perceived risks and uncertainty (Heide & John, 1992; Yen, Shih-Tse Wang, & Hornig, 2011). Conversely, ineffective communication or asymmetric information sharing create misunderstanding and place the partner in jeopardy (Villena, Revilla, & Choi, 2011), which minimizes the likelihood of developing relationship quality and satisfaction (Hung & Lin, 2013), and maximizes the time and effort required to negotiate (i.e. ex-post transaction costs). As communication promotes harmonization between relationship partners in terms of the timely available information, it also helps in fostering confidence in partner's reliability and integrity and thereby minimizes ex-post transaction costs (Hung & Lin, 2013; Wang et al., 2016). Therefore, prior empirical research has found a negative impact of communication on relationship partners' bargaining costs (e.g., Yigitbasioglu, 2010). Furthermore, based on the loyalty and good faith between relationship partners, effective communication is crucial in knowledge sharing and cohesion, leading to conflict resolution and relationship commitment development (Hung & Lin, 2013; Yen et al., 2011). Similarly, studies delineated that communication alleviates the uncertainty level and build a mutually bounded relationship, thereby enhancing relationship commitment (e.g., Cai, Yang, & Hu, 2009). Based on the above discussion, we derive the following hypotheses:

H₃. There is a negative relationship between the use of sociological governance mechanisms of (a) trust and (b) communication, and ex-post transaction costs.

H₄. There is a positive relationship between the use of sociological governance mechanisms of (a) trust and (b) communication, and relationship commitment.

2.4. Interaction effects of economic and sociological governance mechanisms

Prior research has presented two competing views toward the nature of the relationship, i.e. complementarity and substitution between relationship governance mechanisms. The complementarity view suggests that transactional and relational mechanisms function as complements (Lee et al., 2017; Liu et al., 2009; Luo, 2002; Poppo & Zenger, 2002). However, the other view holds that, due to the varying nature of both transactional and relational mechanisms, joint adoption is less effective at governing inter-firm relationships (Li et al., 2010; Wuyts & Geyskens, 2005). In this study, we examine how sociological governance mechanisms interact with contract completeness and symmetric dependence in minimizing ex-post transaction costs and maximizing relationship commitment.

2.4.1. Interaction of sociological governance mechanisms and contract completeness

Seminal studies have viewed sociological governance mechanisms and contracts as substitutes believing that the presence of one prevents

the use of other (Li et al., 2010; Lui & Ngo, 2004; Wang, Yeung, & Zhang, 2011). The theoretical reasons behind this substitution explain the importance of sociological governance against contractual safeguards. Indeed, a contract may minimize the risk of opportunism, it may also be seen as counterproductive to trust and bilateral communication (Dyer & Singh, 1998). Further, researchers argued that sociological mechanisms mitigate relational risks by enhancing confidence in a partner's willingness (Lui & Ngo, 2004), thereby minimizing the redundant specification of monitoring contractual clauses (Gulati & Sytch, 2008; Li et al., 2010). This notion results in closer cooperation and fostered commitment between partners. On the other side, detailed contracts may be interpreted as a sign of unfairness and hinder the formation of sociological governance by enforcing contractual clauses (Lumineau & Henderson, 2012), trust and communication, therefore undermine the negative influence of structural factors (Wang et al., 2011). Similarly, informal self-enforcing approaches relying on trust and communication undermine the use of formal governance of contracts (Dyer & Singh, 1998). Contractual safeguards and controlling characteristics in the contract thus diminish the impact of sociological mechanisms, thereby restraining cooperative interactions between partners. Hawkins, Wittmann, and Beyerlein (2008) argued that, over time, constant changes in strategies and extracted values may transform a relationship from being economic to social and vice versa. The underlying logic explains that drafting detailed and complex contracts may undermine the sociological governance, meaning that their combined use may not be effective. Therefore based on the above discussion and theoretical examination, this study argues that sociological governance mechanisms and contract completeness function as substitutes in minimizing ex-post transaction costs and fostering relationship commitment. Thus, the following hypothesis is proposed:

H₅. Sociological governance mechanisms and contract completeness will function as substitutes in (a) minimizing ex-post transaction costs, and (b) maximizing relationship commitment.

2.4.2. Interaction of sociological governance mechanisms and symmetric dependence

Despite the convincing opinions for viewing sociological governance and contract completeness as substitutes, the rationale for viewing sociological governance and symmetric dependence as complements seems equally compelling. The combination of sociological factors and symmetric dependence might provide greater inter-firm cooperation than employing them separately (Lee et al., 2017). Prior research has argued that symmetric dependence of inter-organizational exchange is socially embedded and complement in producing greater benefits (e.g., Dyer & Chu, 2011; Granovetter, 2005; Liu et al., 2009). However, sociological mechanisms have limitations due to lack of explicit approaches and bounded rationality (Poppo & Zenger, 2002), symmetric dependence, therefore provides an institutional framework and complements sociological governance by offering structural constraints through a mutual hostage. Liu et al. (2009) argued that firms realize that damaging mutual specific investments can result in their reputation loss, thus avoid opportunistic behavior when trust and effective communication are developed. Their significant empirical findings of complementarity interplay between economic and social factors are consistent with the prior seminal research (e.g., Poppo & Zenger, 2002). Thus, the underlying logic explains that symmetric dependence alone is insufficient in minimizing ex-post transaction costs and maximizing relationship commitment, because partners may not be able to resolve the conflicts and external uncertainty cooperatively. Additionally, sociological mechanisms alone can be insufficient because of the uncertainty regarding the fair reciprocal behavior of the counterpart (Ali & Larimo, 2016). Where symmetric dependence promotes sociological governance, sociological factors facilitate structural framework to stabilize the relationship exchange. Therefore, we suggest positive reciprocal relationships between sociological governance mechanisms

and symmetric dependence. Based on the above discussion, this study advances the following hypotheses:

H₆. Sociological governance mechanisms and symmetric dependence will function as complements in (a) minimizing ex-post transaction costs, and (b) maximizing relationship commitment.

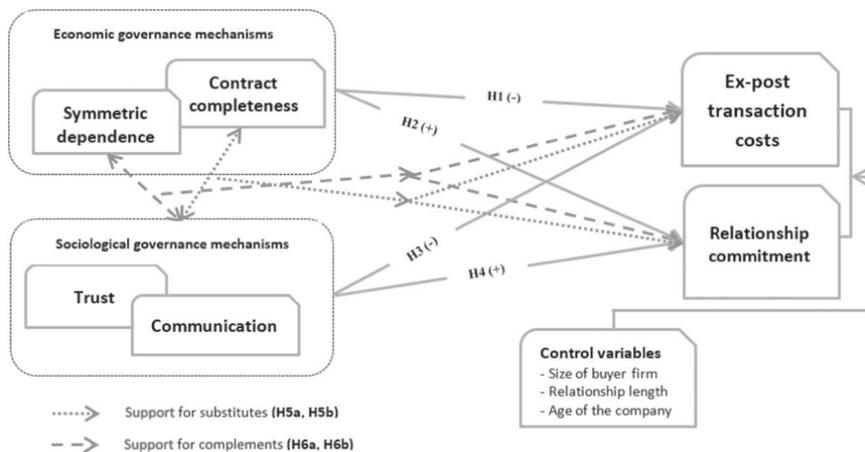


Fig. 1. Theoretical model and hypotheses.

2.5. The relative importance of economic and sociological governance mechanisms

As we have hypothesized the interplay between governance mechanisms in order to minimize ex-post transaction costs, we further predict that economic mechanisms are comparatively more effective than sociological mechanisms in improving cost performance (Yang et al., 2016). Relative effectiveness of governance mechanisms is characterized by nuanced understanding of contextual factors and boundary conditions. Different governance structures are required for different transaction objectives in governing relationship exchange. Better understanding of relationship outcomes and collaboration goals drive managers to analyze which governance mechanism is more crucial for a particular task (Liu et al., 2009; Yang et al., 2016). Based on TCE reasoning, employing more complete contract and symmetric dependence in a buyer-supplier relationship prevent the ex-post costs of enforcing and handling (Dyer & Chu, 2003). Similarly, Poppo and Zenger (2002) manifested economic mechanisms as a formal framework to be used to resolve conflicts, alleviate the risk of misunderstandings, drive combined actions, and clarify the responsibilities and duties of each partner. Furthermore, explicitly described contractual clauses positively affect the use of a cooperative negotiation strategy (Lumineau & Henderson, 2012) and facilitate the continuity of operations in effective manner (Yang et al., 2016), thereby reducing ex-post transaction costs. As, economic governance provide structural frameworks in curbing opportunism and transaction costs in a relationship exchange, sociological factors have limited power to discipline operations (Yang et al., 2016). Although trust clearly matters in relationship exchange and can significantly reduce transaction costs, relational governance settings alone do not completely provide formal framework and clear instructions in case of emergencies. Therefore, the risk of a partner's high level of trust, being exploited, becomes higher. Based on the above-mentioned reasons and the structural logic behind the relative effectiveness of economic factors, we hypothesize that:

H₇. Economic governance mechanisms are more effective than sociological governance mechanisms at minimizing ex-post transaction costs.

While we predicted that economic governance is more effective in minimizing ex-post transaction costs, sociological governance, on the

other hand, can be more effective than economic factors at maximizing relationship commitment (Yang et al., 2016). Previous empirical studies argued that sociological governance mechanisms overcome the adaptive boundaries of complex contracts and function as informal instruments in developing relationship commitment (Kohtamäki, Vesalainen, Henneberg, Naudé, & Ventresca, 2012; Krause, Handfield, & Tyler,

2007). Therefore, this informal governance not only share the social platforms but also facilitate increased knowledge sharing, problem-solving efforts and learning within a relationship (Liu et al., 2009; Yang et al., 2016). Furthermore, relational instruments i.e. trust and communication function as a counterforce to power imbalance and minimizes the influence of power asymmetry, thereby enhancing commitment and desire to continue long-term relationship (Yang et al., 2016). Commitment flourishes and develops more when factors, such as trust, norms of flexibility, solidarity, and communication, robustly exist in a relationship (Poppo & Zenger, 2002). On the contrary, because economic governance create an explicit structural system, in which both parties must comply, the motivation to enhance relationship commitment is thus constrained. Sociological governance, therefore, support flexible environment and encourage relationship partners to engage in such activities beyond the limits of interdependence and contract clauses in order to enhance relationship commitment (Liu et al., 2009; Yang et al., 2016). Based on the above-mentioned reasons and the social logic behind the relative effectiveness of sociological governance factors, we hypothesize the following:

H₈. Sociological governance mechanisms are more effective than economic governance mechanisms at maximizing relationship commitment.

3. Research methodology

3.1. Data collection

This study consists of Finnish SMEs involved in buyer-supplier relationships operating with key suppliers (i.e. suppliers providing key components and services) from a variety of countries in Asia and Europe, as well as the USA. A sample of 892 potential SMEs was generated from a database operated by the Collector Finland (i.e., a financial service provider, offering cost-effective and innovative solutions to private and corporate customers in Nordic countries), which includes basic information about Nordic buyer-supplier relationships. The sample indicates that 170 SMEs had suppliers in three regions (Europe: 143; USA: 17; Asia: 10), with an average size of 24 employees/SME and an average turnover of €38 m/SME. The SMEs in the data set were operating in several dispersed classified industries, with 66.47%

belonging to manufacturing and 33.53% belonging to the services industry. However, it was less useful when attempting to identify economic and sociological governance factors pertaining to the management of buyer-supplier relationships from the database. Therefore, we decided to collect primary data from key executives from Finnish SMEs in order to obtain the essential details on these buyer-supplier relationship issues. This database was used to identify the names and emails of potential respondents, while most of them were CEOs, CFOs, and board directors. Pre-testing was executed among the research group members in order to determine whether the respondents apprehend the questions as offered. Thus in spring 2015, a web-based questionnaire was designed (Dillman, Smyth, & Christian, 2009) and sent to 892 firms by following another email to non-respondents three weeks later. In result, we collected 170 usable responses, yielding a response rate of 19.06% (170 of 892).

Despite this response rate, we performed an independent sample *t*-test as proposed by Armstrong and Overton (1977) in order to measure whether, and to what extent, this survey was subject to non-response bias, and to analyze the difference between early and late respondents ($N = 85$; $N = 85$). No significant differences between the early and late respondents were found in terms of firm's size ($p = 0.510$) and length of the relationship ($p = 0.319$). Therefore, non-response bias was not a problem for this study. Prior methodological literature, as well as many empirical studies (e.g., Ali & Larimo, 2016; Silva, Bradley, & Sousa, 2012), have taken the stance that late respondents are also representative of non-respondents.

A likelihood of common method variance exists in the research when all the constructs are measured using the same survey (Najafi-Tavani, Zaeferian, Naudé, & Giroud, 2015; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Therefore, in order to measure and control for potential effect of common method bias, ex-ante and ex-post strategies were followed (Chang, van Witteloostuijn, & Eden, 2010). During the ex-ante research design stage, we followed different strategies. First, respondents were guaranteed of anonymity and confidentiality regarding the study. Second, the sequence of questions was emplaced in a way that a logical relationship between the variables seemed unapparent, as questions related to ex-post transaction costs and relationship commitment were asked in different sections. After we collected data, we performed Harman's one-factor test as an ex-post approach in order to measure the degree to which collected data is influenced negatively by common method bias. In result of non-rotated factor solution in exploratory factor analysis, no single or general factor was apparent explaining most of the variability in the data, with major factor accounting for 26.88% of total variance. Thus, common method variance was not a problem in the analysis.

3.2. Measures

This study employs reflective measurement models and the items used to operationalize each construct were developed on a 7-point Likert scale based on the existing literature. All the constructs demonstrated satisfactory reliability and validity with their Cronbach's Alpha (CA), Average Variance Extracted (AVE) and Composite Reliability (CR) values as well as item loadings in Table 1. We adapted four items for the ex-post transaction costs construct from Zaheer et al. (1998), which demonstrated satisfactory reliability and validity (AVE: 0.79; CA: 0.75; CR: 0.83). Relationship commitment was measured using four items (AVE: 0.80; CA: 0.79; CR: 0.92) based on Anderson and Weitz (1992) and Tellefsen (2002). Trust was measured by adapting seven items (AVE: 0.78; CA: 0.81; CR 0.93) from Morgan and Hunt (1994). Communication was operationalized adapting four items (AVE: 0.83; CA: 0.93; CR.95) drawing from Heide and John (1992) and Young-Ybarra and Wiersema (1999). Contract completeness including term specificity and contingency adaptability was measured using six items (AVE: 0.77; CA: 0.93; CR 0.95), based on Luo (2002, 2009).

The method that we employed to measure the level of symmetric

dependence between partners was adapted from previous empirical studies (e.g., Ali & Larimo, 2016; Khalid & Ali, 2017). Symmetric dependence characterizes the extent to which both buyer and supplier are interdependent and have invested equal idiosyncratic specific assets ranged from "1 = very low to 7 = very high". Therefore, it was divided into buyer's dependence and supplier's dependence. Buyer dependence comprises of two items, adapted from previous research: A- we need the size of investment in a focal relationship, and B- we need the level of replicability, that is, we need to measure difficulty in redeploying the resources outside the relationship (e.g. Reuer & Arino, 2002; Young-Ybarra & Wiersema, 1999; Zeng, 1998). In order to determine the dependence of buyer firm, these two items were collapsed into one. Similarly, respondents were also asked the same questions to specify the size of supplier's investments in the relationship and the difficulty level of supplier's investment redeployment, that were collapsed into one in order to calculate supplier dependence. To determine the level of symmetric dependence between buyer and supplier, a calculation was made by taking the absolute difference between both partner's interdependence. In this instance, a zero specified a perfectly symmetric dependence of both parties. This measure explains the perfect symmetric dependence between partners in case of both high mutual dependence and low mutual dependence.

To exemplify, suppose we have a case wherein (A) the size of investment is 4 out of 7; and (B) the difficulty to replace is 5 out of 7. In this case, we calculate the level of dependence by multiplying A by B; that is the buyer's dependence is $4 * 5 = 20$. Similarly, if the calculation of supplier's dependence is also 20, we have a pair of buyer and supplier in which both have similar level of dependence, i.e. 20. As such, the difference between these values is $20 - 20 = 0$, representing a perfect symmetric dependence. These calculations helped us to determine the level of symmetrical interdependence between buyer and supplier in order to analyze the data. Three additional variables of less interest were included to control the dependent variables. These include age of the firm, relationship length (Liu et al., 2009), and size of the buyer firm (Luo et al., 2015) as control variables because of their potential effect on dependent variables. Age of the firm was measured as the number of years in operation and size of the firm as a number of employees. Finally, relationship length indicates the time period of the relationship between buyer and supplier.

3.3. Measure validation

To analyze our deductive-nomological model, we utilized a non-parametric technique (i.e., partial least squares - PLS) to variance-based structural equation modeling (SEM) by using SmartPLS 2.0 software (Chin, 1998; Ringle, Wende, & Will, 2005) for the following reasons. Firstly, we adopted variance based PLS-SEM approach because this study tests an explorative model with alternative hypotheses, i.e. whether economic and sociological governance mechanisms (direct effect and interaction effect) explain ex-post transaction costs and relationship commitment. Secondly, PLS-SEM is capable of modeling latent constructs beyond measurement error, therefore is appropriate to test interaction effects in particular (Chin, 1998; Mitchell, Mitchell, & Smith, 2008). Thirdly, PLS-SEM modeling is not only considered as the most suitable approach when dealing with a small sample size but it also allows researchers to evaluate both formative and reflective measurement models simultaneously as well as hierarchical models (Becker, Klein, & Wetzels, 2012; Hair, Sarstedt, Pieper, and Ringle, 2012). Thus, it exhibits higher statistical power than covariance-based SEM when used on complex models with limited sample size (Hair, Sarstedt, Pieper, et al., 2012; Hair, Sarstedt, Ringle, and Mena, 2012; Chin, 1998). This is particularly applicable to this study, as the final sample size was 170 buyer-supplier relationships. Furthermore, multivariate normal data is not required in PLS-SEM modeling (Chin, 1998). Therefore, growing number of recent industrial marketing and management studies employed PLS-SEM because of its dynamic attributes

Table 1
Constructs, item loadings, Cronbach's alpha (CA), AVE and composite reliability values (CR).

Constructs and items	Loadings	Item source(s)
Ex-post transaction cost (AVE: 0.79; CA: 0.75; CR: 0.83)		Zaheer et al. (1998)
How easy are negotiations between your firm and key supplier firm over sharing the burden of costs (not explicitly covered by the contract) when (very difficult 1–7 very easy):		
Your business unit requests engineering changes?	0.85	
Supplier X's raw material costs increase?	0.87	
How quick are negotiations between your firm and key supplier firm over sharing the burden of costs (not explicitly covered by the contract) when (very slow 1–7 very quick):		
Your business unit requests engineering changes?	0.81	
Supplier X's raw material costs increase?	0.83	
Relationship commitment (AVE: 0.80; CA: 0.79; CR: 0.92)		Anderson and Weitz (1992) and Tellefsen (2002)
Please indicate how strongly you agree with the following statements concerning supplier commitment (strongly disagree 1–7 strongly agree)?		
We have a strong sense of loyalty to our key supplier	0.87	
We are continually on the lookout for new sources to replace our supplier (R)	0.89	
We are very committed to our key supplier	0.91	
We expect to be doing business with our key supplier for a long time	0.90	
Trust (AVE: 0.78; CA: 0.81; CR 0.93)		Morgan and Hunt (1994)
Please indicate your level of agreement with the following statements (strongly disagree 1–7 strongly agree):		
Our key supplier firm:		
Cannot be trusted at times (R)	0.91	
Is perfectly honest and truthful	0.93	
Can be trusted completely	0.96	
Can be counted on to do what is right	0.89	
Is always faithful	0.93	
Is someone I have great confidence in	0.92	
Has high integrity	0.91	
Communication (AVE: 0.83; CA: 0.93; CR 0.95)		Heide and John (1992) and Young-Ybarra and Wiersema (1999)
Regarding communication between you and your key supplier, please indicate your level of agreement with the following statements (strongly disagree 1–7 strongly agree):		
We always keep each other informed about events or changes that may affect the other party	0.88	
It is expected that any information, which might help the other party, will be provided to them	0.91	
It is expected that proprietary information will be shared if it can help the other party	0.91	
Exchange of information in this relationship takes place frequently and informally, not only according to a pre-specified agreement	0.94	
Contract completeness (AVE: 0.77; CA: 0.93; CR 0.95)		Luo (2002) and Luo (2009)
To what extent are the following arrangements with your key supplier firm formalized in the written contract (not at all 1–7 entirely)?		
How to operate and manage the relationship	0.86	
How to cooperate, coordinate, and resolve conflicts between your firm and key supplier	0.91	
How to terminate the relationship	0.85	
How to handle the unanticipated contingencies during relationship formation and operation	0.88	
Cost and quality of resources invested in relationship	0.88	
How to secure invested resources from exploitation	0.90	
Symmetric dependence		Zeng (1998), Reuer and Arino (2002) and Young-Ybarra and Wiersema (1999)
Items measuring the dependence of buyer firm (very low 1–7 very high):		
Our investment in the relationship is		
If this relationship was to dissolve, our non-recoverable investments would be		
Items measuring the dependence of key supplier firm (very low 1–7 very high):		
Supplier firm's investment in the relationship is		
If this relationship was to dissolve, the key supplier firm's non-recoverable investments would be		
Symmetric dependence		
Level of symmetric dependence between buyer and key supplier (i.e., difference between dependence of buyer and supplier firm) [0 = 7, 1–8 = 6, 9–16 = 5, 17–24 = 4, 25–32 = 3, 33–40 = 2, 41–48 = 1]	1	

(e.g., Khalid & Ali, 2017; Kohtamäki et al., 2012; Mitrega, Forkmann, Zaefarian, & Henneberg, 2017; Najafi-Tavani et al., 2015; Zaefarian, Forkmann, Mitrega, & Henneberg, 2017).

Although PLS modeling evaluates both structural and measurement model at the same time, this study followed Hulland's (1999) technique in testing models. We analyzed and interpreted the estimated model in two phases: first, the estimation and reliability of the measurement model, and, second, the evaluating the structural model. We also validated measurement model by evaluating the individual item reliabilities: convergent and discriminant validity (Chin, 1998; Hair, Sarstedt, Ringle, et al., 2012). All the loaded indicators on latent variables are above Gotz, Liehr-Gobbers, and Krafft's (2010) recommended a level of 0.7, which specifies a high degree of item reliability, whereas the mean of composite reliability (CR) represents the construct reliability for each latent variable. The composite reliability is noted higher

than the threshold of 0.6. Further, the average variance extracted (AVE) with a greater value than the threshold of 0.5 is considered for all the latent variables in order to evaluate the convergent validity of the reflective block of the model (Gotz et al., 2010), demonstrating satisfactorily valid.

Table 2 exhibits the inter-construct correlations and average variance extracted. Previous studies also recommended that if square roots of the AVEs are statistically higher than correlations among the latent constructs, discriminant validity could be assured (Chin, 1998; Gotz et al., 2010). We also assessed the level of multi-collinearity between the constructs and variance inflation factor (VIF) was found well below five (the highest VIF values is 1.78), thus indicating no significant multi-collinearity (Hair, Sarstedt, Pieper, et al., 2012; Hair, Sarstedt, Ringle, et al., 2012). Additionally, we computed a confirmatory factor analysis, and the results specify a good model fit ($\chi^2 = 277.90$,

Table 2
Inter-construct correlations, AVE and square roots of AVE along the diagonal.

Constructs	AVE	1	2	3	4	5	6	7	8	9
1. Communication	0.83	0.91								
2. Trust	0.78	0.47	0.88							
3. Contract completeness	0.77	0.20	0.12	0.88						
4. Symmetric dependence	1	0.04	0.02	0.04	1					
5. Age of the company	1	0.19	−0.01	0.06	0.06	1				
6. Relationship length	1	0.23	0.04	0.08	0.07	0.52	1			
7. Size of buyer firm	1	0.02	−0.06	0.08	−0.07	0.32	0.28	1		
8. Transaction costs	0.79	−0.31	−0.17	−0.29	−0.12	−0.04	−0.12	0.04	0.89	
9. Relationship commitment	0.80	0.47	0.36	0.28	0.10	0.09	0.16	0.00	−0.35	0.89

d.f. = 165, RMSEA = 0.064, GFI = 0.873, CFI = 0.961, NFI = 0.911, IFI = 0.962). Hence, we safely conclude that all the constructs and items were found to be satisfactorily sound, assuring discriminant validity and reliability.

4. Analysis and results

4.1. Structural estimates

We employed PLS-analysis (a path weighting technique with a maximum of 300 iterations) in order to test our direct effect and interaction effect hypotheses (i.e. H_1 – H_6), and a bootstrapping method of sampling was utilized to generate t-values (Hair, Sarstedt, Pieper, et al., 2012; Chin, 1998). These structural estimations are presented in Table 3 where R^2 (i.e., the coefficient of determination) for the dependent variable, path loadings (i.e., standardized β) and significance levels demonstrate the main effects (Gotz et al., 2010). The nomological validity of our model was evaluated by examining the explained variance R^2 for each dependent construct in our framework (Sarstedt, Ringle, Henseler, & Hair, 2014). The R^2 for dependent variables in Models 3 and 7 are 0.29 and 0.32, respectively, which posits that the independent constructs describe 29% of the variance in ex-post transaction costs and 32% of the variance in relationship commitment.

From the results of Model 3, significant negative relationships were found between contract completeness and ex-post transaction costs ($\beta = -0.40$, $p \leq 0.01$) and between symmetric dependence and ex-post transaction costs ($\beta = -0.13$, $p \leq 0.05$). These results support H_1 . Further, Model 7 shows that contract completeness ($\beta = 0.19$, $p \leq 0.01$) exerts a significant and positive effect on relationship commitment. However, symmetric dependence does not significantly relate to relationship commitment. These results partially support H_2 (H_{2a} = supported, H_{2b} = not supported).¹ Furthermore, from Model 3, significant negative relationships were found between communication and ex-post transaction costs ($\beta = -0.30$, $p \leq 0.05$) and between trust and ex-post transaction costs ($\beta = -0.18$, $p \leq 0.05$). These results support H_3 . Further results from Model 7 indicate that communication ($\beta = 0.33$, $p \leq 0.01$) and trust ($\beta = 0.17$, $p \leq 0.05$) exert a significant and positive effect on relationship commitment. These results support H_4 .

Models 4 and 8 respectively in Table 3 are used to examine the interaction effects between sociological mechanisms and contract completeness and between sociological mechanisms and symmetric dependence in relation to ex-post transaction costs and relationship commitment. We mean-centered and multiplied the indicators of

sociological mechanisms and economic factors to obtain the interaction effects. Several researchers have confirmed that negative coefficients of interacting variables would support a substitute relationship whereas positive coefficients suggest a complementary relationship (e.g., Li et al., 2010; Liu et al., 2009; Poppo & Zenger, 2002; Wang et al., 2011). In relation to ex-post transaction costs, results in Model 4 suggest that interaction between trust and contract completeness ($\beta = 0.19$, $p \leq 0.05$) is positive and significant while the interaction between communication and contract completeness is positive, albeit non-significant. Whereas, the results from Model 8 show that interaction between trust and contract completeness ($\beta = -0.16$, $p \leq 0.05$), is negative and significant. Similarly, the interaction between communication and contract completeness ($\beta = -0.20$, $p \leq 0.05$) is negative and significant, in relation to relationship commitment. These results partially support H_{5a} and completely support H_{5b} , representing substitute relationships between sociological governance mechanisms and contract completeness. Further, in relation to ex-post transaction costs, the interaction between trust and symmetric dependence ($\beta = -0.17$, $p \leq 0.05$) is negative and significant. Meanwhile, the interaction between communication and symmetric dependence is negative and significant ($\beta = -0.15$, $p \leq 0.05$). On the other hand, the interaction between trust and symmetric dependence ($\beta = 0.14$, $p \leq 0.05$), in relation to relationship commitment, is significant and positive, while the interaction between communication and symmetric dependence ($\beta = 0.13$, $p \leq 0.05$) is significant and positive. These results lend full support to H_{6a} and H_{6b} , representing complementary relationships between sociological governance mechanisms and symmetric dependence.

4.2. Relative power of governance mechanisms

To test hypotheses H_7 and H_8 , two methods were employed to compare the relative powers of economic and sociological governance mechanisms, as offered and used by Liu et al. (2009). Firstly, if we take “ex-post transaction costs”, for example, we can get ΔR^2 as per the regression results of Models 1, 2 and 3:

$$\Delta R^2_{\text{Model 3-Model 1}} = R^2_{\text{Model 3}} - R^2_{\text{Model 1}} = 0.29 - 0.25 = 0.04$$

$$\Delta R^2_{\text{Model 3-Model 2}} = R^2_{\text{Model 3}} - R^2_{\text{Model 2}} = 0.29 - 0.21 = 0.08$$

Here, $\Delta R^2_{\text{Model 3-Model 1}}$ describes the proportion of the variance of ex-post transaction costs that sociological mechanisms can explain, while $\Delta R^2_{\text{Model 3-Model 2}}$ represents the proportion of the variance of ex-post transaction costs, that economic mechanisms can explain. As $\Delta R^2_{\text{Model 3-Model 2}} > \Delta R^2_{\text{Model 3-Model 1}}$, this suggests that economic mechanisms are statistically stronger in effecting ex-post transaction costs than sociological mechanisms. Further, taking “relationship commitment” as the dependent variable, we acquire ΔR^2 as per the regression results of Models 5, 6 and 7:

¹ We further split the contract completeness construct into two sub-dimensions of term specificity and contingency adaptability and examined the effect of each of these sub-dimensions on both ex-post transaction costs as well as on relationship commitment. The results suggest that term specificity has negative impact on ex-post transaction costs ($\beta = -0.28$, $p \leq 0.05$) and positive impact on relationship commitment ($\beta = 0.27$, $p \leq 0.05$), however the path from contingency adaptability to these dependent variables while in a right direction, is not significant. These finding suggest that term specificity is more important in explaining transaction cost and can increase relationship commitment.

Table 3
PLS analysis results (standardized beta coefficients & t-values).

Constructs	Transaction costs				Relationship commitment			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Contract completeness	– 0.28 (2.93)***		– 0.40 (2.51)**	– 0.24 (2.36)**	0.28 (2.68)**		0.19 (2.27)**	0.27 (2.40)**
Symmetric dependence	– 0.16 (1.82)*		– 0.13 (1.73)*	– 0.12 (1.69)*	0.11 (1.42)		0.09 (1.31)	0.07 (1.12)
Communication		– 0.31 (2.02)*	– 0.30 (1.67)*	– 0.22 (1.78)*		0.37 (3.08)***	0.33 (2.83)**	0.30 (2.69)**
Trust		– 0.19 (1.85)*	– 0.18 (1.73)*	– 0.16 (1.66)*		0.18 (1.69)*	0.17 (1.70)*	0.16 (1.67)*
Interaction effects								
Trust _s contract completeness				0.19 (1.91)*				– 0.16 (1.83)*
Communication _s contract completeness				0.06 (0.34)				– 0.20 (1.84)*
Trust _s symmetric dependence				– 0.17 (1.81)*				0.14 (1.76)*
Communication _s symmetric dependence				– 0.15 (1.69)*				0.13 (1.66)*
Control variables								
Size of buyer firm (i.e., # of employees)	0.09 (0.82)	0.05 (0.46)	0.02 (0.65)	0.03 (0.28)	– 0.06 (0.64)	– 0.01 (0.19)	– 0.02 (0.30)	0.01 (0.08)
Length of relationship	– 0.15 (1.13)	– 0.10 (0.75)	– 0.02 (0.79)	– 0.10 (0.80)	0.16 (1.33)	0.09 (0.74)	0.08 (0.68)	0.06 (0.60)
Age of company	0.04 (0.26)	0.05 (0.34)	0.01 (0.47)	0.10 (0.82)	– 0.01 (0.02)	– 0.02 (0.21)	– 0.02 (0.21)	– 0.01 (0.13)
R ²	0.25	0.21	0.29	0.35	0.19	0.25	0.32	0.43

*** p ≤ 0.001.

** p ≤ 0.01.

* p ≤ 0.05.

$$\Delta R^2_{\text{Model 7-Model 5}} = R^2_{\text{Model 7}} - R^2_{\text{Model 5}} = 0.32 - 0.19 = 0.13$$

$$\Delta R^2_{\text{Model 7-Model 6}} = R^2_{\text{Model 7}} - R^2_{\text{Model 6}} = 0.32 - 0.25 = 0.07$$

Here, $\Delta R^2_{\text{Model 7-Model 5}}$ represents the proportion of the variance of relationship commitment, that sociological mechanisms can explain, while $\Delta R^2_{\text{Model 7-Model 6}}$ represents the proportion of the variance of relationship commitment, that economic mechanisms can explain. As $\Delta R^2_{\text{Model 7-Model 6}} < \Delta R^2_{\text{Model 7-Model 5}}$, this suggests that sociological mechanisms are statistically stronger in influencing relationship commitment than economic mechanisms. Notably, none of the control variables was significantly related to ex-post transaction costs and relationship commitment.

Secondly, the semi-partial correlation was performed to further examine the above relative predicting power (see Table 4), which represents the independent influence of a predicting variable to the dependent variable controlling for the effect of other variables (Liu et al., 2009). The impact of economic mechanisms on attenuating ex-post transaction costs equals the sum of the impact of contract completeness

Table 4
Semi-partial correlation for the predicting power of governance mechanisms.

	Ex-post transaction costs		Relationship commitment	
	Part correlation	Square of part correlation	Part correlation	Square of part correlation
Economic governance mechanisms				
Contract completeness	– 0.246	0.060	0.170	0.029
Symmetric dependence	– 0.147	0.021	0.039	0.001
Sociological governance mechanisms				
Communication	– 0.176	0.030	0.275	0.076
Trust	– 0.159	0.025	0.150	0.022
Control variables				
# of employees	0.052	0.002	– 0.108	0.012
Age of company	0.068	0.005	0.011	0.000
Age of relationship	– 0.090	0.008	0.071	0.005

and symmetric dependence, which is 0.081 (0.060 + 0.021). Similarly, the impact of sociological mechanisms on shrinking ex-post transaction costs equals to the sum of the impact of trust and communication, which is 0.055 (0.030 + 0.025). The impact of economic mechanisms on ex-post transaction costs is found to be stronger than the impact of sociological mechanisms. This test also confirms that the impact of economic mechanisms on relationship commitment (0.029 + 0.001 = 0.030) is smaller than that of sociological mechanisms (0.076 + 0.022 = 0.098). Therefore, these findings support H₇ and H₈, which recommend that economic governance mechanisms are more powerful in shaping ex-post transaction costs, while sociological governance mechanisms are more effective in maximizing relationship commitment.

5. Discussion and implications

5.1. Results summary

We developed and empirically tested a combined model of economic (i.e., contract completeness and symmetric dependence) and sociological (i.e., trust and communication) governance mechanisms, which minimize ex-post transaction costs and maximize relationship commitment. Based on the analysis of 170 buyer-supplier relationships involving Finnish SMEs, this study had resulted in several noteworthy findings. First, economic and sociological mechanisms are equally important in terms of transaction costs containment to relationship commitment development. Second, this study notably incorporates complementarity view of sociological governance mechanisms and symmetric dependence, consistent with prior research. On the other hand, sociological governance mechanisms and contractual governance found as substitutes in explaining ex-post transaction costs and relationship commitment. Third, economic mechanisms perform a more powerful role in minimizing ex-post transaction costs, whereas sociological mechanisms enhance relationship commitment more effectively. Overall, these results suggest the significance of varying roles of relationship governance mechanisms in order to govern relationship exchange effectively.

5.2. Theoretical implications

Recent studies have emphasized on governance structure that develops relationship performance (Liu, Li, et al., 2017; Luo et al., 2015), credibility and quantity of knowledge transfer (Liu, Luo, et al., 2017),

relational satisfaction (Gorton et al., 2015; Yang et al., 2016) while minimizing conflicts (Lee et al., 2017; Yang et al., 2017) and opportunism (Liu et al., 2009; Luo et al., 2015). Conflicting empirical results on the nature of governance mechanisms (i.e., commentary and/or substitutes) and their isolated existence have overlooked the significant question of varying roles of governance mechanisms. Therefore, this study contributes to the industrial marketing and management literature by providing a comprehensive picture of relative effectiveness, as well as the joint use of both economic and sociological governance structure.

In particular, we advance the research in following ways. *First*, this study develops an integrated framework of inter-organizational cooperation by synthesizing two relevant theories, namely, TCE and SET. The findings support and add to TCE reasoning and empirically demonstrate that the higher extent of contract completeness prevents the possibilities of exchange hazards, conflicts and contingencies, and opportunistic behavior (Luo, 2009; Liu et al., 2009; Liu, Luo, et al., 2017). Our findings offer an additional insight by providing empirical evidence in an SME setting and explain that contractual governance provides an institutional framework to relationship partners in safeguarding ex-post transaction costs, opportunistic behavior and performance problems by controlling the private objectives of partners at the cost of mutual benefits (Lee et al., 2017). Furthermore, the significant effect of symmetric dependence in terms of minimizing ex-post transaction costs reveals that increase in the level of symmetric dependence creates mutual hostage and loyalty, and stabilizes the relationship by realigning the self-interest and the expectations of continuous future transactions (Liu et al., 2009; Liu, Luo, et al., 2017). Similarly, a relatively complete contract keeps the relationship partners committed by providing a convincing signal, restraining uncertainty about behaviors and functioning as deterrence against exploitation and opportunism. Thus, contractual completeness is considered as important manifestation of tangible expressions of confidence and commitment between relationship partners by explicitly clarifying prior equivocal results (Burkert et al., 2012; Woolthuis et al., 2005).

However, contrary to the expectation, we found no significant positive relationship between symmetric dependence and relationship commitment. This finding is against the arguments advanced by scholars (e.g., Burkert et al., 2012; Xie, Suh, & Kwon, 2010) who posit that idiosyncratic relationship-specific investment are considered as a commitment device as well as the indications of adopting longstanding coordination by contributing a strong bond and providing incentives for not abandoning the exchange relationship. One possible explanation for this may be that symmetric dependence includes not only the issue of symmetry but also the level of mutual dependence (i.e., high and low mutual dependence) since low and high mutual dependence should not have the same impact on relationship commitment. It is not likely that firms are more committed at a lower level of symmetric dependence because of their lower stakes in the relationship. Furthermore, the level of interdependence between firms may vary because same amount of relationship-specific investments do not mean the same to the firms highly different in size (i.e., an investment of 1 million US\$ does not mean the same to each partner).

Among the sociological governance mechanisms, our findings also confirm some major reasoning found in the literature and demonstrate the effectiveness of trust and communication. SET suggests that relationship exchange should be rooted in strong relational ties between buyer and supplier in order to control operational hazards (Granovetter, 2005; Liu, Luo, et al., 2017). Therefore, trust, timely information sharing, and open communication within relationship exchange lower the level of ex-post transaction costs (Gulbrandsen et al., 2017; Yigitbasioglu, 2010). Likewise, the notion of a positive relationship between sociological governance mechanisms and relationship commitment extends the view depicted in prior research (Burkert et al., 2012; Hung & Lin, 2013). This study suggests that, based on the relational goodwill, effective communication is crucial in knowledge

sharing and consistency, resulting in the resolution of conflicts and relationship commitment development (Yen et al., 2011). These findings are congruent with recent research, which suggests that trust and communication are the significant sociological factors in managing successful business relationships (e.g., Liu, Luo, et al., 2017; Gulbrandsen et al., 2017).

Second, it empirically tests the interaction effects of sociological mechanisms with contract completeness and symmetric dependence respectively in relation to ex-post transaction costs and relationship commitment. The prior research presents competing views on the nature of the relationship i.e. complementary or substitutive between governance mechanisms (e.g., Lee et al., 2017; Li et al., 2010; Van der Valk et al., 2016). This study offers additional insight and incorporates complementarity view of sociological mechanisms and symmetric dependence, and substitution view of sociological mechanisms and contract completeness. Notably, the interaction effects of trust and communication with symmetric dependence found to be complementary, explaining that firms can adopt these factors simultaneously in order to get cost advantages. These findings are congruent with the understanding of several authors (e.g., Ali & Larimo, 2016; Dyer & Chu, 2011; Liu et al., 2009) who consider symmetric dependence as a form of relational governance, in which partners willingly binding them in a relationship for the purpose of social goodwill. Furthermore, the interaction effect of trust and contract completeness appeared as substitutes, explaining that firms adopt them alternatively because the presence of one obviates the use of other (Li et al., 2010; Lui & Ngo, 2004; Lumineau & Henderson, 2012; Wang et al., 2011). This substitution view suggests that drafting a detailed contract may be seen as counterproductive to trust and hinder the formation of sociological governance by enforcing contractual clauses, thereby increasing opportunism and transaction costs (Li et al., 2010; Wang et al., 2011). In a same fashion, Gulati and Sych (2008) maintain that trust hinders the need of hierarchical control factors and functions as an effective alternative sociological mechanism countering opportunistic behavior. This notion posits that employing them simultaneously may complicate the understanding of inter-firm relationships, which in turn restricts the enhancement of relationship commitment. Therefore, this study suggests that contractual governance functions as substitutes with sociological governance, and can be adopted alternatively depending upon the objectives of the collaboration (Li et al., 2010; Wang et al., 2011). Instead, symmetric dependence more easily complements sociological governance because of its nature of relational embeddedness (Lee et al., 2017).

Finally, it shows the relative power of economic and sociological mechanisms on ex-post transaction costs and relationship commitment. Although both governance mechanisms drive cost advantage and commitment, their effects are different (Liu, Luo, et al., 2017; Yang et al., 2016). Our findings suggest that economic mechanisms are more powerful than sociological mechanisms in minimizing ex-post transaction costs. This notion elucidates that economic governance structure provides a formal framework to firms in clarifying the responsibilities and duties of relationship partners (Liu, Luo, et al., 2017) and facilitate the continuity of operations in effective manner while alleviating conflicts and additional bargaining costs more effectively than sociological structure (Poppo & Zenger, 2002; Yang et al., 2016). However, sociological factors are more effective than economic mechanisms in maximizing relationship commitment, explaining that social factors support flexible environment and overcomes the adaptive boundaries of complex contracts, and function as informal counterforce to power imbalance inhibiting opportunistic behavior (Krause et al., 2007; Liu et al., 2009; Yang et al., 2016). This finding does not only extend our understanding of varying governance mechanisms in order to incorporate their distinguishing power but also specifies their central role in managing successful inter-firm relationships. Therefore, we argue that different governance structures are required for different transaction objectives in governing successful relationship exchange. Better understanding of relationship outcomes and collaboration goals drive

managers to analyze which governance mechanism is more crucial for a particular task (Liu et al., 2009; Yang et al., 2016).

5.3. Managerial implications

Governing successful inter-organizational relationships requires relationship managers to show their willingness and commitment in planning and exercising the optimal governance structure, therefore, this study has several vital implications for SME managers. For this reason, firms should consider making different choices about governance mechanisms under different transaction objectives. The collaboration objectives drive managers to analyze which governance mechanism is more crucial for a particular task. Contractual governance may function as the foundation of a relationship, but relational based governance support firms to continue long-term relationships through cost advantage and fostered commitment. On the other hand, in the case of lack of trust between partner firms, drafting an explicitly complete contract prevents ex-post negotiations and reflects a sign of commitment, thus minimizing any possible opportunistic behavior. Further, firms are required to ensure the quality of an emplaced communication system, which reduces the possible information asymmetries and allows firms to share substantial knowledge for internal operations and external market conditions. This information sharing will protect relationship exchange from behavioral uncertainty and mitigate ex-post transaction costs, thereby keeping the firms committed. Additionally, our results suggest that symmetric dependence between firms inhibits any possible exploitation and opportunistic behavior, due to idiosyncratic investments. Managers should ensure a trustworthy relationship, which provides both partners with a certain level of confidence and align their business objectives accordingly. Another managerial implication of our study is the relative effectiveness of economic and sociological mechanisms. Our results suggest that firms seeking transaction costs advantage should pay more attention to economic governance mechanisms, whereas managers with the intention of resolving a large number of conflicts in an informal manner and develop personal ties should refer more to sociological governance mechanisms.

5.4. Limitations and further research

This study has some limitations that need to be addressed in further research. Firstly, drawing from the theories of TCE and SET, this study only investigates four governance mechanisms to derive the impact on ex-post transaction costs and relationship commitment. Further study may incorporate some other governance mechanisms, such as conflict resolution strategies, relational norms, uncertainty, complexity, and the reputations of partners. Noteworthy results can be found by employing individual and interaction effects of these additional governance mechanisms on opportunism, satisfaction, and overall relationship performance. Moreover, boundary conditions under which each of these mechanisms become more effective also ought to be investigated in future research. Secondly, this study consists of only Finnish small and medium buyer-supplier relationships, future efforts, may extend the existing Nordic SME sample in order to generalize the findings for the whole region. Thirdly, because this study represents a cross-sectional approach where only the buyer's perspective was probed in relation to governance mechanisms, it would be interesting to know how suppliers, either within a longitudinal setting or from a dyadic perspective, perceive the impact of governance mechanisms and their outcomes.

Fourthly, this study is limited to a single key informant. Future studies can obtain data from numerous but different respondents for assessing the independent and dependent constructs in order to reduce common method bias. Finally, we recommend future research in order to consider some additional issues. We encourage further research to investigate the impact of several governance mechanisms on a broad range of transaction costs (i.e., ex-ante and ex-post) as well as investigating the relationship between transaction costs and relationship

commitment. Future research may also investigate the role of contingency factors on the complementary-substitution nature of economic and sociological governance mechanisms. Caniels and Gelderman (2007) argued that a consensus regarding the optimal operationalization of interdependence lacks in the literature and resulted in contradictory findings (Kumar et al., 1995). Therefore, we also encourage researchers to advance refined measures of symmetric dependence by encompassing various aspects of dependence. Symmetric dependence may be more than the issue of symmetry and include the level of mutual dependence (i.e., high and low mutual dependence) because of the firms highly different in size (Ali & Larimo, 2016).

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Conflict resolution strategies and buyer-supplier relationship performance: The role of governance mechanisms

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Abstract

Conflicts in buyer-supplier relationship (BSR) have become inevitable, and pertinent literature lacks in providing enough evidence for the use of effective strategies to enhance relationship performance. Therefore, this study presents an integrated framework and investigates the relationship between governance mechanisms (i.e., contract, interdependence, trust, communication) and choices of conflict resolution strategies (CRS) and the effects on relationship performance. The results based on empirical evidence of 170 Finnish BSR, show that firms' choice of CRS depends on the governance mechanisms. Problem solving approach is the most preferable choice while legalistic approach remains the least resort influenced by different governance mechanisms. Interdependence and trust between firms drive them to compromise on middle grounds in resolving inter-organizational conflicts. Further, the selected strategies by firms may also bolster or deteriorate relationship performance. These findings have important implications for theoretical perspectives and managerial practices.

Keywords: conflict resolution strategy, buyer-supplier relationship, governance mechanisms, transaction cost economics, social exchange theory

1. Introduction

Academics and practitioners have given constant attention to conflict resolution strategies (CRS) and relationship performance in buyer-supplier relationship (BSR) (Spekman et al., 1996). However, the uncertainty of buyers and suppliers regarding the expectations whether the counterpart behaves cooperatively in conflict is an inevitable dilemma in relationship exchange (Liu et al., 2009). The potential negative impact of these relationship disputes and failures overshadow the aggregate effects of relationship behaviors (Palmatier et al., 2006). Several studies have demonstrated high rates of relational disputes and failures (e.g., Bamford et al., 2004; Dant & Schul, 1992; Jap & Anderson, 2003). Key reasons for high failure are different organizational goals, distrust, asymmetric information sharing, and asymmetric interdependence, as well as unanticipated changes in the market, driving towards conflicts and deterioration of the relationship (Pajunen & Fang, 2013). Conflict realization and resolution derived by governance mechanisms, therefore, becomes central in buyer-supplier relationship development (Liu, Luo et al., 2017; Liu et al., 2009; Luo et al., 2015; Lumineau & Henderson, 2012; Krone & Steimel, 2013). Since firms need to erect appropriate governance mechanisms against inter-organizational conflict (Bai et al., 2016; Yang et al., 2017), the choice of CRS becomes the most important in order to govern relationship successfully.

According to prior seminal research on industrial marketing, relationship governance plays a pivotal role regarding conflict resolution in supply chain management (e.g., Yang et al., 2017; Lee et al., 2017; Bai et al., 2016; Liu, Luo et al., 2017). Seminal papers address multiple governance mechanisms, such as structures and trust (e.g., Poppo & Zenger 2002; Wuyts & Geyskens 2005; Kamann et al., 2006; Liu et al. 2009). Studies demonstrate that focal companies differ in their choices of conflict resolution approaches (Wade-Benzoni et al., 2002) – e.g. how to deal with emerging disagreements (Lin & Germain, 1998) with suppliers. However prior empirical research have focused on the varying roles of governance mechanisms in context of opportunism and relationship performance (e.g., Poppo & Zenger, 2002; Jap & Anderson, 2003; Liu et al., 2009; Luo et al., 2015), relatively few recent studies recognized the significance of disputes and conflict management in buyer-supplier relationships (Lee et al., 2017; Yang et al., 2017; Bai et al., 2016; Lumineau & Henderson, 2012; Finch et al., 2013). These limited studies mainly focused on the role of contractual or negotiated incentives in process of managing conflicts, functional or

dysfunctional conflicts (Chang & Gotcher, 2010; Cheng & Sheu, 2012; Ndubisi, 2011), and constructive or destructive conflicts (Li et al., 2011). In particular, despite this considerable research base and insights, the literature seem to be missing a comprehensive picture of conflict resolution process (White et al., 2007; Lin and Wang, 2002).

First, though there is a considerable research on conflict resolution, but it remains in the context of international joint venture (Le Nguyen et al., 2016; Lu, 2006; Wang et al., 2005; Lin & Wang, 2002; Lin & Germain, 1998) and the applicability of choice of conflict resolution strategies in buyer-supplier perspective is unidentified. Second, trust and contractual governance specify the conflict's origin and can elucidate the aspect of conflict management (Vaaland & Hakansson, 2003; Yang et al., 2017). The potential impact of both trust (Yang et al., 2017; Ndubisi, 2011) and contract (Yang et al., 2017; Lee et al., 2017; Bai et al., 2016; Lumineau & Henderson, 2012) on relationship conflict management exist in literature, but the choice of conflict resolution strategies influenced by some additional transactional (i.e. contract completeness and interdependence) and relational mechanisms (i.e. trust and communication) remain under-examined (Yang et al., 2017). Third, business relationship relies not only on the ways it is established initially and its longevity, but also on the ways to manage it successfully by resolving internal conflicts and developing effective strategies. Current literature is not significantly evident of such a variant relationship performance by effective strategies used in emerging disagreements (Le Nguyen et al., 2016). Therefore, additional empirical assessments regarding the relationship between governance mechanisms, conflict resolution strategies, and relationship performance is needed in industrial marketing research.

Thus, this study aims to address these gaps in literature. This approach is different from earlier conflict management studies and provides a more integrative perspective of buyer-supplier conflict resolution process. Unlike prior research that mainly focuses on the functions of contractual governance and trust in managing conflicts (i.e., conflict mitigation, constructive/destructive conflicts), we argue that transactional (i.e. contract completeness and interdependence) and relational (i.e. trust and communication) governance mechanisms can be connected to the choice of effective conflict resolution strategies when conflict arise. It is important that relationship partners recognize the contextual situation in which choices of effective strategies are made (Lin & Germain, 1998) that does not only support in anticipating conflict resolution behaviors between

partners but also influences on the their strategy choice (Lin & Wang, 2002). Furthermore, by assessing the relationship between conflict resolution strategies and relationship performance, this study offers valuable insights to understand that effective strategies enable relationship partners to mutually adapt constructive approaches and facilitate cooperative behavior, concern both parties' interests and feelings and satisfy their needs (Le Nguyen et al., 2015). Therefore, this study aims to answer the following research questions: *‘How do the transactional and relational governance mechanisms influence the choice of conflict resolution strategy and how conflict resolution strategies impact on the performance of BSR?’* This study contributes to industrial marketing literature by extending earlier conceptualization and links both transactional and relational governance mechanisms with conflict resolution process. It also demonstrates the effect of soft and hard conflict resolution strategies on buyer-supplier relationship performance.

2. Theoretical background and hypotheses

2.1 Conflicts and types of conflict resolution

Buyer-supplier conflict represents the disagreement between both parties which arises from inconsistency of actual or desired behavior (Yang et al., 2017), because each party in a relationship strives to accomplish its own business objectives (Samaha et al., 2011). It emerges as a negative force which drives confusions and interruptions in business operations (Robbins, 2005). Fey and Beamish (1999) noted that researchers have mostly emphasized their studies on the avoidance of conflict. As conflict is inevitable part of relationships, firms should realize different conflict resolution strategies in order to deal with it successfully. Earlier relationship conflict studies, have presented different categories of conflicts, such as destructive/constructive conflicts (Yang et al., 2017; Li et al., 2011), task conflict (Lee et al., 2017), and functional or dysfunctional conflicts (Chang & Gotcher, 2010; Cheng & Sheu, 2012; Ndubisi, 2011), but conflict resolution strategies of problem solving, compromising, forcing and legalistic strategies found missing and mainly discussed in international joint venture literature (Le Nguyen et al. 2016; Lin & Germain, 1998). In this study, we consider these strategies “a best fit” for the analysis as researchers (e.g., Le Nguyen et al., 2016; Lin & Germain, 1998) supported the explicit nature of these strategies.

Problem solving is a soft strategy that does not only encourage mutual discussion on a conflict but also look out for better solutions in order to enhance mutual benefits as well as to avoid any

operational blockade (Lin & Wang, 2002). Both partners cooperatively exchange information about their objectives and priorities, and constantly suggest different alternatives (Pruitt 2013). *Compromising strategy* refers to accommodate both partners on a “middle-ground”. In comparison with problem solving, compromising strategy may not require considerable involvement from each partner. It may limit the possibilities of exploring the best available alternatives but a common agreed solution may help partners to continue their relationship smoothly (Lin & Wang, 2002). *Legalistic strategy* refers to deal with a conflict by practicing written contracts and informal binding agreements (Lin & Germain, 1998; Le Nguyen et al., 2016). In a buyer-supplier’s contractual formality, explicit legal clauses offer an institutional framework within which partners reconsider their rights and responsibilities and execute ongoing conflict resolution (Lumineau & Henderson, 2012). However, this approach may demonstrate high costs and a lengthy process which may destroy a trusted environment between partners in the long run (Lin & Wang, 2002).

2.2 Transactional governance mechanisms and CRS

Transactional governance mechanisms are explained as economic rational organizational measures that support managing, monitoring, and harmonizing partners’ behaviors in inter-organizational relationships (Dyer, 1996; Liu et al., 2009). Transactional determinants (i.e., contract completeness and interdependence) are demonstrated as mutually specified contractual clauses and idiosyncratic relationship specific investments (Brown et al., 2000; Heide & John, 1992; Yeung et al., 2013; Liu, Li et al., 2017), and offer structural ways to avoid opportunism and conflict between relationship partners. Therefore, this study examines two aspects of transactional governance mechanisms (i.e., contract completeness and interdependence) as determinants of appropriate strategy selection.

Contractual governance is albeit ubiquitous in industrial relationships, but it varies in their level of completeness, complexities (Williamson 1991; Crocker & Reynolds, 1993), rigidity, and flexibility (Sande & Haugland, 2015). Several researchers have maintained that contracts will always be incomplete due to inevitable unpredictability (Crocker & Reynolds, 1993; Luo, 2009), Williamson (1979) therefore argued that a relatively complete contract minimizes the boundary spanners’ uncertainty, conflicts and risks of opportunism. The level of completeness in a contract stipulates the extent to which contractual terms and future contingencies are specific and detailed. Contractual completeness corroborates term specificity, contingency adaptability and contractual

obligatoriness (Luo, 2005). *Term specificity* highlights the specificity and details of contractual terms, whereas *contingency adaptability* concerns the handling of future problems contractually. *Contractual obligatoriness* includes the legal clauses to which partners are bound, and provides the possibility to penalize the counterpart (Cannon et al., 2000; Luo, 2002, 2005; Reuer & Arino, 2007) as well as functions as a safeguard against exploitation albeit at possibly higher cost (Lumineau & Malhotra, 2011). This level of contract completeness delineates exchange substance and structure resulting in maximum pay-off (Williamson, 1979). Moreover, such provisions in contracts encourage partners to describe and coordinate a mutual agreement, and strategize a cooperative and integrative approach or alternative solution in a conflict situation (Wuyts & Geyskens, 2005; Malhotra & Lumineau, 2011; Yang et al., 2017). Dissimilarities in organizational objectives can be the critical factor to create potential risks and misunderstandings (Luo & Park, 2004), detailed contractual terms clarify the roles and responsibilities and overcome the fuss and deterioration of relationship (Lumineau & Malhotra, 2011; Malhotra & Lumineau, 2011).

The extent to which partners rely on contractual governance effects their behavioral approach directly and indirectly by describing and determining beliefs and expectations in conflict resolution (Lumineau & Malhotra, 2011). Detailed contractual coordination clauses (i.e. term specificity and contingency adaptability) promote inter-organizational harmonization and problem solving attitude by mutually acceptable alternatives, and help to strengthen cooperative relational experience. For this reason, Lumineau and Malhotra (2011) argued that contract completeness creates coordination driven perception among relationship partners, and facilitate valuable communication and information sharing. Furthermore, legal support of contract is self-explanatory notion for a partner to sanction the counterpart in case of specified contract terms violation (Cannon et al., 2000) and where both partners cannot mutually solve the conflict. It functions as a wide-ranging tool in order to control predicted and unpredicted future circumstances (Ferguson et al., 2005; Liu et al., 2009; Liu, Li & Zhang, 2010), thus minimizing behavioral uncertainty through enforcing formal rules, terms and procedures. In contrast, firms prefer not to seek compromises if problem solving approach becomes ineffective because legal clauses offer them leverage with which they can make their preferences in choice of penalizing the counterpart. Whereas previous studies emphasizes on the overall impact of contractual governance on buyer-supplier conflict (Yang et al., 2017; Lee et al., 2017; Bai et al., 2016; Lumineau & Henderson, 2012), this study deviates from traditional conceptualization and examine the influence of contract completeness on firms'

preference of CRS when conflicts arise. Thus, based on the above theoretical examination, this study hypothesizes that:

H1. Contract completeness between buyer and supplier is positively related to (a) problem solving and (b) legalistic strategy, and inversely related to (c) compromising strategy.

The other transactional governance mechanism, interdependence explicates that partners have a joint motivation of forbearance (Heide, 1994) and serves as an economic rationale in monitoring long-term relationship exchange (Wathne & Heide, 2004; Dyer, 1997). It entails both partners to invest idiosyncratically in physical and human assets that are less valuable to alternative usage (Williamson, 1985; Kumar et al., 1995; Ali & Larimo, 2016; Khalid & Ali, 2017; Liu, Li et al., 2017). These co-specialized investments create interdependence (Dyer, 1997) between partners, Kumar et al. (1995), therefore argued that symmetric interdependence is a product of both partners' equal dependence on each other by investing jointly in a relationship. On the other hand, asymmetric dependence effect on coercive power of less dependent partners to exploit and creates potential for opportunism and conflict (Liu, Li et al., 2017; Shen et al., 2017; Kumar et al., 1995). Therefore, high level of symmetric dependence enhances the relational embeddedness between partners and discourages individual private goal seeking by binding and locking firms to a particular course of action (Young-Ybarra & Wiersema, 1999).

Interdependence influence firms in choice of most appropriate alternative strategy while dealing with conflicts. Because both partners bind themselves by contributing idiosyncratic specific assets (i.e., which serves as non-legal sanctions) (Wright & Lockett, 2003), opportunistic behaviors become less likely in conflict situations. Previous research on international marketing argued that balanced power, balanced ownership and balanced control will lead towards integration and coordination among partners (Le Nguyen et al., 2016; Lin & Wang, 2002). Similarly, interdependence produces a socially embedded and structurally harmonized template and serves as a mutual hostage that motivates relationship partners to make relationship work (Anderson & Weitz, 1992; Dyer, 1997; Young-Ybarra & Wiersema, 1999; Liu et al., 2009; Luo et al., 2009). Relationship partners willingly follow relational approaches in order to escalate individual and collective gains. In cases where relationship partners cannot reach to the conflict resolution either by problem solving or compromising approach, it is more likely for them to seek legal support. Previous literature on industrial marketing and management does not provide enough theoretical

explanation regarding the influence of interdependence in the choice of CRS. Therefore based on the above discussion, this study argues that interdependence is a source of commitment which may correlate positively with problem solving, compromising and legalistic strategy. Thus, the following hypothesis is proposed:

H2. Interdependence between buyer and supplier is positively related to (a) problem solving, (b) compromising and (c) legalistic strategy.

2.2.1 Relational governance mechanisms and CRS

Relational governance mechanisms are defined as socially embedded organizational measures in economic activities that help in managing, monitoring, and organizing successful BSR (Granovetter, 2005; Heide & John, 1992; Liu et al., 2009; Li et al., 2010; Liu, Li et al., 2017). Social exchange theory suggests that relationship exchange should be rooted in strong relational ties between buyer and supplier to control operational hazards (Granovetter, 2005). Therefore, based on existing research, this study categorizes two relational governance mechanisms (i.e., trust and communication) underlying the impact of these relational ties between buyer and supplier that influence CRS.

Trust as relational governance factor emphasizes cooperative environment (Liu et al., 2009) for developing and sustaining long-term relationship, and critically calculate the perceived risk (Lui & Ngo, 2004). Prior seminal research defined trust as non-contractual mechanism based on three elements; (1) confidence in one's expectations about another's behavior, (2) confidence in another's goodwill, and (3) confidence in an exchange partner's reliability and integrity (Dyer & Chu, 2011; Zaheer et al., 1998; Morgan & Hunt, 1994). Williamson (1993a) distinguished between calculative, personal and institutional trust. Calculative trust includes "relational" frame of trust nurtured by mutual hostages whereas personal trust implicates in personal relationships and portrays as non-calculative. While institutional trust, refers to social and organizational embeddedness and appears also as being calculative. In this manner, Zaheer and Venkatraman (1995) argued that both the relational calculation and the "leap of faith" comprise trust in business relationships. Higher level of mutual trust exhibits more successful relationship exchange (Liu, Li et al., 2017) as negotiations can quickly and easily be successful because of relationship partners' readiness (Zaheer et al., 1998; Mohr & Spekman, 1994). While lower level of mutual trust between

partners enhances the complexities, thereby resulting in inter-organizational conflicts (Dyer, 1997; Zaheer et al., 1998; Liu et al., 2010; Dyer & Chu, 2011). Furthermore, trusted partners spend less time in haggling over problems, adapting to unforeseen circumstances (Yang et al., 2017) and spending fewer resources in monitoring and predicting each other's behavior (Dyer, 1997; Dyer & Chu, 2011). The more the relationship partners trust each other, the more a belief of benevolence and reliability among relational partners. Hence, in the absence of control structure, trust develops the expectations of partner's action in cooperative manner in order to address hazards (Das & Teng, 1998).

Trust is a source of managing greater stress or conflict, and displays greater adaptability in relationship exchange (Williamson, 1985). Building on conceptualization of trust, we suggest that existing trust between partners enhances firms' confidence and behavior consistency (Yang et al., 2017), thereby influencing in their choice of more collaborative strategies in a disagreement. Ndubisi (2011) suggests that trust is linked with integrating, accommodating and compromising style of conflict handling as it demonstrates the commitment between relationship partners and facilitates effective conflict resolution. Trust promotes problem solving approach between partners and encourages each other to express their feelings and opinions fully, learning about issues jointly, and openly sharing concerns and issues about their counterpart (Yang et al., 2017). Furthermore, compromised solutions are prevailed because it encourages trusting partners to maintain friendly environment, discover a fair and optimal solution (Yang et al., 2017), look for "middle-ground" and arrive at acceptable compromises in order to resolve conflicts (Ndubisi, 2011). On the other hand, lack of trust is not only harmful for the firms but also reduces the relationship commitment and effectiveness of joint problem solving. Schurr and Ozanne (1985) found trust to be integral and central part to the process of attaining cooperative problem solving and productive dialogue. Further, when trust is present, relationship partners can openly discuss the issues because they are not afraid of vicious actions by each other (Morgan and Hunt 1994).

In contrast, trust and legalistic conflict resolution strategy should correlate inversely. More recently, Kozan et al. (2014) found that relationship partners behave cooperatively when high level trust is emplaced and avoid forceful strategy (i.e., legalistic strategy). Similarly, Le Nguyen et al. (2016) also found that high trust between partners drives them to avoid legalistic approach while dealing with conflict. Firms prefer not to seek lengthy and costly legal support but problem solving

or compromising approach if trust is emplaced. Therefore based on the above discussion and theoretical examination, this study argues that trust exhibits mutual commitment which may correlate positively with problem solving, compromising and negatively with legalistic strategy. Thus, the following hypothesis is proposed:

H3. Trust between buyer and supplier is positively related to (a) problem solving, (b) compromising and inversely related to (c) legalistic strategy.

The other relational governance factor, communication, is considered as a useful tool in developing collaboration, integration and cooperation between relationship partners (Kim & Chai, 2017). It refers to the bilateral expectation of information exchange between relationship partners (Wang et al., 2016) and can be explained as, formal and informal sharing of meaningful and timely information between relationship parties (Anderson & Narus, 1990, p. 44). Mutually effective communication and timely information sharing function as useful safeguards to deter perceived risks, conflicts and uncertainty (Heide & John, 1992; Yen et al., 2011; Liu, Li et al., 2017) and foster partners' confidence by aligning perceptions and expectations (Morgan & Hunt, 1994). Moreover, communication quality; suitable, truthful, beneficial and reliable communication, is a crucial source in joint planning and goal setting, thereby effectively influences the decision making process (Krishnan et al., 2006; Yang et al., 2017; Phan et al., 2005). Conversely, ineffective communication and asymmetric information sharing create misunderstanding and place the partner in jeopardy (Villena et al., 2011). It minimizes the likelihood of developing relationship quality and satisfaction (Hung & Lin, 2013), and maximizes the time and effort required to negotiate over conflicts (Liu, Luo et al., 2017). Hence, we conceptualize that communication strengthens the confidence of both parties in a relationship because both relationship partners are willing to share information frequently that enable them to handle conflicts effectively (Das & Teng, 1998; Kim & Chai, 2017).

Communication promotes mutual understandings between partners and drives firms towards collaborative conflict resolution and effective interaction (Li, Poppo, & Zhou, 2010; Sinickas, 2001; Das & Teng, 1998). Information sharing and joint decision making in effective communication process facilitate an integrative behavior characterized by intentions to safeguard the interest of both partners in order to attain "win-win" goals (Putnam, 1990; Koza & Dant, 2007). Further, it signals trust and commitment between partners thus enhances the collaboration, and

facilitates joint problem solving approach. Phen et al. (2005) argued that managers need to evaluate conflicts from both (i.e., relationship partners) perspectives and openly express their views across. On the other hand, bilateral communication and information sharing should inversely correlate to compromising strategy. Because the nature of compromising strategy refers to accommodate both relationship partners on “middle-ground”, it may not require considerable information sharing and open communication between relationship parties (Lin & Wang, 2002). Song et al. (2006) argued that compromising is a midrange strategy which is often related to quick decisions and unwillingness to explore best available alternatives. Therefore, it is less likely that the level of communication and information exchange is higher in a compromising approach. Similarly, communication should also inversely correlate to legalistic conflict resolution strategy. Firms prefer not to seek lengthy and expensive legal process if relationship partners openly and timely share significant information. In such conflict situations, problem solving approach becomes central where both relationship parties are more interested in sharing critical information and bilateral communication in order to end the deadlock. Therefore, problem solving approach remains as an important conflict resolution technique influenced by effective communication. Thus, based on the above discussion and theoretical examination, this study argues that bilateral and open communication exhibits mutual confidence of relationship partners which leads towards more problem solving approach rather compromising or legalistic strategy. Thus, the following hypothesis is proposed:

H4. Communication between buyer and supplier is positively related to (a) problem solving and inversely related to (b) compromising and (c) legalistic strategy.

2.3 CRS and buyer-supplier relationship performance

CRS are the significant approaches effecting performance outcomes. Several researchers (e.g., Le Nguyen et al., 2016; Lin & Germain, 1998; Mohr & Spekman, 1994) have highlighted the importance of CRS and their impact on relationship performance. Mohr and Spekman (1994) argue that the way in which relationship partners resolve conflict can have productive or destructive implications for relationship outcome. Firms are more interested to involve in cooperative strategies such as problem solving and compromising in order to implicate productively. These integrative efforts are applied to seek synergy and collaboration between partners, concern both parties' interests and feelings in a relationship, satisfy their needs and positively effect on

relationship performance (Le Nguyen et al., 2015; Lu, 2006; Monczka et al., 1999; Koza & Dant, 2007). Joint problem solving and compromising techniques enable partners to adopt constructive approaches in a “deadlock” situation and foster a “win-win” solution. Further, both partners quite often adopt a “give-and-take” attitude to achieve compromise in order to resolve conflict. These efforts of balancing the needs and concerns of both parties positively nurture the relationship performance (Lin & Germain, 1998).

On the other hand, legalistic conflict resolution strategy is more assertive and indicative in nature than other collaborative strategies of problem solving and compromising. Legalistic approach may not only increase the likelihood of future conflicts, but it can also hurt the partner’s feelings and create frustration and rigidity between them. Similarly, Le Nguyen et al. (2015) and Lin and Germain (1998) found negative impact of legalistic conflict resolution strategy on performance and satisfaction explaining that it can minimize the likelihood of eliminating the causes of conflicts and may drive towards relationship destruction. Moreover, Pfeffer (1994) argued that legalistic conflict resolution approach aggravate problems between relationship partners. Therefore, legal approaches may decrease the partners’ motivation of contribution and involvement in the relationship (Le Nguyen et al., 2015). Based on the above theoretical examination and discussion, this study argues that problem solving and compromising strategies of conflict resolution should have a positive impact and legalistic strategy on contrary, negative impact on buyer-supplier performance outcomes. Thus the following hypothesis is proposed:

H5. (a) Problem solving and (b) compromising positively relate to buyer-supplier relationship performance, while (c) legalistic strategy negatively associates with buyer-supplier relationship performance.

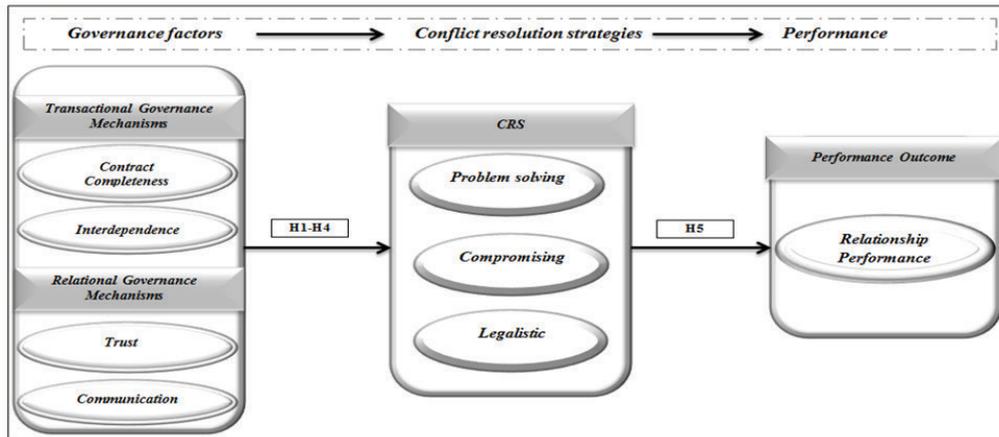


Fig. 1 Research model

3. Research method

3.1 Data collection and research design

This study consists of Finnish SMEs involved in BSR operating with key suppliers from a variety of countries in Asia and Europe, as well as the USA. A sample of 892 potential SMEs was generated from a database operated by the Collector Finland (i.e., a financial service provider, offering cost-effective and innovative solutions to private and corporate customers in Nordic countries), which includes basic information about Nordic buyer-supplier relationships. The sample indicates that 170 SMEs had suppliers in three regions (Europe: 143; USA: 17; Asia: 10), with an average size of 24 employees/SME and an average turnover of €38m/SME. The SMEs in the data set were operating in several dispersed classified industries, with 66.47% belonging to manufacturing and 33.53% belonging to the services industry. However, an attempt to identify transactional and relational governance mechanisms relating to the CRS and BSR performance was ineffective from database. Therefore, to attain the requisite level of details on these BSR management issues, it was decided to collect primary data from key executives from Finnish SMEs. The potential respondents' names and emails were identified from this database and most of them were CEOs, CFOs and board directors. Pre-testing was carried out among research group members in order to find out whether the respondents of the questionnaire would understand the questions as presented. The wording and sequence of some questions were modified based on the feedback.

The questionnaire was designed and developed in accordance with the suggestions by Collis and Hussey (2009). Prior research suggests that, compared to mail-based surveys, a web survey enables access to an enormous number of dispersed respondents in an easier, faster and cheaper way, as well as exhibits the data in numerical form in real time (Dillman et al., 2009). Therefore, in spring 2015, a web-based questionnaire was administered and sent to 892 firms. A follow up email was sent to non-respondents three weeks later. In total, 170 responses were received, yielding a response rate of 19.06% (170 of 892). Despite this response rate, an independent sample t-test was performed to assess whether, and to what extent, our survey was subject to non-response bias, and to check the difference between early respondents (N = 85) and late respondents (N = 85), as suggested by several authors (e.g., Armstrong & Overton, 1977; Werner, Praxedes & Hyun-Gyu, 2007; Silva, Bradley & Sousa, 2012). No significant differences were found between early and late respondents in terms of a firm's size ($p = 0.510$) and the length of the buyer-supplier relationship ($p = 0.319$). Thus, non-response bias was not a problem for this study. Further, prior methodological literature, as well as many empirical studies (e.g., Ali & Larimo, 2016; Aulakh et al., 1996; Sarkar et al., 2001), has taken the stance that late respondents are also representative of non-respondents.

A likelihood of common method variance exists in the research when all the constructs are measured using the same survey (Najafi-Tavani et al., 2015). Therefore, an ex-ante and ex-post steps were taken to limit and evaluate the common method bias, as suggested by Chang et al. (2010). Two further approaches were followed in ex-ante phase. First, respondents were assured of anonymity and privacy of the study. Second, a logical relationship between the constructs was kept unapparent by using the order of questions in the instrument, as questions related to conflict resolution strategy and relationship performance were asked in different sections. Harman's one-factor test was conducted as an ex-post approach in order to measure the extent to which data were negatively influenced by common method bias. In result of non-rotated factor solution in exploratory factor analysis, no single or general factor was apparent explaining most of the variability in the data, with major factor accounting for 26.88% of total variance. Thus, common method variance was not a problem in the analysis of the study.

3.2 Measures

This study employs reflective measurement models and the items used to operationalize each construct were developed on a 7-point Likert scale based on the existing literature. All the constructs demonstrated satisfactory reliability and validity with their Cronbach's Alpha (CA), Average Variance Extracted (AVE) and Composite Reliability (CR) values as well as item loadings in Table 1. Relationship performance was operationalized using four items (composite reliability 0.93) obtained from prior empirical research (Kumar et al., 1992; Artz, 1999). These measures included the firm's performance outcome such as satisfaction, success, relationship expectations, and achieving the set objectives. The three CRS (e.g., problem solving, compromising, and legalistic) were operationalized from Lin and Germain's (1998) study. The respondents were asked the extent to which a relationship partner resorts to specific actions in resolving conflicts. Trust was measured by adapting seven items (composite reliability 0.93) from Morgan and Hunt's (1994) research. Communication was operationalized adapting four items (composite reliability 0.95) drawing from Heide and John (1992) and Young-Ybarra and Wiersema (1999). Contract completeness was measured using six items (composite reliability 0.95), based on Luo (2002, 2009).

We followed the method used in recent studies (e.g., Ali & Larimo, 2016; Khalid & Ali, 2017) in order to measure the level of interdependence. It characterizes the extent to which both buyer and supplier are interdependent and have invested idiosyncratic specific assets in the relationship ranged from "1 = very low to 7 = very high". Interdependence was divided into buyer dependence and supplier dependence in order to measure the construct. Buyer dependence comprises of two statements: a) how large is the firm's investment in the relationship and b) what is the degree to which the firm's investment is 'sunk' in the relationship (e.g. Zeng, 1998; Reuer & Arino, 2002; Young-Ybarra & Wiersema, 1999). In order to determine the dependence of buyer firm, these two statements were collapsed into one. Similarly, respondents were also asked to specify the size of supplier's investments and the difficulty level of supplier's investment redeployment in order to calculate supplier dependence. To determine the level of interdependence between buyer and supplier, a calculation was made by taking the absolute difference between both partner's dependence. In this instance, a zero specified a perfectly symmetric dependence of both parties. To exemplify, buyer and supplier's interdependence can be determined in the following ways. In

order to determine buyer's dependence, it is supposed that: 1) the size of the investment in the relationship is represented by 4 out of 7, while 2) the difficulty level in redeploying the resources outside the relationship is 5 out of 7. In this case, buyer's dependence is: $4 \cdot 5 = 20$. Similarly if the calculation of supplier's dependence is also 20, the difference between these values is: $20 - 20 = 0$, representing a symmetric dependence between buyer and supplier because of their idiosyncratic investments in the relationship. These calculations helped us to determine the level of symmetrical interdependence between buyer and supplier in order to analyze the data.

Three additional variables of less interest were included to control the dependent variables. These include, age of the firm, relationship length (Liu et al., 2009) and size of the buyer firm (Zhou & Xu, 2012) as control variables because of their potential effect on dependent variables. Age of the firm was measured as the number of years in operation and size of the firm as number of employees. Finally relationship length refers to the time period of the exchange relationship between buyer and supplier.

Table 1 Constructs, item loadings, Cronbach's alpha (CA), AVE and composite reliability values (CR)

Constructs and items	Loadings	Item source(s)
Relationship performance (AVE: 0.77; CA: 0.90; CR: 0.93)		Artz (1999) and Kumar et al. (1992)
The performance of this relationship has? (very difficult 1-7 very easy):		
...been very satisfactory	0.82	
...been very successful	0.89	
...fully met our expectations	0.89	
...achieved the set objectives	0.89	
Conflict resolution strategies		Lin and Germain (1998)
When there are disagreements/conflicts between buyer and supplier regarding operations and/or strategic decisions, your actions are? (never used 1-7 always used):		
...use spirit of mutual consensus to fully satisfy both own and supplier's concern (i.e. problem solving)	1	
...use "give and take" to achieve compromise (i.e. compromising)	1	
...use legal provisions in the contract to obtain compliance (i.e. legalistic)	1	
Trust (AVE: 0.93; CA: 0.81; CR 0.93)		Morgan and Hunt (1994)
Please indicate your level of agreement with the following statements (strongly disagree 1-7 strongly agree):		
Our key supplier firm:		
...cannot be trusted at times (R)	0.94	
...is perfectly honest and truthful	0.93	
...can be trusted completely	0.96	
...can be counted on to do what is right	0.89	
...is always faithful	0.93	
...is someone I have great confidence in	0.92	
...has high integrity	0.91	
Communication (AVE: 0.83; CA: 0.93; CR 0.95)		Heide and John (1992) and Young-Ybarra and Wiersema (1999)
Regarding communication between you and your key supplier, please indicate your level of agreement with the following statements (strongly disagree 1-7 strongly agree):		
...we always keep each other informed about events or changes that may affect the other party	0.88	
...it is expected that any information, which might help the other party, will be provided to them	0.92	
...it is expected that proprietary information will be shared if it can help the other party	0.90	
...exchange of information in this relationship takes place frequently and informally, not only according to a pre-specified agreement	0.93	
Contract completeness (AVE: 0.77; CA: 0.93; CR 0.95)		Luo (2002) and Luo (2009)

To what extent are the following arrangements with your key supplier firm formalized in the written contract (not at all 1-7 entirely)?	
...how to operate and manage the relationship	0.88
...how to cooperate, coordinate, and resolve conflicts between your firm and key supplier	0.92
...how to terminate the relationship	0.86
...how to handle the unanticipated contingencies during relationship formation and operation	0.88
...cost and quality of resources invested in relationship	0.87
...how to secure invested resources from exploitation	0.87

Symmetric dependence

Zeng (1998), Reuer and Arino (2002) and Young-Ybarra and Wiersema (1999)

Items measuring the dependence of buyer firm (very low 1-7 very high):

...our investment in the relationship is

...if this relationship was to dissolve, our non-recoverable investments would be

Items measuring the dependence of key supplier firm (very low 1-7 very high):

...supplier firm's investment in the relationship is

...if this relationship was to dissolve, the key supplier firm's non-recoverable investments would be

Symmetric dependence:

Level of symmetric dependence between buyer and key supplier (i.e., difference between dependence of buyer and supplier firm) [0 = 7, 1-8 = 6, 9-16 = 5, 17-24 = 4, 25-32 = 3, 33-40 = 2, 41-48 = 1]

3.3 Measure validation

To analyze our model, we employed partial least squares (PLS) variance-based structural equation modelling (SEM) by using SmartPLS 2.0 software (Chin, 1998; Ringle, Wende & Will, 2005) for the following reason. First, we adopted variance based PLS-SEM approach because it enables the estimation of a series of relationships, in which one dependent variable turns into the explanatory variable in subsequent relationships. Second, this method is appropriate when it tests an explorative model (i.e. transactional and relational governance mechanisms influence CRS, and CRS explain relationship performance). Third, PLS-SEM modelling is not only considered as the most suitable approach when dealing with a small sample size but it also allows researchers to evaluate both formative and reflective measurement models simultaneously as well as hierarchical models (Becker et al., 2012; Hair et al., 2012a). Thus, it exhibits higher statistical power than covariance-based SEM when used on complex models with limited sample size (Hair et al., 2012a; Hair et al., 2012b; Chin, 1998). This is particularly applicable to this study, as the final sample size was 170 buyer-supplier relationships. Furthermore, multivariate normal data is not required in PLS-SEM modeling (Chin, 1998). Therefore, growing number of recent industrial marketing and management studies employed PLS-SEM because of its dynamic attributes (e.g., Kohtamäki et al., 2012; Khalid & Ali, 2017; Zaefarian et al., 2017; Najafi-Tavani et al., 2015; Mitrega et al., 2017).

Although PLS estimates both measurement and structural model concurrently, this study followed the techniques offered by Hulland (1999) and Hair et al. (2014) in order to estimate PLS models. In two steps, we analyzed and interpreted the estimated model: first, the estimation and reliability of measurement model, and second, the testing of structural model. We also validated

measurement model by evaluating the individual item reliabilities: convergent and discriminant validity (Chin, 1998; Hair et al., 2012b). The loaded indicators were above the benchmark criteria of 0.7 (Gotz et al., 2010) on their particular latent variables showing a high degree of internal consistency. Composite reliability scores were also calculated in order to assess construct reliability. As reported in Table 1, composite reliability for all constructs is above than the benchmark criteria of 0.6 (Gotz et al., 2010) therefore, indicated that construct reliability is statically significant. Further, the average variance extracted (AVE) with a greater value than the threshold of 0.5 is considered for all the latent variables in order to evaluate the convergent validity of the reflective block of the model (Fornell & Larcker, 1981; Gotz et al., 2010), demonstrating satisfactorily valid. The AVE also helps in evaluating discriminant validity if the square roots of AVEs of constructs are higher than the correlations between the latent variables (Chin, 1998; Fornell & Larcker, 1981; Gotz et al., 2010). Therefore, all the latent constructs were found to be satisfactorily sound and discriminant validity is assured. We also assessed the level of multi-collinearity between the constructs and variance inflation factor (VIF) was found well below 5 (the highest VIF values is 1.75), thus indicating no significant multi-collinearity (Hair et al., 2012a, 2012b). Additionally, we computed a confirmatory factor analysis, and the results specify a good model fit ($\chi^2 = 489.91$, d.f. = 282, RMSEA = 0.066, GFI = 0.83, CFI = 0.947, NFI = 0.885, IFI = 0.948). Hence, we safely conclude that all the constructs and items were found to be satisfactorily sound, assuring discriminant validity and reliability.

Table 2 Inter-construct correlations, AVE and square roots of AVE along the diagonal

Constructs	AVE	1	2	3	4	5	6	7	8	9	10	11
1. Contract completeness	0.77	0.88										
2. Interdependence	1	0.04	1									
3. Trust	0.93	0.12	0.02	0.96								
4. Communication	0.83	0.20	0.04	0.47	0.91							
5. Problem solving	1	0.32	0.14	0.25	0.20	1						
6. Compromising	1	-0.16	0.22	0.23	-0.15	0.13	1					
7. Legalistic	1	0.42	-0.09	-0.11	-0.07	-0.21	0.36	1				
8. Relationship performance	0.77	0.14	-0.06	0.37	0.51	0.23	0.19	-0.14	0.88			
9. No. of employees	1	0.08	-0.07	-0.06	0.02	0.06	0.20	0.11	-0.05	1		
10. Age of the relationship	1	0.08	0.07	0.04	0.23	0.02	0.06	0.09	0.02	0.28	1	
11. Age of buyer firm	1	0.06	0.06	-0.01	0.19	0.04	-0.00	0.08	0.05	0.32	0.52	1

4. Analysis and results

4.1 Structural estimates

We employed PLS-analysis (a path weighting technique with a maximum of 300 iterations) in order to test our direct effect and interaction effect hypotheses, and a bootstrapping method of sampling was utilized to generate t-values (Hair et al., 2012a; Chin, 1998). The significance levels, path coefficients (i.e., standardized β), and R^2 (i.e., the coefficient of determination) of dependent variables show the main effects of structural model. The nomological validity of our model was evaluated by examining the explained variance R^2 for each dependent construct in our framework (Sarstedt et al., 2014). The R^2 for problem solving, compromising and legalistic strategies are 0.42, 0.39, and 0.28 respectively. It demonstrates that context variables explain 42% of the variance in problem solving, 39% in compromising and 28% in legalistic strategies. Similarly, the R^2 for relationship performance is 0.36, explaining 36% of the variance in the dependent variable of relationship performance. Table 3 presents the partial least square (PLS) results of structural model with CRS and relationship performance as dependent variables.

Table 3 PLS path analysis results (standardized beta coefficients and t-values)

Constructs	Problem solving	Compromising	Legalistic	Relationship performance
Contract completeness	0.29 (3.28)***	-0.15 (1.82)**	0.44 (6.50)***	
Interdependence	0.13 (1.75)**	0.19 (2.20)***	-0.07 (0.86)	
Communication	0.18 (1.93)**	-0.12 (1.70)**	-0.08 (0.88)	
Trust	0.22 (2.40)***	0.19 (2.10)**	-0.12 (1.74)**	
Problem solving				0.21(2.25)***
Compromising				0.17(1.84)**
Legalistic				-0.13 (1.69)**
Control variables				
No. of employees				-0.02 (0.28)
Age of relationship				0.02 (0.19)
Age of buyer firm				0.03 (0.36)
R^2	0.42	0.39	0.28	0.36

*** $P \leq 0.001$, ** $P \leq 0.01$, * $P \leq 0.05$

The results indicate that contract completeness is positively related to problem solving ($\beta = 0.29$, $p \leq 0.001$) and legalistic strategy ($\beta = 0.44$, $p \leq 0.001$), and inversely related to compromising ($\beta = -0.15$, $p \leq 0.01$). These results completely support H1. Further, interdependence exerts a significant positive effect on problem solving ($\beta = 0.13$, $p \leq 0.01$) and compromising strategy ($\beta = 0.19$, $p \leq 0.001$), but negatively related legalistic strategy. These results partially support H2 (H2a and H2b = supported, H2c = not supported). The results for H3a ($\beta = 0.22$, $p \leq 0.001$), H3b ($\beta = 0.19$, $p \leq$

0.01) and H3c ($\beta = -0.12$, $p \leq 0.01$) supported the notion that trust between buyer and supplier has a positive effect on problem solving and compromising conflict resolution strategy and a negative effect on legalistic strategy. Moreover, the results of H4 show a significant positive relationship between communication and problem solving strategy ($\beta = 0.18$, $p \leq 0.01$) and a negative significant relationship between communication and compromising strategy ($\beta = -0.12$, $p \leq 0.01$) supporting H4a and H4b. However, the predicted inverse relationship between communication and legalistic strategy was found non-significant, partially supporting H4. Table 2 also presents the results for the impact of CRS on buyer-supplier relationship performance. It indicates the significant positive relationship between problem solving ($\beta = 0.21$, $p \leq 0.001$), compromising ($\beta = 0.17$, $p \leq 0.01$) strategies and relationship performance and significant negative relationship between legalistic strategy ($\beta = -0.13$, $p \leq 0.01$) and relationship performance. These results thus support H5a, H5b and H5c. Table 4 summarizes proposed hypotheses and results.

Table 4 Summary of hypotheses and results.

Hypotheses	Description	Results
H1	Contract completeness between buyer and supplier is positively related to (a) problem solving and (b) legalistic strategy, and inversely related to (c) compromising strategy	Supported
H2	Interdependence between buyer and supplier is positively related to (a) problem solving, (b) compromising and (c) legalistic strategy	Partially supported (except the relationship between Interdependence and legalistic strategy, all else supported)
H3	Trust between buyer and supplier is positively related to (a) problem solving, (b) compromising and inversely related to (c) legalistic strategy	Supported
H4	Communication between buyer and supplier is positively related to (a) problem solving and inversely related to (b) compromising and (c) legalistic strategy	Partially supported (except the relationship between communication and legalistic strategy, all else supported)
H5	(a) Problem solving and (b) compromising positively relate to buyer-supplier relationship performance, while (c) legalistic strategy negatively associates with buyer-supplier relationship performance	Supported

5. Discussion and implications

5.1 Results summary

We developed and empirically tested a combined model of transactional (i.e., contract completeness and interdependence) and relational (i.e., trust and communication) governance mechanisms which influence in choice of the most appropriate CRS and their impact on relationship performance. Based on the analysis of 170 buyer-supplier relationships of Finnish

SMEs, this study demonstrates several interesting findings. Firstly, as hypothesized relationship governance mechanisms are found keystone components supporting firms in selecting the most suitable of CRS that determine relationship performance. Secondly, results indicate that problem solving strategy is the most crucial conflict resolution approach firms always prefer to use in a conflict situation. Legalistic strategy can be the least resort (i.e., when relationship partners cannot mutually come out of a deadlock situation), and preferable in case of specified contract terms violation. The use of compromising strategy is influenced by interdependence and trust between relationship partners which demonstrates that the interdependency between firms drive them to compromise in order to resolve the conflicts. Similarly, when trust is emplaced, relationship partners may compromise in order to continue longer term relationship. Thirdly, CRS influence relationship performance. Problem solving and compromising are the most significant CRS that enhance relationship performance, whereas legalistic strategy can hurt the partner's feelings and diminish relationship performance.

5.2 Theoretical implications

This study contributes to purchasing and supply management literature and provides new insights in different ways. Because current literature does not provide enough explanation on the influence of governance mechanisms on buyer-supplier's choices of CRS, this study extends the earlier conceptualization and empirically investigates the influence of governance mechanisms in the choice of CRS. This is accomplished by developing and empirically testing a combined model of transactional and relational governance mechanisms. In addition, this study highlights the most preferable CRS in order to resolve buyer-supplier disagreements. Furthermore, by testing the impact of CRS on relationship performance, this study advances the research and provides empirical identification of most relevant strategies that can suppress or bolster relationship performance.

Concerning the first context variable, the findings affirmed and add to the TCE reasoning by empirical demonstration, that contract completeness including term specificity and contingency adaptability encourage relationship partners to describe and coordinate a mutual agreement which facilitates more cooperative and integrative problem solving approach in conflict situation in order to satisfy their needs (Lumineau & Henderson, 2012). Therefore, contract completeness stimulates a problem solving approach in order to resolve conflicts. Further, the positive relationship between

contract completeness and legalistic strategy demonstrates that if problem solving approach becomes ineffective, the presence of explicit safeguard clauses of a complete contract encourages relationship partners to legally sanction their counterpart in case of specified contract terms violation (Cannon et al., 2000; Lusch & Brown, 1996). Compromising as a conflict resolution strategy becomes less prevalent in this situation as relationship partners have the possibility to follow contractual obligations. Moreover, this study reveals that interdependence between relationship partners significantly influence their choices of CRS. The use of problem solving and compromising approach influenced by interdependence between relationship partners demonstrates that due to the level of investments contributed in a relationship, it is very difficult for relationship partners to redeploy these investments, therefore prevent partners' opportunistic behavior when conflict arises (Dyer, 1997; Wright & Lockett, 2003) and facilitate integration and coordination (Le Nguyen et al., 2016; Lin & Wang, 2002). These findings also complement the theoretical notion that interdependence produces a socially embedded template where relationship partners willingly follow relational norms (Luo et al., 2009) and induce problem solving and compromising approach. As predicted, our study found no significant negative relationship between interdependence and legalistic strategy. A potential explanation for this can be the fact that equal relationship-specific investment bounds both partners with a huge redeployment cost, thereby squeezing the possibilities to seek more expensive and lengthy legal support.

Among the relational governance mechanisms, the findings also confirm some major reasoning in the literature and demonstrate the influence of trust and communication in selecting CRS. Social exchange theory suggests that relationship exchange should be rooted in strong relational ties between buyer and supplier to control operational conflicts. Based on the findings, this study implies that trust is an important governance mechanism which influences firms significantly in choice of most appropriate CRS in a disagreement situation (Han & Harms, 2010) using more integrative and cooperative approach; problem solving and compromising. Similarly, relationship partner feel comfortable in openly discussing their problems, expressing their opinions, learning about issues jointly, and sharing concerns that facilitate a problem solving attitude (Morgan and Hunt, 1994). The significant positive relationship between trust and compromising strategy demonstrates that relationship partners are encouraged to find out fair and agreeable solutions, look for "middle-ground" to compromise in resolving conflicts. These findings are congruent with prior research (Dyer, 1997; Zaheer et al., 1998; Liu et al., 2010; Ndubisi, 2011) which suggests

that mutual trust determines an effective conflict handling environment by inducing problem solving and compromising approach when conflict arises. Further as proposed, this study finds a negative significant relationship between trust and legalistic strategy. This notion is in line with findings of recent empirical studies (e.g., Kozan et al., 2014; Le Nguyen et al., 2016) suggesting that relationship partners behave cooperatively and avoid using legalistic approach when there is high level of trust emplaced.

Moreover, effective and open communication between relationship partners is found a significant relational governance factor in choice of conflict resolution strategy. The positive significant relationship between communication and problem solving demonstrates that effective communication is a crucial strategic cooperative relational instrument which drives firms towards interaction and knowledge sharing, facilitating a collaborative and integrative conflict resolution, consistent with Koza and Dant (2007) and Sinickas (2001). Open communication signals trust and commitment between partners thus enhances the collaboration and sense of sharing relevant information in order to resolve a conflict. Further a negative significant relationship between communication and compromising strategy affirms the proposed hypothesis and demonstrates that when firms have to compromise to resolve a conflict, it may not require considerable information sharing and open communication because quick decisions are required and relationship partners may not eager to explore best available alternatives. These findings are consistent with prior studies (e.g., Ling & Wang, 2002; Song et al., 2006).

In the relationship between CRS and BSR performance, this study demonstrates that problem solving and compromising strategies positively relate to relationship performance. The problem solving approach to resolving conflicts posits to be a significant mechanism in fostering relationship performance, which is consistent with prior studies (e.g., Lin and Germain, 1998; Le Nguyen et al., 2015; Mohr & Spekman, 1994). This means that firms are more interested to involve in cooperative strategies such as problem solving and compromising enabling relationship partners to mutually adopt particular constructive approaches for a “deadlock” and foster a “win-win” solution. These integrative efforts facilitate cooperative behavior, concern both parties’ interests and feelings and satisfy their needs prevailing positive impact on relationship performance (Le Nguyen et al., 2015). The findings also demonstrate a significant negative relationship (as hypothesized) between legalistic strategy and relationship performance. This notion posits that

legalistic approach may not only aggravate future problems but also decrease the firms' motivation of contribution and involvement in the relationship, consistent with the findings of previous studies (e.g., Le Nguyen et al., 2015; Lin & Germain, 1998; Lu, 2006).

5.3 Managerial Implications

This study has several vital implications for managers dealing with conflicts in business relationships. A multidimensional framework of this study (specifying a linkage between governance mechanisms, CRS approaches and relationship performance) not only provides an understanding for the relationship managers in their choices of most suitable CRS but also predicts their partner's choices when conflict arise. Awareness of possible actions and behaviors of partners thus prevails in the relationship in case of conflict, and help them in resolution effectively. Most importantly, the results suggest that problem solving approach of conflict resolution is positively influenced by all governance mechanisms. Managers should thus understand that cooperative and integrative problem solving approach is the most crucial conflict resolution strategy which facilitates open discussion and mutual agreement in order to get a "win-win" solution for both parties. Further, managers should ensure a trustworthy relationship, which provides both partners with a certain level of confidence to compromise on a "middle-ground" in order to continue long-term relationship. Similarly, interdependency between firms drives firms to compromise because of relationship-specific investments which enhances relationship performance. Unlike problem solving and compromising strategy, legalistic strategy can be the least resort for managers in cases when partners cannot mutually come out of a deadlock situation. Because it is a lengthy and expensive approach and can hurt partner's feeling, managers should ensure that conflicts are resolved through alternative approaches in order to assure relationship performance.

5.4 Limitations and further research

This study has some limitations that need to be addressed in further research. Firstly, drawing from the theories of TCE and SET, this study only investigates four governance mechanisms to derive the impact on CRS. Further studies may incorporate some other governance mechanisms with their mediating effects, such as opportunism, relational norms, uncertainty, reputations of buyers and suppliers etc. Noteworthy results can be found by employing interaction impact (complementary or substitutive) of these mechanisms influencing the choice of CRS and their impact on

relationship performance. Secondly, this study consists of only Finnish SMEs relationships operating with key suppliers in Europe, Asia and the USA. Future efforts may extend the existing Nordic SMEs sample in order to generalize the findings for the whole Nordic region. Thirdly, because this study represents a cross-sectional approach where only the buyer's perspective was probed, it would be interesting to know how suppliers, either within a longitudinal setting or from a case study dyadic perspective, perceive the impact of governance mechanisms on CRS and relationship performance. Fourthly, this study is limited to a single key informant. Future studies can obtain data from numerous but different respondents for the purpose of assessing the independent and dependent constructs in order to reduce common method bias. Besides, in this study, types of conflicts (e.g., constructive and destructive conflicts) are not specified. Therefore, future research can include this notion and examine whether choice of CRS depends on conflict types. Finally, we recommend future research in order to take some additional issues into account. We encourage investigating the direct and indirect impact of governance mechanisms on transaction cost and opportunism through CRS. Caniëls and Gelderman (2007) argued that a general consensus regarding the optimal operationalization of interdependence lacks in the literature and resulted in contradictory findings (Kumar et al., 1995). Therefore, we also encourage researchers to advance more refined measures of symmetric dependence by encompassing various aspects of dependence. Symmetric dependence may be more than the issue of symmetry and include the level of mutual dependence (i.e., high and low mutual dependence) because of the firms highly different in size (Ali & Larimo, 2016).

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