

Cranfield University

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Business triads in servitization; The influence of the provider – partner relationship on the performance of the partner towards the provider's customer base

School of Management

PhD Thesis

Academic Year: 2012-13

Supervisors: Dr. Mark Johnson, Dr. Marko Bastl

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This thesis is submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy

Abstract

The thesis is concerned with a problem arising in contexts where there is provision of integrated product-service offerings (servitization). It may be the case that the provider relies on independent service partners for the delivery of the services to the customer, which means that the three actors (provider, service partner and customer) form a triad. This makes the performance of the partner determinative for customer satisfaction and hence an important issue for the provider. Because the buyer – supplier relationships and business triads literatures suggest that relationships affect the performance of the related parties, the aim of this work is to understand how the provider – partner working relationship influences the service performance of the latter. To satisfy the aim, an appropriate setting in the UK commercial vehicles industry was identified (one provider plus a network of service partners), and a mixed-methods research design was employed. The qualitative part consisted of several exploratory interviews and three case-studies of purposively sampled provider – partner relationships. The quantitative part had a supplementary character, and as part of it, questionnaires completed by 38 of the provider’s partners were analyzed with the use of a configurational method (fsQCA). In this study, the firm-level working relationship was considered as a five-dimensional construct based on Cannon’s and Perreault’s (1999) framework of relationship connectors. The findings consist of:

- 1) A model capturing the causal ordering of the relationship dimensions, their interplay with two emergent exogenous factors, and their eventual impact on the service performance of the partner.

- 2) A set of configurations of relationship dimensions and exogenous factors enhancing service performance.

With the in-depth study of the influence of the provider – partner relationship on the performance of the partner towards the provider’s customer-base, my research simultaneously contributes to knowledge in two ways. Firstly, it helps in the theoretical development of the phenomenon of servitization, and secondly, it extends triadic research by examining in depth and in a novel setting the relationship – performance interdependence within the triad.

Acknowledgements

It feels incredibly good to be submitting but I must admit I have got mixed feelings about the whole PhD journey. My experience throughout my 4 years has been mainly frustration and stress, blended with doubts about literally everything related to my PhD (especially myself and my capacity as a man and a researcher). I truly feel a better, stronger and wiser person compared to when I started, but if you asked me now, I would never do it all over again if I had the chance. There is always the possibility though that I change my mind if and when I start reaping the fruits of it. Then, maybe I will only remember the good times (which, because of still being a student abroad, have been plenty). In any case, I am extremely proud of this manuscript which, from inception to submission, has been a product of 16-17 months maximum. I felt like dropping it several times, especially during the third year, but by persisting and insisting I have finally made it.

During my time as a PhD student (and as a student in England in general) there have been many people who played a role in my life, and to whom I now feel indebted. Beyond any doubt, without them I would not have managed to submit this 300+ page document. Thus, this section is dedicated to them.

To begin with, I am really grateful to the CEO of my subject organization for providing the setting for my research and helping me with access to data. I am also thankful to all the people from the service workshops who accepted to be interviewed or respond to the questionnaire. The case was literally my last resort and without these guys' help I would have simply never produced a thesis. I hope they will find my findings and recommendations interesting and useful.

Moving on to my friends, a special 'thank you' goes to Dr. Boyle (aka Dr. Retard) for an epic two-year period of utterly pointless boozy outings and innumerable fails. What is certain however is that the scientific method was followed throughout and that the project produced substantial insight regarding the infamous 'Dorman hypothesis'. I hope we will soon proceed to an extensive replication study in order to finally arrive to unassailable findings.

A special thanks also goes to my friend Nessa with whom I shared the madness of the last months of the PhD write-up. Our interaction and discussions surely gave courage to both. A simple 'thank you' will not do justice to what I feel about Sara, my boss at the UEA Grads Bar. Simply the best boss one could ever have and always a great friend. Thanks also to my

colleague Alessandro Giudici for the ideas and help he gave me. He has had a major role to play.

I am short for words for my original MSc crew from 2006-07. Chris, Carla, Simon, Leanne, Julie, Eddy, Greg, SJ, Mounia, Ertug, Meital, Jerome, Alejandro, Burcu, Virg, Roy, Ovidiu, Octavio, Gulliver, Brett, Paul, Andres, Virginie, Fernando and the rest whose names slip from my mind at the moment, have all played a massive role in my life throughout the years and I thank them very much for everything. The fact that we are so often in contact and that we meet at every opportunity demonstrates the strong bonds that tie us and shows to me that our friendship will be forever. Somebody's role however stands out; David and I have been together since the beginning and influenced each other a lot throughout our academic maturing. Eva and him have been fantastic housemates and even more fantastic friends throughout the years. So fantastic that I forgive them for leaving me to go to California. I dream of growing old as colleagues together in the same university and having lunch and coffee breaks and talking about exactly the same things we talk about now.

This does not mean however that I will ever forget the people who played a role in my life during the second Masters and the PhD years. Matt, Jacobo, Gerardo, Javier, Javi and Juancho will always be my best friends and I keep a special place in my heart for them. My two Greeks, the '9inch pepperoni and chips man' and the 'gav gav', we have had unforgettable laughs. Holger, Andrew, Sly and Aris have been by far my favourite undergrads and I will never forget particular times we spent together and with our genius friend: Tony No2. One day I am sure I will be saying 'you know, I know this guy; we spent loads of time together in Norwich and I actually helped him get the job at the bar' and people will not believe me. Thanks also to 'the professor' Aris, who has been my main companion during the final year.

All the boys from CCP football and the chemists football team...What can I say? Great lads all of them with no single exception. I am extremely happy I have been spending with them my favourite time of the week: playing 7 a-side. Especially during the very tough and uncertain third year, the one or two hours of football every week were what kept me going really.

My other housemates are also worthy to be mentioned. Greame is still one of my favourite people in the world to talk football with, Thomas is still a great laugh to go out with, (Dr.) Alessandro has been a legendary, paternal figure for many including me, Gyozo

made my last PhD year great and will be leading me through the ranks of the new students this year, Ivan, Ellie and Matt have all been great!

Other friends that do not fall in any of the 'latent' categories discussed so far include Usman (who passed the philosophy virus to me), Lucia and Ioaneta (for the great times of summer 2012), Nick (whose absence I feel every time I watch Liverpool at the pub), and a person who cannot be named (for reasons that cannot be named). Thank you all!

Last but not least, thanks to my supervisor Dr. Mark Johnson, and Dr. Marko Bastl. Their help during the four years is greatly appreciated and the academic I have become is mainly due to them. I look forward to a long academic collaboration and friendship with both. A great 'thank you' goes to Professor Alan Harisson for 'paying the bill' during my final year, to Lynne for all the help during the 4 years, and to Mehemt for the useful discussions and the assistance during data collection. I am deeply indebted. Thanks also to Professors Catherine Waddams, Steve Davies and Morten Hviid for taking me on board to UEA CCP before submitting. I will do my best to pay back their trust. Thanks also to my good friend Richard Adams for having proof-read almost every document I have produced in the last six years.

Finally, nothing would have been possible without the support and understanding of my parents during my time in England. One thing I have promised to do after this is to show my love to them and my sister more often.

October 2012

Antony Karatzas

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1 INTRODUCTION

This chapter introduces my work. It begins with a presentation of the research problem and research aim. It then provides a preview of the research questions I sought to answer, the methods employed, and the outcomes of the study. A tabulated summary of the key features of the thesis is provided in section 1.2. The chapter ends with the high-level structure of the document.

1.1 Research problem and aim

Over the last two and a half decades, academic research has become increasingly interested in the changing face of manufacturing. Due to a combination of economic, environmental and market factors, manufacturers have been actively supplementing their increasingly complex products with a variety of services, and providing them as customer-focussed combinations. The trend is more prevalent in developed countries, where approximately half of the manufacturers are involved into some sort of service activity (Neely 2008). This goes hand in hand with the fact that in these countries, the proportion of total value added from the manufacturing sector has been shrinking, with a simultaneous expansion of the service part of the economy. For OECD members such as the U.S, UK, France, Australia and Denmark, the total value added share of the service sector exceeded the 60% landmark at the advent of the 21st century, with the share of manufacturing dropping to around 20% (OECD 2005).

Although there is a multitude of related terms in the academic literature originating from diverse research traditions, the strategy of manufacturing firms that involves product-service integration and provision is termed *servitization* (Vandermerwe & Rada 1988). Additionally, the resultant offering is commonly referred to as a *Product-Service System* (e.g. Tukker 2004), an *integrated solution* (e.g. Davies et al. 2007), or a *product-service offering* (e.g. Bastl et al. 2012). Formally: Servitization is “*the innovation of an organization’s capabilities and processes to better create mutual value through a shift from selling products to selling Product-Service Systems*” (Baines et al. 2009b, p.555), and a Product-Service System (PSS) is “*an integrated combination of products and services that delivers value in use*” (Baines et al. 2007, p.1545).

The extant literature has largely been concerned with issues pertinent to the manufacturing firm itself. For example, many works focus on the antecedents of servitization (e.g. Dickson 1992; Wise & Baumgartner 1999), on the transition paths from pure product to integrated product-service provision (e.g. Oliva & Kallenberg 2003; Salonen 2011), and on deriving classifications of related offerings and strategies (e.g. Gebauer 2008; Tukker 2004). At the same time, minimal attention has been paid to issues pertinent to the supply network in which the manufacturer/provider is embedded. This is despite the increasing importance of the relationships with upstream suppliers and downstream customers for the successful provision of the offering (e.g. Johnson & Mena 2008; Windahl & Lakemond 2006). It is also despite the fact that in certain servitized contexts, the manufacturer relies on independent service suppliers for the delivery of the services to the customer base (e.g. Cohen et al. 2006; Pawar et al. 2009). My work focuses on this particular structural arrangement in the network, i.e. when the delivery of a service part of the PSS is subcontracted to a network of partners. When this is the case, the subcontracted partners need to deliver the services to the provider's customer-base effectively and efficiently, at the levels prescribed in the contract between the manufacturer and the customer. This makes the performance of a service partner determinative for customer satisfaction, and hence a matter of primary importance to the manufacturer (Pawar et al. 2009; Tate & van der Valk 2008). Logically then, any manufacturer/provider would be keen to maximize the performance of its service partners. However, guidelines on how to do this are scarce, because this setting is theoretically and empirically nascent.

In contrast to products, services are normally produced and consumed simultaneously (*inseparability* – e.g. Axelsson & Wynstra 2002), hence there is supplier – customer interaction during service delivery (Sampson 2001; Sampson & Froehle 2006). This means that when the manufacturer/provider subcontracts the delivery of the service part of the PSS to an independent partner, the latter is now in direct and ongoing interaction with the customer. It follows that the two entities together with the manufacturer become interconnected, therefore forming a business triad (i.e. a network comprising three actors and the links between them – Wasserman & Faust 1994). I frame the research problem as a problem of business triads and draw from the developing relevant literature to determine the aim of my study. As will be discussed in the literature review, scholars involved in triadic research, be it in pure manufacturing or service contexts, assume and at instances confirm, the interdependence between the state of the relationships between the involved actors and the performance of those actors in the triad (e.g. Choi et al. 2002; Li & Choi 2009; Tate & van der Valk 2008). Along those lines, in this work I consider the

service delivery performance of the service partner to be the performance of one actor (service partner) towards another in the triad (customer). Given that inter-firm relationships and performance are interdependent in triadic settings, I investigate the importance of the provider – partner relationship in the service performance of the partner through answering the following research question:

1) In a triadic servitized context, how does the provider – partner relationship affect the performance of the partner in delivering the services to the customer base?

The influence of inter-firm relationships on the performance of the related parties is a phenomenon that has been widely studied in the (dyadic) buyer – supplier relationships literature (e.g. Carr & Pearson 1999; Corsten et al. 2011; Handfield & Bechtel 2002; Krause et al. 2007). It is referred to here as ‘relational influences on performance’. As the literature review will show, there are many relationship dimensions/characteristics whose effects on performance have been investigated. These include such dimensions as commitment (e.g. Morgan & Hunt 1994), trust (e.g. Handfield & Bechtel 2002) and information exchange (e.g. Yigitbasioglu 2010). Additionally, several theories have been employed in the quest of explaining relational influences on performance, including Transaction Cost Economics, Resource Based View and Relational Contracting Theory (see for example Palmatier et al. 2007; Parmigiani & Rivera-Santos 2011). Because inter-firm relationships are complex and multi-faceted (e.g. Ritter 2004) I adopt an explicit, multi-theoretical framework of relationship characteristics (the Cannon & Perreault 1999 framework of *relationship connectors*¹) to answer the preceding research question.

Additionally, the relevant literature suggests that no unassailable conclusions can be drawn with regard to the role and effects of relationship dimensions. The phenomenon on the whole seems to be causally complex and contingent on exogenous contextual factors. For example, there are divergent opinions and findings regarding whether contractual governance and relational norms function as complements or substitutes, and under which conditions (i.e. the context) they influence the performance of the parties in an inter-firm relationship (e.g. Li et al. 2010; Poppo & Zenger 2002; Zhou et al. 2008). The general inconclusiveness of findings suggests there are many alternative ways in which the inter-firm relationship can influence the performance of the related parties (i.e. alternative causal ‘recipes’). Complex causation justifies the application of configurational logic (Ragin 1987). This is reflected in the second research question:

¹ These include information exchange, operational linkages, cooperative norms, legal bonds and relationship-specific adaptations

2) *What configurations of dimensions of the provider – partner relationship ('relationship connectors') and contextual factors elicit superior service performance?*

I investigate the phenomenon of relational influences on performance in a particular servitized setting that clearly exhibits triadic interaction. The setting consists of a provider of commercial vehicles in the UK market and its service partners, who are subcontracted for the delivery of the services.

To answer the two research questions I conduct a mixed-methods study that consists of one qualitative and one quantitative strand conducted sequentially (*sequential exploratory* mixed methods design – Creswell & Plano-Clark 2006), and is underlined by the philosophical stance of pragmatism. The qualitative strand consists of three case-studies of provider – partner relationships where the data are analyzed using *template analysis* (King 2004a). The outcome of the qualitative inquiry is an in-depth account of the role of the relationship as a whole and the effects of its five dimensions on the service performance of the partner. The interplay between the relationship dimensions, two emergent exogenous factors (partner's size and partner's product-service penetration) and service performance are captured in a model. This describes the context-dependent effects of the relationship dimensions on the service performance of the partner and consequently answers the first research question. To answer the second research question I apply configurational logic and a related method (fuzzy-set Qualitative Comparative Analysis, [e.g. Ragin 2008]) for the analysis of survey data. The answer consists of a set of configurations of causal conditions that enhance the service performance of the partner. The candidate causal conditions include the five relationship dimensions from the Cannon & Perreault (1999) framework and the two exogenous, contextual factors that emerged out of the qualitative work.

The contributions to knowledge of this research stem from the consideration of a particular servitization setting as a triad, and within it, the treatment of the provider – partner relationship as a multi-dimensional construct. To my knowledge, this work is the first to generate novel and in-depth insight on how each dimension of the provider – partner relationship influences the performance of the partner towards the provider's customer base. Additionally, apart from understanding their individual roles, through employing configurational logic my work is the first to identify the combinatory effects of these relationship dimensions in this particular context.

1.2 Overview of the study

As a preview, this section contains a tabulated summary of the key features of the thesis (Table 1-1). The formal structure of the document can be found in the following section.

Table 1-1: Summary of key features of the thesis

Research questions
1) <i>In a triadic servitized context, how does the provider – partner relationship affect the performance of the partner in delivering the services to the customer base?</i>
2) <i>What configurations of dimensions of the provider – partner relationship ('relationship connectors') and contextual factors elicit superior service performance?</i>
Key definitions
- Servitization is “ <i>the innovation of an organization’s capabilities and processes to better create mutual value through a shift from selling products to selling Product-Service Systems</i> ” (Baines et al. 2009b, p.555). - A triad is defined as “ <i>a subset of three actors and the (possible) tie(s) among them</i> ” (Wasserman & Faust 1994, p. 19). In this study specifically, a triad refers to three interconnected actors (<i>transitive triad</i>) unless explicitly stated otherwise (e.g. ‘ <i>triad with a structural hole</i> ’). - A Buyer - Supplier relationship represents “ <i>a valuable bridge that gives one actor access to the resources of another</i> ” (Harland 1996, p.68). For the purpose of this study, the dimensions of a relationship include information exchange, operational linkages, legal bonds, cooperative norms and relationship-specific adaptations (Cannon & Perreault 1999).
Philosophical approach
Pragmatism
Research design
- <i>Sequential exploratory</i> mixed methods design (Creswell & Plano-Clark 2006) consisting of one qualitative and one quantitative strand. - A case is a provider – partner relationship throughout the research - The outcome variable (partner’s service performance) is measured objectively and consistently
A) Qualitative strand: - three case-studies sampled according to the partner’s performance scores (<i>stratified</i> sampling strategy – Patton 2002) - unit of data collection: key individuals from both parties engaged in ongoing interaction - overall number of interviews (including exploratory stage): 29 - data analysis: <i>template analysis</i> (King 2004) as part of which an <i>eclectic</i> coding strategy was employed (Saldana 2009)
B) Quantitative strand - Survey study; data collected from 38 partners’ sites - unit of data collection: senior people in the site with a holistic view of their company’s working relationship with the provider - data analysis: fuzzy-set Qualitative Comparative Analysis (fsQCA)
Outcomes
A) A model emerging from the data capturing the interplay between the five relationship dimensions and two exogenous contextual factors (partner’s size and proportion of revenues coming from servicing vehicles under contract), and their influence on service performance
B) Four (core) configurations of conditions (relationship dimensions and exogenous factors) eliciting superior partner service performance

1.3 Structure of the remainder of the document

The main part of the thesis begins with the review of the relevant literature. It consists of three separate but interconnected parts.

Firstly, the servitization part introduces the context of my study and presents the research problem. Namely, when the provider assigns the delivery of the services to independent customer-facing suppliers, the performance of the latter becomes important as it affects customer satisfaction. A provider would be motivated to ensure that its service partners deliver the services at (at least) the levels agreed in the customer contract. Subsequently, the literature on business triads is reviewed. This helps me frame the problem and formulate the research objectives. I do this by invoking the commonly held and at times validated assumption, that the nature of the dyadic relationships between the three actors and the performance of each actor within the triad are interdependent and affect one another. Hence, I seek to examine how the provider – partner relationship, and its intrinsic dimensions, affect the service delivery performance of the partners. This automatically leads to the last part of the literature review: The influence of buyer – supplier relationships (and their intrinsic characteristics), on the performance of the interconnected actors. By looking at this literature from a high level, and by also critically reviewing particular encompassed topics, I achieve two crucial things. Firstly, I adopt an explicit theoretical framework to use as lens for the focussed collection and analysis of information relevant to the provider – partner relationship. This is the Cannon and Perreault (1999) framework of *relationship connectors*. Secondly, I show that relevant knowledge indicates that the phenomenon of relational influences on performance is causally complex. These two points inform the research questions which are formally articulated at the end of the chapter.

Chapter 3 begins with the introduction and justification of suitability of the chosen research setting. It continues with a discussion on the philosophy permeating this research. Firstly, I comment briefly on the different philosophical stances, especially the two extreme positions of positivism and interpretivism. Subsequently, I suggest pragmatism as an alternative to the positivism – interpretivism debate and present its main premises. The presentation of the research design follows. It comprises one qualitative (three case-studies) and one quantitative (survey) strand, with the former having priority. After a general note on mixed methods research I proceed to the specifics

of the two phases. Crucially, the chapter ends with the presentation of the fuzzy-set Qualitative Comparative Analysis (fsQCA) technique, which is used to analyze the survey data and answer the second research question. The narrative is short but comprehensive and should help the reader get accustomed with the peculiarities of a technique very rarely adopted by scholars in the management discipline.

Chapter 4 presents the findings of the two strands of the research design. It begins with the qualitative part. The within-case analysis of the three case-relationships is structured around the Cannon & Perreault (1999) relationship connectors, and is followed by the cross-case analysis. This section begins with a comparison of the three case-relationships, which shows that the more relational the relationship, the higher the performance of the service partner. This observation leads in to the inquiry that attempts to answer the first research question. As part of the answer, the role of each relationship connector and two emergent exogenous factors is discerned. The interplay between them is also uncovered and captured by a model. In this way I provide a nuanced understanding of how the provider – partner relationship affects the service performance of the partner towards the provider’s customer base. The model indicates that there are different causal paths (or ‘recipes’) for high partner performance, which resonates with the insight generated from the literature review (i.e. the phenomenon of relational influences on performance is causally complex). Taking this into consideration, the second part of the chapter begins with the construction of four hypotheses. It continues with the configurational analysis in order to answer the second research question. As a result, four configurations of relationship dimensions and exogenous factors are found to enhance the service performance of the partner. Prior to the results, the scale reliability analysis and all the necessary steps undertaken in the fsQCA software are reported and discussed. This part of the chapter ends with a brief discussion of the hypotheses and the results.

Chapter 5 brings the findings together, and discusses them in relation to the relevant bodies of literature. The first part links the findings to the literature stream of relational influences on performance in a construct-by-construct manner. The second and third parts revisit the servitization and triad literatures respectively, in light of the findings.

Chapter 6 concludes the thesis. It begins with a brief summary of the findings and continues with the contributions to knowledge. These are divided into primary and secondary. A comment on the findings from a pragmatism point of view follows, and the managerial implications are detailed. The limitations affecting the conduct and outcome

of my research follow straight after, and the chapter concludes with a few further research directions.

2 LITERATURE REVIEW

2.1 Overview of the chapter

The literature review chapter consists of three separate but interconnected parts. Section 2.2 introduces servitization, which comprises the context of my study and provides the research problem. Namely, when the servitized manufacturer/provider assigns the delivery of the services to independent customer-facing service partners, the performance of the latter becomes important as it affects customer satisfaction. A provider would be motivated to ensure that its service partners deliver the services at (at least) the levels agreed in the customer contract.

The chapter continues with a detailed review of the literature on business triads (section 2.3.1). This helps me frame the problem and formulate the research objectives. I show that due to the nascent state of this body of knowledge, no explicit empirical attention has been given to my research problem. However, I draw from the commonly held, and at times validated, assumption, that the nature of the dyadic relationships between the three actors and the performance of each actor within the triad are interdependent and affect one another. Hence, I state that my aim is to investigate how the provider – service partner relationship affects the service delivery performance of the partner.

This automatically leads to the last part of the literature review: The influence of buyer – supplier relationships (and their intrinsic characteristics), on the performance of the connected actors (sections 2.3.2, 2.3.3). After looking at this literature stream from a high level, and after critically reviewing particular encompassed topics, I achieve two crucial things. Firstly, I adopt an explicit theoretical framework of relationship dimensions (Cannon & Perreault 1999) to use as lens for the focussed collection and analysis of information relevant to the provider – partner relationship. Secondly, I show that relevant knowledge suggests that the phenomenon of relational influences on performance is causally complex. These two points inform the research questions which are formally articulated at the end of the chapter (section 2.4).

2.2 Servitization of manufacturing and the research problem

This chapter reviews the servitization literature and demonstrates the research gap. With regard to the first point, I begin with a short introduction to servitization of manufacturing as a concept and as a research domain (section 2.2.1). After a short discussion on the definitional ambiguity, I state the definition adopted in this work (section 2.2.2). Section 2.2.3 lists the drivers and benefits of servitization discussed in the literature, while section 2.2.4 is concerned with the hurdles inherent in the transition of a manufacturing firm towards becoming servitized. Section 2.2.5 follows with a comment on the many relevant classifications of offerings, services and servitized firms. From then onwards, the review starts to narrow down towards the explication of the research problem. Firstly, in section 2.2.6 I claim that the vast majority of the relevant papers focus on issues pertinent to the manufacturing firm exclusively. In section 2.2.7 I present the papers that constitute exceptions to this trend, and blend them with arguments in favour of research in the inter-firm relationships and networks of servitized manufacturers. Section 2.2.8 presents the specific scenario in servitization, whereby the manufacturer/provider assigns the delivery of the services to independent service partners who now get to interact directly with the provider's customer base. The succeeding discussion shows that this setting has not been empirically researched, even though the partners' service performance is determinative for customer satisfaction, and therefore an important issue for the provider. Consequently, the rationale and motivation of this study are articulated in sections 2.2.9 and 2.2.10. The chapter concludes with the delineation of the scope and aim of the inquiry 2.2.11.

2.2.1 Introduction

Servitization is considered to signify the move of manufacturing firms from producing and selling stand-alone products to providing combinations of products and services. The term was first coined by Vandermerwe and Rada (1988) and was seen as driven by customers on the one hand, and as the new competitive tool of manufacturers from developed countries on the other. The authors, in the original 1988 which introduced the concept, observed that the dividing line between manufacturing and service firms was becoming less clear. However, this idea has been around for much longer. For example, Theodore Levitt stated in 1972 that everybody is into services (Levitt 1972). In addition, the related concept of systems selling, which emphasizes the emergent, systemic properties of

combining artefacts and activities or products and services (Spring & Araujo 2009), has also been around since Mattsson (1973). Moreover, others claim that bundling products and services has been happening since the 19th century and the distinction between the two has always been somewhat blurry (e.g. Schmenner 2009). It is quite obvious that in this instance practice is leading academia (Sakao et al. 2009; Sawhney 2006), and scholarly research is predominantly trying to document and understand real world examples of servitized manufacturers and their practices. The introduction of the term 'servitization' though, has aided into the creation of a new, constantly growing area of study. Considering that evidence suggests that approximately 1/3 of the manufacturers globally (and around 60% in Western economies) are nowadays engaged into service activities (Neely 2008), academic research on the phenomenon is a legitimate and worthwhile endeavour.

Since the beginning of the 90s, servitization research has been growing dramatically. Journals across a number of disciplines, countries and traditions publish related empirical work (Baines et al. 2009a), and conferences of several disciplines (e.g. operations management, marketing, and environmental sustainability) organize special tracks on the subject. Also, although at the beginning the literature referred to servitization in both consumer and business markets, gradually the interest of management scholars seems to have centred largely in Business-to-Business (B2B) contexts. This is probably because B2B servitization bears a number of important differentiating contingencies. Firstly, the products exchanged between firms can be simultaneously complex and long-life, which means that they require through-life support. For this reason, the manufacturers/providers and their strategic suppliers and customers may be tied to each other with long-term relationships (e.g. Johnson & Mena 2008). Moreover, B2B service exchange is episodic and embedded in ongoing interaction between the supplier and the customer (Ahlstrom & Nordin 2006). This interaction takes place across multiple levels and creates strong social bonds between the actors (Bastl et al. 2011). These contingencies are hardly ever the case in Business-to-consumer (B2C) settings. Some regular contributors to the field actually consider explicitly that complex, long-life products and long-term, ongoing buyer – supplier relationships are necessarily intrinsic characteristics of the phenomenon of servitization (e.g. Baines et al. 2009b; Johnson & Mena 2008; Lockett et al. 2011). This tends to preclude B2C research on the subject.

Although the succeeding review of the servitization sub-topics does not explicitly distinguish between B2C and B2B, I make a distinction when deemed necessary. This is to

more conveniently introduce the literature that informs the objectives and design of my research, which takes place in a B2B context.

2.2.2 Definition

Like in any emerging field of study, defining the key concepts is a subject of debate and ambiguity. Since Vandermerwe's and Rada's (1988) introduction of the concept, servitization has been further considered to be a process (Brax 2005), a strategy (Ahlstrom & Nordin 2006) or a trend (Lindberg & F Nordin 2008), all of which are concepts with different meanings. To the definitional ambiguity contributes the fact that related research simultaneously developed across a number of disciplines and traditions (e.g. marketing, operations management and industrial ecology). These developments however seem to have taken place in isolation. Thus, several terms have been used (and are used) which refer to the same overarching phenomenon. These include for example 'Product-Service Systems' (PSS) (e.g. Mont 2002), 'integrated solutions' (e.g. Brady et al. 2005), 'Complex Product Systems' (CoPS) (e.g. Davies & Brady 2000), 'servicisation' (e.g. Cheng & Vittal 2012), 'total care products' (Alonso-Rasgado et al. 2004) and 'product services' (e.g. Frambach et al. 1997). Interesting attempts to classify and integrate the relevant literature and provide definitional clarity include (Baines et al. 2009a) and two papers from the 2009 special issue (No. 5) of the *International Journal of Operations & Production Management*: Spring and Araujo (2009) and Pawar et al. (2009). Systematic literature reviews specifically focussing on delineating the definitions and nature of related terms also exist (e.g. Alvizos & Angelis 2010 on 'servitization', Nordin and Kowalkowski 2010 on 'solutions', Hypko et al. 2010a on 'performance-based contracting'). It is beyond the purpose of my thesis to list all (versions of) these definitions. What is noteworthy in my view is that although servitization has been conceptualized and defined differently by different people (a strategy, process, outcome, trend, innovation) all related concepts and definitions imply the same thing. That is, a manufacturer's shift from simply manufacturing and selling products to providing integrated product-service offerings, and with it, an increasingly customer-centric view of the firm with the intention to tackle specific customer needs. In B2B contexts this customer-centricity is an important feature of servitization and is emphasized by almost all authors on the subject. For example, Oliva and Kallenberg (2003) and Matthyssens and Vandenbempt (2008) emphasize the need for a change in the nature of manufacturer-customer interaction from transaction-based to relationship-based. Tuli et al. (2007) go as far as to define a related concept ('solution') according to this principle.

They say that customer solutions should be seen as *“sets of customer–supplier relational processes comprising (1) customer requirements definition, (2) customization and integration of goods and/or services and (3) their deployment, and (4) post-deployment customer support, all of which are aimed at meeting customers’ business needs”* (p.1). The fact that the authors came up with this definition inductively, through interviewing a large number of providers and business clients, adds validity to the customer-centricity principle.

For the purpose of this document, I adopt the definition of servitization devised by Baines and colleagues. Servitization is:

“the innovation of an organization’s capabilities and processes to better create mutual value through a shift from selling products to selling Product-Service Systems” (Baines et al. 2009b, p.555).

Where, Product-Service System refers to:

“an integrated combination of products and services that deliver value in use” (Baines et al. 2007, p.1545).

This definition of servitization is very close to Vandermerwe's and Rada's (1988) original definition: *“...the increased offering of fuller market packages or ‘bundles’ of customer focussed combinations of goods, services, support, self-service and knowledge in order to add value to core product offerings”* (p.314). It has to be mentioned that the marketing literature uses very often the term ‘integrated solution’ (or ‘customer solution’). Although it could be argued that a PSS is not necessarily a ‘solution’², I do not differentiate between the two. In the review of the relevant literature I use the term each original work has used, or more generally the notion ‘product-service offering’. I believe that solving the definitional and conceptual ambiguities is not a task I should undertake here and is much less important than the accurate description of the specific offering and industry setting in which my research takes place. These are discussed in sections 2.2.8 and 2.2.9, and in the methodology chapter.

² A solution necessarily implies integration of products and services but also customization and post-sale interaction with the customer (see for example Tuli et al. 2007). One could argue that in the way the term PSS has been used, customization and ongoing interaction are not necessary, at least for specific types of PSSs such as ‘product-oriented services’ (see for example Tukker & Tischner 2006). In this line of thinking, PSS can be considered as a more generic notion.

2.2.3 Drivers and benefits

The drivers and reasons behind servitization are closely linked to the benefits that servitized manufacturers expect to reap. Hence, I am treating them simultaneously here.

Servitization has been considered to be a response to the changing business environment and particularly competition and customer requirements (Gebauer 2008; Miller et al. 2002). The rise of competition from developing economies and developments in technology and in benchmarking techniques, have made product and process based competitive advantage easily imitable among manufacturers (Dickson 1992; Quinn et al. 1990). Moreover, product technologies have become commoditized, industry profit margins from product sales have decreased sharply, and at the same time, installed bases have been increasing (Reinartz & Ulaga 2008; Windahl & Lakemond 2006; Wise & Baumgartner 1999). Additionally, business customers face pressures to downsize and focus on narrower core competences, which makes them keen to outsource service activities that they used to perform themselves (Gebauer 2008; Reinartz & Ulaga 2008). Accordingly they tend to purchase a 'function' or a 'capability' from their suppliers (which entails product-service integration) rather than a simple product (e.g. Alonso-Rasgado et al. 2004).

In terms of expected benefits, they can broadly be classified into three, closely intertwined categories:

- Environmental benefits: Mainly purported by the PSS research tradition (e.g. Geodkoop et al. 1999; Mont 2002; Tukker 2004), it is argued that combining products and services can reduce the environmental impact of consumption. Authors from this research tradition propose ways of extending the life-cycle of the products, which ideally remain under the responsibility of the providers who in turn service them through life. The demand for materials and energy is reduced, leading to environmental sustainability.
- Strategic/marketing benefits: It is widely argued, especially in the practitioner literature, that servitization can increase competitiveness through differentiation (Frambach et al. 1997; Gebauer & Fleisch 2007; Robinson et al. 2002). By bundling together products and related services, manufacturers from developed countries try to create and deliver superior value against competitors, as well as against manufacturers from cheap labour economies who enjoy a cost advantage (Davies 2004). Moreover,

services are supposed to be less easily imitable than product technologies (Oliva & Kallenberg 2003). From a marketing perspective, services can also be used to influence the buyer's decision for purchasing more products (e.g. Gebauer & Fleisch 2007). Additionally, services can make the customer dependent on the provider (customer 'lock-in'; Vandermerwe & Rada 1988) and encourage repeat transactions and customer loyalty. It has been shown that increasing the completeness of the market offering by bundling products and services is associated with a switch from transactional to relational contracting and relational coordinating mechanisms (see Penttinen & Palmer 2007).

- Economic/Financial: The literature almost unanimously suggests that manufacturers should benefit from the relatively longer life-cycles and higher and more stable revenues/profit margins of services. (Brax 2005; Gebauer & Fleisch 2007; Sawhney et al. 2004). Many authors use the large-installed base argument: manufacturers with a high installed base of complex, long-life products (e.g. locomotives, aerospace) should exploit the seemingly great revenue potential (Wise & Baumgartner 1999).

Recent empirical studies (predominantly case studies) have directly or indirectly confirmed the existence of these drivers and expected benefits for a variety of industry sectors (e.g. Johnstone et al. 2009 in aerospace, Penttinen and Palmer 2007 in industrial equipment). Benefits of specific forms of servitization (discussed later) such as 'Performance-based contracting' (Hypko et al. 2010b), rather than servitization in general, have also started to be assembled into theoretical propositions. Such endeavours provide a more nuanced and informative understanding of the drivers and benefits. However, research has also shown that the benefits do not always materialize, while there are also pitfalls inherent to the transition towards servitization. The following section attempts to make a short account of key contributions referring to, or empirically studying the servitization transition process.

2.2.4 Servitization as a transition; guidelines and potential hurdles

Many authors have considered servitization as a process and have examined the transformation of a traditional manufacturer into a PSS provider (e.g. Brax 2005; Oliva & Kallenberg 2003). Most works are normally underpinned by the assumption that there is a continuum of services ranging from simple to advanced or from less value-adding to more value-adding. Accordingly, the manufacturer is assumed to strive to progress towards the right-hand side of the continuum (i.e. more advanced services) and the researchers

identify and discuss challenges inherent to this process. Recent, context-specific research has also started uncovering challenges associated with particular types of servitization (such as 'outcome-based contracting' – Ng & Nudurupati 2010), and providing guidelines for overcoming them. However, in this sub-section, and as most of the papers in the literature do, I am taking a more generic view into the servitization process.

Under the continuum assumption, empirical or theoretical guidelines are presented as a journey or a path, where the manufacturer starts from being solely into products and ends up being a PSS provider (e.g. Davies et al. 2006; Oliva & Kallenberg 2003; Reinartz & Ulaga 2003). Academic and practitioner papers effectively try to show how to 'do it right', and often draw from well known examples of successfully servitized firms such as Rolls-Royce, Alstom, IBM and Thales (Brady et al. 2005, Miller et al. 2002; Swahney et al. 2004). Although they end up with prescriptions that make sense and sound easy, they, in their majority, try to draw the attention on hurdles and pitfalls inherent to the transition process.

The relevant literature refers to a number of issues for the transitioning manufacturer to consider. Some have to do with the structure of the organization (e.g. Neu & Brown 2005; Neu & Brown 2008; Penttinen & Palmer 2007). For example, should the manufacturer establish a separate services business unit or not? Some have to do with the workforce (e.g. Auguste et al. 2006; Galbraith 2002). For example, should the firm train existing salesmen to sell additional services, or recruit new ones with the desirable skills instead? Another issue is the set of new capabilities that are required (e.g. Brady et al. 2005; Salonen 2011). For instance, the firm has to become capable of assessing the additional challenges of providing integrated offerings. Such challenges include the risk of underpriced contracts and the careful assessment of clients (Miller et al. 2002). Other commentators tend to ponder and investigate how far into services should the organization move (e.g. Oliva & Kallenberg 2003), and also, to what extent standardization of service processes and modularization of solution components are desirable (Davies & Brady 2000; Davies et al. 2007; Miller et al. 2002). The most important and salient theme however turns out to be the change in organizational culture that needs to be undertaken (e.g. Mathieu 2001b). A necessary, critical step for the transformation is a change in the mindsets of everybody involved; a leap should be taken from a product-centric logic to a customer-centric logic (Galbraith 2002). The service orientation of organizational parameters, such as corporate culture, has been shown to affect customer relationship quality and overall profitability (Homburg et al. 2003) and product and service sales volumes (Antioco et al. 2008). This customer-centric attitude is also greatly emphasized in

the service dominant logic (SDL) framework, which views service (singular) as the process of doing something for another party (e.g. Vargo & Lusch 2008). Its supporters view SDL as a whole new mindset according to which tangible goods are only appliances for service provision rather than ends in themselves. SDL sees the offering as co-produced by the supplier and the customer, and value as co-created in an interactive process rather than as simply created and sold by one party. Although SDL appears to mainly be an abstract academic framework, its tenets highlight the necessary cultural change that the manufacturer has to endure for successful transition into services.

Apart from the transition challenges, attention has recently turned towards examining whether the promised benefits of servitization actually materialize. Most of the related arguments are explicitly about the potential of the economic/financial benefits. Gebauer et al. (2005) refer to the 'service paradox', an observation they made during their 8-year long research. They found that while companies invest heavily in extending their service business, increasing their service offerings and incurring associated costs, these do not result in the expected corresponding higher rewards. Furthermore, Neely (2008), by adopting a binary distinction between servitized and non-servitized manufacturers, provided evidence that on average the former generate higher sales revenues but are less profitable than the latter. This tends to be more evident for big rather than small firms. Hence, it looks as though, on average, the financial benefits of servitization do not necessarily outweigh the investments in processes, personnel and capabilities. In addition, Pawar et al. (2009) and Tukker (2004) stress the danger of underpriced contracts due to the difficulty in measuring and predicting hidden costs, risks and uncertainties that otherwise were a problem of the customer. Capital investments in infrastructure and relationship development should also not be taken lightly. These issues are particularly central for providers that assume responsibility of the operation of customers' assets. In the most elaborate study of all regarding the financial implications of servitization, Fang et al. (2008) showed that, only when a firm reaches a 20-30% service range do service transition strategies begin to influence firm value positively. Also, moving into related (to the product) services rather than unrelated services has a significantly higher and positive effect on firm value.

These identified pitfalls and dangers indicate that servitization is not and should not be a panacea for all manufacturers. As Johnstone et al. (2009) claim, the problem with much of the earlier literature purporting the benefits of servitization, is that the findings and arguments are presented as 'laws', without being sensitive to context, industry or country characteristics. In addition, the transition is assumed to take place from one steady state

to another, while the description of the servitization 'journey' is predominantly based on the accounts of a few senior executives. As servitization examples and empirical evidence are gathering, more context-sensitive academic research gives a relatively more nuanced account of the transition and the inherent pitfalls (e.g. Brax 2005; Gebauer et al. 2005) than the prescriptive, practitioner literature of the past. A sort of contingency theory (environment-strategy-structure fit) approach for successful servitization purported by Gebauer (2008), Gebauer et al. (2010) and Neu and Brown (2005; 2008) among others, looks more legitimate than a-theoretical, universalistic prescriptions.

Overall, manufacturers should very carefully consider the threats and opportunities before embarking into servitization. When doing so, they should strive to ensure that the structural and cultural changes undertaken during the transition are consistent with the intended strategy and desired end state. Committing to the cause, overcoming internal resistance, and developing or acquiring new capabilities, are key issues in order to avoid unwelcome outcomes such as falling into the service paradox. After having moved into services, the manufacturer and its offering can be categorized according to a number of different classifications developed in the literature.

2.2.5 Classifications

Considering the definitional ambiguity, the long history of the phenomenon and the different traditions engaged in related research, it looks natural that confusion surrounds the related emerging classifications. That is because there are numerous different concepts that have been classified to produce typologies and taxonomies. For example, marketing scholars have produced typologies of offerings, ranging from pure products to pure services (e.g. Kotler 2003; Martin & Horn 1992; Shostack 1977). Others have provided typologies of product related services specifically. For example Mathieu (2001b) divided manufacturing services into *services that support the product* and *services that support the client's activities*, while Frambach et al. (1997) distinguished between *transaction-based* and *relationship-based* services. Typologies of business models have also been proposed, for instance, Wise's and Baumgartner's (1999) *embedded services*, *comprehensive services*, *integrated solutions* and *distribution control*. Additionally, within the 'blurry' part of the pure product to pure service continuum, authors have introduced typologies of product-service systems (PSSs). Prime example is Tukker's (2004) distinction between *product-oriented*, *use-oriented* and *result-oriented* PSSs, to which Neely (2008)

added the *integration-oriented* and *service-oriented* types. Notwithstanding, typologies of service strategies have also been proposed. A recent and empirically justified one is that of Gebauer et al. (2010). Their service strategies classification includes: *after-sales service provider, customer support service provider, outsourcing partner, and development partner*.

This account does not intend to be exhaustive, as there is an abundance of related classifications, all being very close to each other. They are normally based on the product-service continuum assumption. This is the view that manufacturing services range from simple to advanced or from entirely related to the product to entirely unrelated. Considering this in conjunction with the 'transition' literature, it is common for one to get the impression that a manufacturer can or should proceed from one step/type to another, more advanced type of product related services or product-service integration. This is a view which has been challenged. Alvizos and Angelis (2010) devised a classification of three servitization 'approaches' based on a systematic literature review and content analysis. They argued that "*the three may be incompatible with one another, due to issues arising from the underlying business models employed*" (p.25). Moreover, they suggest that the three approaches do not necessarily contain an inherent evolutionary relationship and may not have to be adopted in a particular sequence. At the same time, it is the case that big, diversified corporations (e.g. IBM, Rolls Royce, BP – see Neely 2008) are active in several market segments, adopting a different 'service mix' (Kotler 2003) for each. This means that they are involved in the provision of a number of different services and consequently, product-service offerings. Classifying these companies as one or the other type of any related taxonomy of business models or strategies is a dubious task.

Accordingly, I echo that an aggregate approach to the study of servitization types may hinder the analysis of issues pertinent to some but not all types or transition avenues, and that a nuanced approach is warranted (Johnstone et al. 2009). This is an idea reflected in my research design described in the methodology chapter (chapter 3). In this study I have carefully specified the servitization context in which the research took place.

Having presented, what I believe to be, a general introduction in servitization, the next section starts to gradually centre the remaining of the chapter towards the presentation of the research problem and rationale of the study.

2.2.6 The skewed orientation of the existing literature

The concept of servitization has existed for more than twenty years and empirical research on the subject has been growing ever since. However, as indicated in the previous sections, most researchers have focussed on issues pertinent to the manufacturing firm itself (e.g. Brax 2005; Davies et al. 2007; Oliva & Kallenberg 2003). Quite obviously, the unit of analysis is almost always the manufacturer/provider, and the resulting frameworks, findings and empirical guidelines refer to it exclusively. Although within-firm research has by no means been exhaustive, research on the business networks and relationships in which the providers are embedded is undoubtedly scarce. This is despite the fact that many works have implicitly or explicitly stressed the importance of relationships with suppliers, partners and customers (e.g. Lockett et al. 2011; Windahl & Lakemond 2006). Hardly ever though do such phenomena become the immediate focus of empirical inquiry. Some exceptions exist and are detailed in the following section. Important insights and arguments relevant to the external network of servitized manufacturers are also blended in the narrative, even though the primary focus of such papers is within-firm. This review will gradually lead to the demonstration and discussion of my research problem.

2.2.7 Beyond the firm-centric view

In this section I begin to take the focus of the review away from the firm-centric stance adopted in the majority of the servitization studies. To start with, many relevant works by marketing scholars, that uncover challenges inherent to the transformation of the manufacturer, stress the importance of building deep and long-term relationships with customers. This is a necessary step away from product-centricity and towards customer-centricity (e.g. Gebauer et al. 2005; Vandermerwe 2000). In the same vein, Windahl and Lakemond (2006) show that good supplier relationships are a critical success factor for the delivery of an integrated solution. Also, Tuli et al. (2007) state that the successful implementation of solutions depends on customer variables as well, such as customer adaptiveness. However, as already mentioned, such issues constitute emergent findings, suggestions or conclusions instead of being the main focus of the authors. Similarly, contributions from the operations management field also indicate the need for further research in the networks of servitized manufacturers. Baines et al. (2009b) empirically derive an operations strategy framework for servitized manufacturers, which emphasizes

the need for increased supplier integration and customer interaction. Integrating processes with suppliers and customers, in the same fashion as integrating products with services is a suggestion also made by Slack et al. (2004), and given empirical support by Locket et al. (2011) and Ng and Nudurupati (2010). Somewhat similarly, Spring and Araujo (2009) argue, in agreement with Hays (2002), for a new operations strategy to account for the blurring boundaries between products and services. A fundamental element of this should be the development of techniques for analysing alternative network structures and making relationships with customers, suppliers and complementors work. Cova and Salle (2008) also raise network related considerations and indicate the need for network research under the SDL paradigm. Drawing from such arguments that favour the broadening of the focus of servitization research, academics have started exploring a number of network related topics. The following paragraph summarizes the main contributions.

Löfberg et al. (2010) found that service-based strategies (based on the Gebauer 2008 classification) differ between companies depending on their position in the supply chain. That is because the platform for the service (in Löfberg et al. 2010, automotive) is under the control of the OEM, which is larger than its suppliers and has a direct relationship with the customer. These factors limit the range of potential service-based strategies for the upstream suppliers of parts and systems. Moreover, Matthyssens and Vandenbempt (2008), in their longitudinal study, mapped the different service transition strategies of many members of the commoditized electro-technical industry supply chain. They concluded that successful transition necessitates *“revitalized relationship management with multiple chain partners in order to allow for external alignment”* (p.325). They go on to claim that it is a big challenge to overcome the mistrust and power play which develop between the supply chain members, each one of which follows their own servitization journey to counter product commoditization. For that to happen, joint collaborative efforts are vital (Matthyssens & Vandenbempt 2008). Van der Valk et al. (2009) use Wynstra’s et al. (2006) distinction of B2B services into *component, semi-manufactured, instrumental* and *consumption*, and identify the patterns of ongoing buyer-seller interaction associated with successful service exchange. They find that these differ, indicating that the nature of each service places contingent requirements to the buyer – seller relationship. Similarly but by employing a different approach, Kim et al. (2007) analytically model and explore the optimal contract terms for the service supply chain members in the context of performance-based contracting. For example, when channel members are risk averse, the researchers find that the optimal contract will combine a fixed payment, a cost-sharing incentive, and a performance incentive.

More generally, Johnson and Mena (2008) argue that when it comes to integrated offerings, a supply chain capable of delivering both products and services efficiently and effectively is required. They come up with a framework of ten supply chain processes for servitized supply chains and validate it empirically with five case studies. With regard to the upstream part of the supply chain, Lockett et al. (2011) examined the relationship between a PSS provider and two of its major suppliers. Their study highlighted the importance of aligning incentives with suppliers and engaging them through risk-sharing agreements, as well as the necessity for increased intensity and diversity of information sharing. The demand for higher levels of information exchange compared to traditional manufacturing is also amongst the main findings of Johnson and Mena (2008) and Bastl et al. (2012). The latter explored two upstream supply relationships of a focal PSS provider, and used an accepted framework that can holistically describe a dyadic relationship. Hence, they provided a detailed and nuanced account of the supply relationships, as opposed to the simplistic exhortations common in the relevant literature. What they found did not exactly match their theoretically derived expectations, but their results suggested that the provider should integrate and work more collaboratively with its suppliers. They also specifically stressed the importance of trust as a relational safeguard in conjunction with legal contracts.

In conclusion, although there are some works providing substantive insight on issues pertinent to the external network of the servitized manufacturer, the literature is still scant and the state of related knowledge is nascent compared to firm-centric research. Consequently, there are many academic research directions for interesting and relevant contribution. In reality, I believe that the related research problems are so multifarious and complex that what one chooses to study depends on personal interest and the level and quality of potential access to data from real-life organizations. I do not see the existence of one clear and evident gap that builds on existing contributions and can be fully addressed with a couple of research questions. However, some research directions are quite evident and also look promising. For example, one could investigate how the manufacturer's relationships with suppliers, customers and partners transform during the transition. The transformation of the physical structure of its supply chain (e.g. facility location), and the understanding of the make-or-buy decision of manufacturers, could also constitute potential research topics. Furthermore, a worthwhile endeavour would be to investigate how the supply chain structure and relationships differ for different types of offerings. To tackle this, a promising way would be to target providers exhibiting a variety of offerings (e.g. IMB or General Electric) that fall into separate categories of existing classifications (such as both product-oriented and result-oriented PSSs).

My study does not focus on any of those issues. Instead, my research interest is uncovered in the remaining sections of this chapter where I describe the specific servitization setting in which my empirical work takes place. I illustrate this with excerpts and insights from existing servitization literature.

2.2.8 The use of partners for delivering the product-service offering

It may be the case that for the development, integration and provision of a PSS, the manufacturer/provider requires new competences, resources and capabilities. Hence, a need arises for collaboration with external actors, sometimes even in the form of ‘virtual enterprises’ whereby partners are involved from the design phase to the end of the program’s life (Cova & Salle 2008; Foote et al. 2001; Pawar et al. 2009)³. This poses challenges to the manufacturer. For example, Mathieu (2001b) highlighted the importance of investigating the trade-off between the benefits and costs of partnering with different entities (e.g. suppliers, competitors, distributors), at different stages of the offering’s lifecycle.

Regarding exclusively the provision phase of the PSS, several commentators (e.g. Quinn et al. 1990; Cohen et al. 2006) say that it is common for the product to be provided by one organization, the manufacturer/provider, while the services may be delivered by independent partnering organizations. These organizations (from now on referred to as ‘service partners’) are effectively subcontracted for the delivery of the services. Moreover, they need to deliver the services according to the terms and conditions specified in the contract between the servitized manufacturer and the customer (van der Valk & van Iwaarden 2011). For example, Caterpillar has long been using its independent dealers to provide customer service support (Fites 1996). Cisco has been relying on a whole network of independent partners to cater for the servicing of its equipment on customer sites (Cohen et al. 2006). Pawar et al. (2009) and Bastl et al. (2012) in their case-study work also came across such structural arrangements in the aerospace industry.

When this is the case, the manufacturer, its customer and the independent service partner become interlinked. Each actor (provider, service partner, customer) has direct contact with the other two, meaning that the three form a triad (Havila et al. 2004).

³ Take for example defence contracting. The contractor (e.g. Rolls-Royce, Babcock) is regularly involved with the government from the design of a new system or weapon to the end of each useful life.

Moreover, due to the episodic and repetitive nature of service delivery (e.g. Gronroos 1994), the service partner is now in ongoing interaction with the manufacturer's customer, to whom it has to deliver the service at agreed levels. This has significant implications for the manufacturer and helps define the rationale of this study.

2.2.9 Rationale of the study

The fact that independent service partners are assigned with the delivery of the services means that their performance in doing so is paramount for the successful provision of the offering as a whole. Research on service triads, discussed in section 2.3.1.6, tells us that in consequence, the partner's performance can affect customer satisfaction, and the provider – customer relationship (Tate & van der Valk 2008). Such research also provides us with examples of firms that suffered a reduction in customer satisfaction after unsuccessfully outsourcing customer service functions. The list of firms includes Dell, AT&T and J.P Morgan Chase (Li & Choi 2009). These examples indicate that the introduction of a third party which gets involved in direct and ongoing interaction with the customer base may have unintended consequences. The scholarly papers from the servitization literature considering the implications of the emerging triads (Ahlstrom & Nordin 2006; Bastl et al. 2012; Pawar et al. 2009), clearly show that managing the relationships with the service partners and ensuring that they deliver the services at desirable levels, is a challenge for the provider.

It is the case then that in servitization settings where there is ongoing partner – customer interaction for service delivery, the servitized provider is dependent on the performance of its partner in delivering the service. This dependence is the phenomenon that triggered my research. Based on simple logic, one can reasonably assume that any provider embedded in such a setting will be keen to maximize its partners' service performance (Pawar et al. 2009). For example, CAT would want its dealers to deliver exceptional customer service, as much as an aircraft engine provider would want its international service partners to service the product effectively and efficiently, no matter where in the world the aircraft is. This leads to the general motivation behind my research, which is captured in the following paragraph.

2.2.10 Motivation

My motivation stems from the empirically observed situation that entails the manufacturer/provider assigning the delivery of the service elements of its integrated product-service offering to independent partners. Because the partner is now in direct interaction with the provider's customer and is responsible for delivering the service at specified levels, its performance becomes increasingly important to the provider. How can the provider then ensure that the service delivery performance of its partner does not fall short to the expectations of the customer-base?

Reasonably, the provider would be interested in the factors that affect its partners' service delivery performance, and especially those that can be manipulated. Such factors have not been the subject of explicit consideration and empirical inquiry in the general servitization and PSS literature. As detailed in the following section, my research is driven by the idea that the working relationship between the provider and the partner can affect the service deliver performance of the latter. Consequently, my research focuses on factors pertinent to this relationship.

2.2.11 Aim of the inquiry

To identify factors that influence the service delivery performance of the subcontracted partner, I look at the provider – partner relationship. The driving underlying proposition of this research is that this relationship, and specifically certain characteristics of it, can positively or negatively affect the performance levels of the partners. Uncovering this dynamic is the aim of the research. The results should indicate specific areas or aspects of the relationship which the provider can design or manipulate in order to enhance its partners' service delivery performance.

The expectation that the provider – partner relationship will in some way influence the performance of the latter in a triadic servitization setting is given initial theoretical and empirical grounding through the two points that follow.

Firstly, the growing research in business triads suggests that there is an interplay between the performance of each of the three actors within the triad and the nature of the dyadic relationships between these actors (Choi & Wu 2009a). For example, Li and Choi (2009) give the example of Aviva, where the increase in customer satisfaction was attributed to

the collaborative relationship the company had with its three major outsourcing partners. These relationships encouraged the partners to perform well, and subsequently fostered collaborative relationships between the partners and Aviva's customers. Due to this performance – relationship interdependence in triads, we would expect that in a servitization context, for the successful provision of the integrated offering, not only the performance of the actors is important, but also the relationships between each other (Li & Choi 2009).

Secondly, it has been shown in the vast Buyer- Supplier (BS) relationships literature that the BS relationship and its characteristics influence directly or indirectly the performance of the buyer or the supplier. For example, information sharing has been found to enhance operational (e.g. Corsten et al. 2011) and financial performance (e.g. Carr & Pearson 1999).

The two aforementioned points justify the aim of the research, which is to understand how the provider – partner relationship affects the service performance of the partner towards the provider's customer base. These points are examined further in the remainder of the literature review. Although the translation of the aim into a research question could be done here, I prefer to formulate the research questions after incorporating the insight and critique of the relevant bodies of literature. A preface of these literature streams is presented below.

2.2.12 Preface of the remainder of the chapter

The literature streams behind the two points presented above comprise the fundamental blocks of the review, and will be analytically scrutinized. Specifically:

- 1) The growing literature on business triads (e.g. Choi & Wu 2009c; Tate & van der Valk 2008; van der Valk & van Iwaarden 2011), which will give some in-depth understanding of the principles of triadic interaction, and of business performance within triads. Gaps in the existing knowledge and how my research contributes to it will also be discussed.
- 2) The specific research stream examining empirically the impact of dyadic buyer – supplier relationships on the performance of the actors. Drawing from relevant literature I will discuss whether and how characteristics of dyadic buyer – supplier relationships affect performance.

Hence, the chapter continues as follows. The research problem and motivation that resulted from the review of the servitization literature naturally lead to the small but growing business triads research stream. Hence, this stream is reviewed next. This will be followed by a brief account of Buyer – Supplier (BS) relationships research in general, the main theoretical approaches underlying their study, and the specific variables that have been used to characterize them. Accordingly, the analytical framework that guides my investigation is presented (the Cannon & Perreault 1999 framework of ‘relationship connectors’). I then comment on its use so far in the literature, and provide a detailed justification for its adoption. Subsequently, I draw from empirical research on the relational influences on performance to argue in the end that the phenomenon is causally complex. This means that there are different ways in which relationship characteristics affect performance, while the observed effects depend on contextual factors and, in instances, the theoretical approaches employed. I will argue that to study relational influences on performance in a nascent context (in terms of academic knowledge) like servitization, an exploratory rather than a hypothetic-deductive approach is initially appropriate.

2.3 Triads and relational influences on performance

This section comprises the main part of the literature review. As mentioned earlier, this will consist primarily of two bodies of literature: business triads, and the specific topic within the Buyer – Supplier (BS) relationships research domain that refers to the influence of the relationship and its intrinsic characteristics, on the performance of the two interrelated actors.

Section 2.3.1 starts generally by defining BS relationships and introducing the study of business triads. Section 2.3.1.4 presents the rationale for triadic research based on arguments made in related academic papers. Section 2.3.1.5 follows with the seminal contributions, which primarily come from the SCM and marketing literature domains. The few works on service triads are analytically scrutinized in section 2.3.1.6. Section 2.3.1.7 summarizes triadic research and frames the research problem as a problem relevant to triads. It also expresses the need for the review to delve in the BS relationships research domain and specifically to the theme of relational influences on performance. Accordingly, section 2.3.2 begins with a brief overview of the most influential theories employed in the BS relationships literature, and continues with a reference to the multitude of

relationships characteristics that have been considered. Subsequently, I present the framework of relationship characteristics adopted for the purpose of this research: the Cannon and Perreault (1999) framework of relationship ‘connectors’. I comment on how it has been used in the literature so far and conclude section 2.3.2 with the justification for its adoption. Section 2.3.3 starts with the specification of the type of performance pertinent to this study, and then looks with a critical eye the vast research strand examining relational influences on performance. It is argued (and supported with evidence) that the phenomenon is causally complex. The implications of this argumentation are drawn in section 2.3.3.4. The latter leads to the formulation of the research questions (section 2.4).

2.3.1 Business triads

2.3.1.1 Introduction

This chapter provides a detailed account of the business triads literature, with specific attention to service triads. It starts with a brief conceptualization of buyer – supplier relationships and the rationale for applying a triadic lens to study them. It then goes on to present the fundamental principles of triadic interaction by commenting upon the major contributions. The chapter ends with the, relatively more relevant, service triads literature. The gap and potential contribution of my research are also highlighted.

2.3.1.2 IOR and Buyer – Supplier relationships

The Inter-organizational Relationships (IOR) domain is a vast and diverse one. Contributions to it come from a number of different academic fields (e.g. economics, marketing, SCM, organization science, sociology) employing a number of different theories, methods and approaches. This has understandably led to a “*jungle of work*” (Parmigiani & Rivera-Santos 2011, p.1109), where it seems that anybody can plant a tree (Nassimbeni 2004). Moreover, certain types of IOR have been exhaustively studied (e.g. research alliances, joint ventures), while others remain understudied (e.g. consortia) (Parmigiani & Rivera-Santos 2011). The type of the relationship between two

organizations (or actors or nodes) is mainly determined by the type or nature of the tie between them. In other words a relationship is characterized based on the type of exchange between the actors⁴. It is understood that among any given set of organizations, many kinds of ties can exist simultaneously (i.e. *multiplexity* [Borgatti & Li 2009]). For example, two companies can have joint R&D activity and at the same time one can be the other's components supplier.

More relevantly, when the link between two firms represents a flow of goods or services, the relationship can be characterized as a supply relationship (Borgatti & Li 2009)⁵. In such dyadic relationships there is one buyer and one supplier, therefore, they are more commonly referred to as buyer – supplier relationships (BS relationships). BS relationships represent “*valuable bridges, as they give one actor access to the resources of another*” (Harland 1996, p.68). Typically, in a BS relationship the supplier exchanges goods or services for money with the buyer. More than one interconnected BS relationships give rise to a supply network. Hence, supply networks “*consist of interconnected entities whose primary purpose is the procurement, use, and transformation of resources to provide packages of goods and services*” (Harland & Knight 2001, p.21). This means that BS relationships are vertical in nature, i.e. the actors are located at different stages of the production of a final good or service. This is as opposed to horizontal linkages such as many kinds of alliances and joint ventures (Nassimbeni 2004).

It is often argued that within the marketing and SCM fields, researchers investigating BS relationships have traditionally constrained their focus to the individual BS dyad (Choi & Kim 2008). Such research obviously treats the latter as the unit of analysis. However, there has been a move recently towards analytical and empirical examination of more complex structural arrangements such as triads (Choi et al. 2002; Havila et al. 2004). Triadic research is the main focus of this part of the chapter and is presented in the following sections.

⁴ Exchange is defined as “*the giving of something in return for something else*” (Macneil & Campbell 2001, p.89).

⁵ Several schemes that categorize inter-organizational relationships exist in the literature. For example, based on the classification of Tichy et al. (1979) a BS relationship is a ‘work flow network’, while according to Grandori’s and Soda’s (1995) distinction, it constitutes a ‘transactional interdependency’.

2.3.1.3 Background of business triads research

A triad has been defined as “a subset of three actors and the (possible) tie(s) among them” (Wasserman & Faust 1994, p.19). Triads were firstly considered and studied by the sociologist and philosopher Georg Simmel (Simmel 1950). Much of the terminology and ideas explored nowadays in B2B settings stem directly from the works of Simmel at the level of individuals. Take for example Li and Choi's (2009) extension of the concepts of *bridge transfer* and *bridge decay* to the service outsourcing phenomenon.

The definition of the triad permits the absence of links between actors. For example, a supply chain consisting of a supplier, a buyer and the buyer's customer sequentially connected into two dyadic relationships (buyer – supplier and buyer – customer), is effectively a triad with a *structural hole* (Burt 1992). This is because the buyer occupies a bridge position between the supplier and the customer, i.e. the latter two are not directly linked to each other (Figure 2-1b). The theoretical definition of triads implies that even a constellation of three actors without any link between them could be considered a triad (e.g. Peng et al. 2010). This means that a triadic lens could be applied literally in any IOR study, as firms or firm dyads do not exist in a vacuum (Hakansson & Snehota 1989). Nevertheless, academic works that consciously study business triads (e.g. Li & Choi 2009), or at least consider the triadic level of analysis in the study of networks and relationships (e.g. Madhavan et al. 2004) remain scarce. The scholars involved in such research essentially try to showcase the special dynamics that emerge when the focus extends over and beyond the individual dyad, hence, they predominantly investigate settings where all three actors become interconnected. Additionally, they in instances compare fully connected, or *transitive* triads (three actors and three links – Figure 2-1c), with triadic structures with a structural hole (e.g. Wu & Choi 2005). As indicated in sections 2.2.8 and 2.2.9, the contexts from which the research problem arises exhibit fully connected triads. Thus, a ‘triad’ in this study signifies three interconnected actors unless explicitly stated otherwise (e.g. ‘triad with a structural hole’).

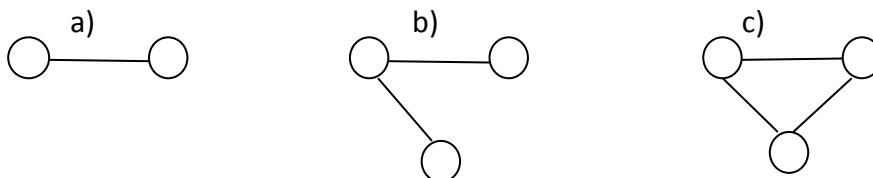


Figure 2-1: a) dyad, b) triad with a structural hole, c) transitive triad

2.3.1.4 Rationale for triadic research

Research in business triads is growing. The reason behind it, according to the advocates of this research strand, is that the move away from the dyadic towards the triadic level of analysis can help us really understand networks and their dynamics (Wu & Choi 2005, Choi & Wu 2009a). This is because in order to capture the essence of a network, one must be able to study how a link affects another link (e.g. how a buyer – supplier relationship affects a supplier–supplier relationship). Additionally, one must be able to study how an actor affects (or is affected by) another link in the network (e.g. how a buyer affects the relationship between two suppliers). A dyad studied in isolation makes no reference to any of the two issues, hence, it is not the dyad but the triad that is the fundamental building block of a network (Choi & Wu 2009a; Choi & Wu 2009b). In the same vein, conceptual and empirical papers coming from the Industrial Management and Purchasing (IMP) group (e.g. Anderson et al. 1994), have also emphasized the merit and relevance of triadic research. The main idea is that within a network or a buyer’s supplier base, there are supplier – supplier interactions that have an impact on the focal firm or on other suppliers. Similarly, issues pertinent to the relationship between a buyer and a first-tier supplier (e.g. the supplier significantly improving efficiency) may have an effect on other first-tier suppliers. To understand such interdependencies an extension of the unit of reference to (at least) the triad is necessary (Roseira et al. 2010).

According to this line of argument, scholars studying (dyadic) inter-firm relationships are basically encouraged to acknowledge and explore empirically the phenomenon of *structural embeddedness* (Choi & Kim 2008). Namely, that any focal firm or dyadic relationship is embedded in a wider social network of firms and relationships, which affect decision making, economic exchange and performance (Granovetter 1985)⁶. Adopting a triadic focus is a good first step to explore this. For example, Choi and Kim (2008) provided examples proving that the performance of a supplier depends on how that supplier interacts with other customers. Hence, a focal buyer has to consider the importance and influences of the network in which a potential supplier is embedded, and not only its directly measurable performance.

Empirical works vividly demonstrating the usefulness of triadic research come from various management sub-disciplines. For example, Wuyts et al. (2004) showed with their conjoint experiment that buyers of complex products (integrated computer networks)

⁶ The embeddedness perspective has a long tradition and constitutes a major research stream in social network research.

that necessitate extensive information flows between them and their vendors, go beyond the individual dyad when assessing the appeal of a channel. The results indicated that, for instance, buyers value a sequence of strong (i.e. frequent and intensive interactions) and cooperative ties that run from the upstream suppliers through the vendor to the vendor's customer base. Another relevant study is that of Madhavan et al. (2004). When studying the evolution of the steel industry competitor alliance network from 1979 to 1994, the researchers identified a structural tendency toward transitive triads, especially among firms within regional and technology blocks. In this way, they demonstrated the feasibility and usefulness of triadic research in inter-firm networks. Another work legitimizing triadic research is that of Havila et al. (2004). The results from the analysis of 98 international transitive business triads (in this case supplier – intermediary – customer) showed that the triad functions as an entity in its own right. This means that social interaction in the triad is interlinked: higher social interaction within one link (customer – intermediary) is associated with lower interaction within another link (supplier – customer). This has serious implications for constructs characterizing dyadic relationships (e.g. trust and commitment), hence, studying one dyad in isolation may at times be deficient. Similarly, Lazzarini et al. (2008) showed that an intense buyer – supplier alliance tends to reduce the intensity of the alliance between that supplier and another supplier of the same buyer. This means that in effect, one link in the triad can constrain another link.

Additionally, interest in business triads has risen due to the emergence of real world phenomena such as service outsourcing (see section 2.3.1.6) and *supply chain disintermediation* (Rosetti & Choi 2005; Rosetti & Choi 2008). As far as the latter is concerned, Rosetti and Choi (2005; 2008) drew from the situation in the aerospace industry, where the intended strategic sourcing decision by OEMs has not had the expected results. Mainly due to contractual inflexibility (as well as operational and financial misalignment and the attractiveness of the after-sales market), goal incongruence between these OEMs and their suppliers increased, which encouraged the latter to bypass the OEMs and sell parts directly to the airlines. The change in the dynamics has been tremendous because those suppliers suddenly became competitors of the OEMs. So, from a traditional three-tier, sequential structural arrangement (supplier – OEM – customer), due to the deterioration of one link (supplier – OEM), a new link was established (supplier – customer) which tied the actors into a triad.

It seems to be the case then, that several scholars across a number of different management sub-disciplines have argued in favour of triadic research in B2B settings, and have demonstrated its usefulness. Actually, recently there was a debate in the *Journal of*

Purchasing and Supply Management discussing the merits and potential contribution of triadic research to the study of inter-organizational relationships (Choi & Wu 2009a; Choi & Wu 2009b; Dubois 2009). The triad, as an intermediate level between the inter-firm dyad and the business network, is worthy of analysis in its own right (Choi & Kim 2008; Madhavan et al. 2004).

The next section goes beyond the rationale for studying business triads and presents the key relevant contributions.

2.3.1.5 Key contributions; conceptual papers and studies in manufacturing contexts

The works mentioned so far undoubtedly constitute contributions themselves to the study of triads. However, their role is more like ‘setting the scene’ for in-depth conceptual or empirical work, concerning the intrinsic dynamics taking place within a business triad. This section presents such works. I start with a review of the generic conceptual papers and some empirical studies in pure manufacturing contexts, and continue with more relevant triadic studies in service and product-service settings.

The first (chronologically) related contribution in the SCM field is the paper by Choi and colleagues (Choi et al. 2002). The authors utilized the game-theoretical concept of *coopetition*⁷ (Brandenburger & Nalebuff 1996) and proposed three theoretical archetypes of supplier – supplier relationships (cooperative, competitive and co-opetitive). Accordingly, they tried to capture the implications of each type (and their intrinsic aspects) for the buying firm, as well as the suppliers themselves. This is the first attempt to consciously highlight the interdependence between characteristics of the dyadic relationships and the performance of individual actors within a business triad. Similarly, Dubois and Fredriksson (2008) introduced the concept of *triadic sourcing*, whereby the buyer (in their case Volvo) actively creates interdependencies between two suppliers with partially overlapping capabilities, who simultaneously cooperate (e.g. supply chain and R&D partners) and compete (for different contracts). The authors, based on their case study, also provide guidelines on when and how the manufacturers should prefer this strategy over other sourcing strategies, so as to maximize rents.

⁷ The main idea of the concept is that competing parties, be it individuals or organizations, are mindful of potential retaliatory actions of their counterparts in future interactions so they are willing to collaborate.

Wu and Choi (2005) is the first in-depth empirical qualitative triadic study in SCM. The study is effectively an extension of Choi et al. (2002). Based on the dynamics of the relationships between the actors in eight different triads, the authors inductively derived five supplier – supplier relationship archetypes, and generated theoretical propositions to guide future research. These propositions *“move beyond the archetypes of supplier–supplier relationships to the intricate dynamics that unfold between the buyer and the suppliers as well as between suppliers”* (p.46). As part of this process, they highlighted in a case-by-case manner the implications of the characteristics of the dyadic relationships on the performance of the three actors, in a way substantiating the suggestion that the relationships between triadic actors and the performance of those actors are interrelated. In another extension of the Choi et al. (2002) study, Wu et al. (2010) conducted a survey with data collected from all three actors. The results from 43 buyer – supplier –supplier triads showed that although the buyer indeed affects the supplier – supplier relationship by encouraging cooperation, its influence does not have the intended outcome, i.e. supplier performance seems to decrease.

More recently, drawing from balance theory (e.g. Cartwright & Harary 1956; Heider 1958) and the structural hole concept (e.g. Burt 1992; 1998), Choi and Wu (2009b) defined nine archetypes of buyer – supplier – supplier relationships. They accordingly formulated propositions regarding the internal dynamics of each archetype and how an unbalanced state transforms into a balanced one. In another import of a grand theory for studying business triads, Bastl et al. (forthcoming), apply the sociological coalition theory to conceptualize with whom of the other two actors in the triad and under what conditions (i.e. distribution of power in a triad), the weakest player would establish a coalition. These papers provide two new theoretical lenses for the study of business triads and to SCM in general, however, they remain conceptual.

The aforementioned contributions explicitly or implicitly refer to manufacturing only contexts (e.g. Choi et al. 2002; Dubois & Fredriksson 2008) or remain conceptual and abstract (Bastl et al. forthcoming; Choi & Wu 2009b). Nevertheless, papers referring directly to service or servitized settings also exist. Before entering into the detailed treatment of these papers, the reader may want to keep two fundamental points in mind that result from what has been discussed so far in the business triads section. Namely that:

- 1) Triadic research is demonstratively beneficial and interesting from both an academic and a practical viewpoint. With the explicit consideration of the third actor, it opens many

ways to investigate important emerging dynamics and explore the phenomenon of structural embeddedness (e.g. Choi & Kim 2008; Madhavan et al. 2004; Rosetti & Choi 2008).

2) It is assumed, but also directly or indirectly demonstrated, that in triadic settings the performance of the actors towards one another is interdependent with the nature of the dyadic relationships between them. Intrinsic characteristics of the dyadic relationships have implications for the performance of individual actors and vice-versa. For example, Wu and Choi (2005) show that the performance gain or loss for a supplier in the triad depends greatly on whether its relationships with the buyer and the second supplier are adversarial or collaborative.

With these two points in mind I proceed to an in-depth review of the few papers explicitly considering service triads. This is because they are arguably more relevant to my study.

2.3.1.6 Service triads

Triadic settings where the element of exchange is a service, apart from bearing the characteristics of triadic interaction, are also defined by the contingencies of business-to-business (B2B) service exchange. First and foremost, the customer interacts with the service provider during the process of delivery, as service supply chains are bi-directional (Sampson 2001; Sampson & Froehle 2006). This interaction is episodic and repetitive, with the interrelated sequence of episodes shaping the overall relationship (Gronroos 1994; Gummerson 2002; van der Valk et al. 2009). A service supply relationship is assumed to be based to a greater extent on relational exchange when compared to B2B relationships in pure manufacturing contexts (Zajac & Olsen 1993). Moreover, the evaluation of the service supplier and of the content and quality of services is a difficult task, due to the intrinsic characteristics of services (Axelsson & Wynstra 2002; Ellram et al. 2008): perishability (impossible to stock), inseparability (difficult to separate production from consumption), intangibility (services are performances, not objects) and heterogeneity (repeated service encounters tend to differ from one another)⁸. Hence, I regard these papers as more relevant and I discuss them on their own right in the following paragraphs. The typical structure to which they refer to is shown in Figure 2-2. There is always a buyer

⁸ The argument that services possess these four characteristics has been challenged and is a matter of debate in the literature (e.g. Sampson 2001, Spring & Araujo 2009) but this does not undermine the idea that evaluating service quality and service supplier performance is difficult.

(or in servitized contexts a provider), a customer, and a supplier or partner assigned with the delivery of a service to the customer. This is different to the manufacturing setting, where there normally is one buyer and two suppliers of parts/products (e.g. Choi et al. 2002), or one supplier and two buyers of the same product (e.g. Bastl et al. forthcoming). When all three links exist, i.e. the triad is transitive, triadic ongoing interaction takes place for the exchange of products and services and each actor acts as an intermediary between the other two. I continue with the review of this stream of research.

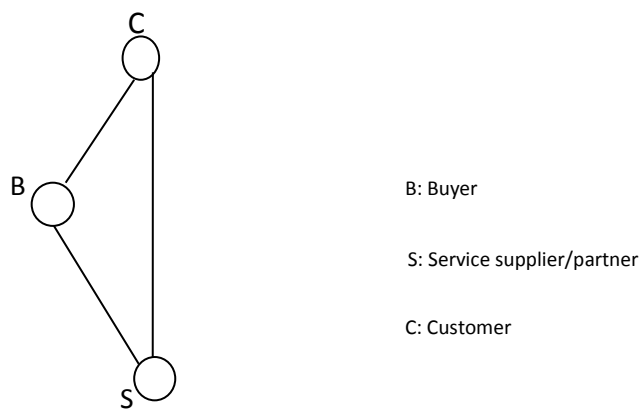


Figure 2-2: A typical service triad

Some of the papers theorize on, or empirically study, the phenomenon of service outsourcing. For example, Li and Choi (2009) drew from failed real-life outsourcing decisions (e.g. Dell, JP Morgan) and showed that when companies outsource the provision of some service to a third party, they must understand the implications of the supplier interacting directly with the customer base. By utilizing the network theory concepts of 'bridge decay' and 'bridge transfer' to illustrate the different stages of service outsourcing, they suggested that the focal company should actively manage the service supplier and never stop interacting with the customer entirely. The need to manage the supplier and ensure service delivery at desired levels also arises in exploratory empirical servitization studies such as Pawar et al. (2009). Li and Choi (2009) in their propositions also considered how the strength of each tie in a triad is influenced by the strength of the other ties. For example, the relationship that is formed between the service supplier and the buyer's customer is very much dependent on how the buyer has been treating the service

supplier. Their work remained conceptual though, and did not consider, in the words of the authors, 'quasi-manufacturing' settings (Chase 1981; Chase & Tansik 1983), but only pure services (e.g. training, call centres).

Quite relevantly, Ahlstrom and Nordin (2006) examined the problem areas that a manufacturer of high-tech products encountered when establishing relationships with suppliers to service its customer base. From their case-work, it turns out that these areas differ for the different stages of the relationship. For example, specifying the service processes is an issue during the earlier stages (negotiation phase), while losing control of the customer relationship becomes very important during the later stages (stability phase). With regard to the latter point, Ahlstrom's and Nordin's (2006) work indicated the strategic implications of what Li and Choi (2009) called 'bridge transfer', i.e. transferring the service process and the responsibility of the customer relationship to a supplier. It is argued that maintaining a direct relationship with the customer (meaning that the triad remains transitive) is crucial for most types of services, even though a clear distinction did not emerge. Managing the relationship with the service supplier also turns out to be important.

Tate and van der Valk (2008) conducted an in-depth case study of a firm's customer contact centre outsourcing decision. Apart from establishing that the performance of the customer-facing supplier is determinative for customer satisfaction, they showed that satisfaction increased when the focal firm supplemented the efficiency and process-based performance measures for its supplier, with effectiveness and outcome-based ones. This is because, normally, the latter measures are those that really matter for the customer, and their utilization contributes to customer satisfaction. They also indicated that cooperation between the focal firm and the service supplier (in this case, co-developing the KPIs and aligning incentives) improved relationships and satisfied the needs of all actors in the triad.

Furthermore, Van der Valk and van Iwaarden (2011) used agency theory to provide recommendations on the type of contract and type of monitoring activity that the focal company has to implement in a service triad to manage the behaviour of the subcontracted supplier. The research unveiled the tremendous importance of social contracts for mitigating the potential negative effects of behaviour-based monitoring and contract misalignment. This led the authors to claim that relational governance outweighs contractual governance as a means to ensure appropriate subcontractor behaviour.

Two additional studies from the emerging servitization research stream explicitly consider triadic arrangements. Somewhat giving empirical substance to the ideas of Li and Choi (2009), Peng et al. (2010), examined the effects of the structural position occupied in a triad on cooperative performance. They showed that a focal company uses different management mechanisms to achieve higher cooperative performance when all triadic actors are connected to each other, compared to when the triad has *structural holes*. In fully connected triads, the existence of coordination mechanisms such as formal contracts, coupled with trust between the actors, is associated with relatively high perceived performance. In contrast, market mechanisms (e.g. the extent to which the contract is determined by price) seem to have a negative influence on cooperative performance. The network they look at, however, is an industry one (Taiwanese military avionics maintenance industry), consisting of interconnected suppliers, collaborators and competitors of the focal firm. The customers are not included.

Bastl et al. (2012) examined the implications of the adoption of servitization on the tripartite relationship between a provider and two systems suppliers, one of whom established a direct link with the customers to more effectively service its products. They showed that the involved parties expected more open exchange of information, operational linkages were strengthened, and contracts started being complemented by relational norms. They also observed a shift towards a win-win mentality and increased levels of supplier adaptation to support the provision of the offerings. Interestingly, these changes were more evident in the relationship with the customer-facing supplier. Table 2-1 tabulates the main aspects of the previously discussed papers.

Table 2-1: Key works on service triads

Paper	Context / Setting	Methodology	Key argument
Ahlstrom and Nordin (2006)	Service outsourcing; Manufacturer – service supplier – customer triad	Interviews with managers in a high-tech manufacturing firm regarding 11 attempts to establish relationships with external partners to provide services augmenting the core products	Identifying four problem areas when establishing service supply chain relationships with suppliers to service the customer base: writing the agreements, defining service processes, handing over service delivery to suppliers, controlling the relationship with the end customers. The challenges change in importance depending on the stage of the relationship.
Tate and van der Valk (2008)	Service outsourcing; telecoms service provider – service supplier (customer call centre) – customer triad	In-depth case-study investigating propositions emerging from the literature	For the management of suppliers of customer call centres, the focus on efficiency measures solely is not good enough. A balance between KPIs seeking both efficiency and effectiveness increases customer satisfaction.
Li and Choi (2009)	Service outsourcing; Buyer – service supplier – customer triad	Conceptual paper	Trying to address the question of how to manage service outsourcing for success. Producing propositions exploiting the concepts of 'bridge decay' and 'bridge transfer' to capture the dynamics at the different stages of outsourcing. The main claim is that the buyer should continue to actively interact with its customer and closely monitor the supplier.
Peng et al. (2010)	13 embedded triads within a single industry network (Taiwanese military avionics maintenance)	Effectively an in-depth case study where semi-structured interviews but also structured questionnaires were employed	Studying the structural position that a focal firm occupies in different triads and how that position influences cooperative performance. The effects of management mechanisms adopted by the focal company (coordination mechanisms, trust and market mechanisms) on cooperative performance are also examined.
Van der Valk and van Iwaarden (2011)	Service outsourcing; Service organization – service supplier – customers	Two in-depth case studies of service triads	Through the lens of agency theory they try to identify the right combination of contracts and monitoring activities for the focal company to manage the behaviour of a subcontractor delivering services directly to the customer. Highlighting the tremendous importance of the existence of social contracts, such as the reduction of the negative effects of contract misalignment
Bastl et al. (2012)	Aerospace; buyer – supplier – supplier triad. But one supplier services customers directly hence, buyer – supplier – customer triad as well	In-depth case study of a tripartite relationship. Interviews with individuals from all organizations	Examining the consequences of the adoption of servitization on buyer – supplier relationships. What happened in reality did not match entirely the expectations emerging from the (largely) anecdotal servitization literature.

2.3.1.7 Summary

To summarize, in business service triads there is always (at least) one actor who delivers some sort of service. He does so with the consent of the buyer (or provider in the servitization case), and whether this buyer retains its direct link to the customer base is a decision to consider. It is in general suggested that some sort of interaction between the buyer and the customer base should continue for a number of reasons (Li & Choi 2009). The emerging dynamics due to this interconnectedness is the overall research interest of the scholars investigating service triads. Their efforts have shown that, due to the nature of services, relational exchange is more prevalent and important in triadic service outsourcing or servitization settings than in manufacturing contexts. This is evidenced in all works discussed so far, for example, through the expectations of increased information sharing and relationship specific adaptations in Bastl et al. (2012), or through the tremendous importance of social contracts in van der Valk and van Iwaarden (2011). Undoubtedly though there is a lot more to be examined within this research stream, as testified in the further research directions sections of the discussed papers. My work, as mentioned in the introduction, draws from triadic research but also contributes to it. This is discussed below.

In certain servitized contexts, the fact that all three actors become interconnected and each one acts as an intermediary between the other two, makes the service partner responsible for delivering the services to the customer at the levels agreed in the contract between the customer and the servitized manufacturer (provider). Hence, the performance of the service partner is determinative for customer satisfaction and can obviously affect the provider – customer relationship. A relevant example, but from a pure service context, is that of Aviva (mentioned in section 2.2.11). Aviva attributed the increase in customer satisfaction to the exceptional performance of its three major outsourcing partners. High partner performance was a direct outcome of the collaborative relationships that Aviva established with these partners. Additionally, the collaborative spirit between Aviva and the partners was mirrored in the relationships that the latter developed with Aviva's customers (Aviva 2004; Li and Choi 2009). This interplay between the performance of the actors within the triad and the nature of the dyadic relationships between them is a fundamental characteristic of triads (Choi & Wu 2009a; Choi & Wu 2009b) and my research draws from it. The argument goes as follows. In servitized contexts the performance of the service partners in delivering the services is of major importance to the provider. However, so far it has not been the focus of direct investigation. Because of the interplay between actor performance and nature of dyadic

relationships within triads, I seek to understand the role of the provider – partner relationship in the performance of the partner. As I will discuss in later sections, I do so by employing a specific framework of relationship dimensions (the Cannon & Perreault 1999 framework of relationship connectors) that characterize a dyadic buyer – supplier relationship (section 2.3.2.4), and by examining the influence of each individual dimension and combinations of them. After introducing the framework and justifying its application, I proceed to a brief but critical review of the buyer – supplier relationships literature that examines the effects of the relationship and its intrinsic characteristics on performance (i.e. the phenomenon of relational influences on performance).

2.3.2 Buyer- Supplier relationship characteristics and the Cannon & Perreault (1999) framework

2.3.2.1 Introduction

This part of the literature review starts with a brief account of the most influential theories that have been utilized to study Buyer – Supplier (BS) relationships. Because this stream of research is interdisciplinary and multi-theoretical in nature, there are many variables accruing from the different theories that have been used to characterize dyadic BS relationships. I present two classifications of these and introduce a concrete and concise framework, the Cannon and Perreault (1999) framework of relationship connectors. The detailed presentation of it, the way it has been used so far in the literature and the justification for adopting it in this research conclude the section.

2.3.2.2 Theories and approaches used to study Buyer – Supplier relationships

Researchers who empirically examine BS relationships have been predominantly concerned with exploring or testing theoretical relationships among a variety of relevant constructs. For example, scholars have been studying one or more of the following:

- The influence of relationship characteristics such as trust or commitment, on the behaviour of the parties in the relationship, such as the tendency of the supplier to act

opportunistically (e.g. Anderson & Weitz 1992; Doney & Cannon 1997; Heide et al. 2007; Morgan & Hunt 1994),

- The antecedents of such relationship characteristics (e.g. Kumar et al. 1995; Sako & Helper 1998) or how external factors such as uncertainty and dependence affect them (e.g. Anderson & Coughlan 1987; Heide & John 1990; Mohr et al. 1996),

- The effects of relationship characteristics on relationship outcomes such as business performance (Lusch & Brown 1996; Noordewier et al. 1990), satisfaction with the relationship (e.g. Ivens 2004; Monczka et al. 1998) and partnership success (Mohr & Spekman 1994).

To accomplish their empirical research objectives and advance theoretical knowledge, scholars have employed, and at times contributed to, a number of different theories and approaches with diverse origins. In this section I briefly present the most popular and influential ones. Undoubtedly, these theories have greatly contributed to the advancement and reification of the BS relationships research stream. I acknowledge that each one of them has many ramifications and several encapsulated research programs. However, given that in this work I adopt a specific, multi-theoretic framework (the Cannon & Perreault 1999), a simple introduction and presentation of the main theories is sufficient at this stage.

Resource Dependence Theory (RDT)

Resource dependence theory (Pfeffer & Salancik 1978) assumes that organizations are dependent upon vital resources owned by others, and since these resources are scarce, power struggles and uncertainty arise. As an alternative to a self-contained form of organization or to 'standard' market transactions, collaboration between firms with complementary resources is created (e.g. Powell et al. 1995). There is ample empirical evidence supporting the use of relationships for reduction of domestic and international environmental complexity and resource gain (e.g. Elg 2000; Stearns et al. 1987).

Resource Based View (RBV) and the strategic management approach

From an RBV point of view, firms develop firm-specific valuable resources, capabilities, competences, and dynamic capabilities, which they exploit to create a competitive advantage which in turn can explain the differential performance observed in industries (Barney 1991; Barreto 2010; Penrose 1959). However, it has been recognized that a firm's critical resources may extend beyond firm boundaries (e.g. Dyer & Singh 1998). Hence, firms will form relationships to obtain access to complementary resources. Relationships are actually considered to be one of the four major vehicles to acquire new resources, alongside internal development, external procurement, and full acquisition (Rivera-Santos & Inkpen 2009). Relationships typically provide quicker access to resources than internal development does, and are less costly than acquiring an entire firm (Parmigiani & Rivera-Santos 2011). Development of a competitive advantage is supposed to take place through the creation of relational rents⁹ (Dyer & Singh 1998). An example of RBV application in the BS relationships literature is Palmatier et al. (2007), who showed how RBV can unify the other commonly used theories and explain relationship performance.

Social exchange theory (SET)

Social Exchange Theory's (SET) (Homans, 1958; Kelley & Thibaut 1978; Thibaut & Kelley, 1959) main aspect is the positive outcome (or the expectation of a positive outcome) of the social interaction. The basic assumption is that parties enter into, and maintain, relationships with the expectation that doing so will be rewarding (Blau 1968; Homans 1958). Benefits could be economic (e.g. goods or money) as well as intangible (e.g. social amenities or friendship). A number of variables have been used in the literature to operationalize SET. For example, Lambe et al. (2001) list dependence, trust, commitment, cooperation, relational norms, and satisfaction. SET is very often utilized in marketing channels research (e.g. Kumar et al. 1995; Morgan & Hunt 1994).

⁹ Dyer and Singh (1998) define relational rent as '*a supernormal profit jointly generated in an exchange relationship that cannot be generated by either firm in isolation and can only be created through joint idiosyncratic contributions of the alliance partners*' (p.662). They go on to analyze the four categories of relational rents and the consequent types of competitive advantage.

Transaction Cost Economics (TCE)

TCE was introduced by Williamson (1975) and has received a great deal of attention by researchers interested in BS relationships. Its main focus is on the choice of the most efficient governance mechanism for a relationship, to safeguard from opportunism of the exchange partner. On the one hand there is the choice of the *market*, on the other one the *hierarchy*. In general, when transaction costs are low, the market is preferable, while when they are high, hierarchical governance or internal production is supposed to increase efficiency. The original TCE framework has been bolstered with insights and arguments from the relational contracting theory (Macneil 1980). Subsequently, it has been suggested that reliance on relational exchange norms may constitute a hybrid form of governance between discrete market transactions and hierarchies (Williamson 1985). This hybrid form is posited to be suitable for recurring, non-standardized transactions, where continuity of the relationship between the two parties is valued, uncertainty is high, and the risk of opportunism low. Like SET, TCE has significantly contributed to the study of supply chain partnerships and marketing channels (e.g. Heide & John 1990; Wathne & Heide 2000).

The interaction model of IMP group

The interaction model is probably the most important contribution of the Nordic Industrial Marketing and Purchasing Group (e.g. Ford et al. 1998; Hakansson & Snehota 1989). According to it, the marketing and supply of industrial offerings in industrial markets is seen as an interaction between two parties. Four groups of variables influence this interaction; variables describing the parties involved, the elements and process of interaction, the environment within which the interaction takes place, and the atmosphere between the two parties. The model's recognition and acknowledgement of the high complexity that characterizes any interaction has encouraged a lot of informative qualitative work in the fields of marketing and SCM (e.g. Kalafatis 2002; van der Valk et al. 2009).

Relationalism (the transactional-to-relational continuum of BS relationships)

Macneil (1980) in his seminal work suggested that business exchanges can span across a continuum anchored by the two polar sides of discrete transactions and relational exchange. This idea came to revolutionize thinking in the BS relationships research stream. It helped refining TCE and SET, and sparked related empirical research in the fields of marketing, and later SCM. Based on this continuum, nowadays scholars typically classify BS relationships as transactional or relational (Anderson & Narus 1984; Dwyer et al. 1987; Gundlach & Murphy 1993; Hutt & Speh 2001; Moller & Torronen 2003)¹⁰. Relational relationships are normally characterized by higher levels of commitment and trust (Anderson & Weitz 1992; Morgan & Hunt 1994), joint problem solving (Ellram & Hendrick, 1995), interdependence and mutual goals (Anderson & Narus, 1984; Fontenot & Willson 1997), frequent and open sharing of relevant information (Eggert & Helm 2003), and conflict resolution through dialogue (Macneil 1980). On the other hand, transactional relationships are characterised by a win-lose mentality and may consist of a single transaction, independent of any past or future interactions. Contracts, as opposed to trust, act as the main safeguarding mechanism to protect against opportunistic behaviours, and price is the driving force to complete the transaction (Morgan & Hunt 1994; Williamson 1975; Williamson 1985). Interaction lacks a social dimension (Blau 1964), while investments by the parties in the exchange are minimal, resembling a pure market as conceptualized in TCE.

What this essentially says is that transactional and relational relationships differ across a number of relationship characteristics/variables, such as those already mentioned (e.g. trust, frequency of interaction). Very often these variables are assumed to be highly correlated to each other, and in combination they reflect an underlying, higher-order, unidimensional construct; the relationalism continuum. Many seminal empirical papers from the relationship marketing literature of the late 80s and 90s assume this (e.g. Dwyer et al. 1987; Kumar et al. 1995; Noordewier et al. 1990)¹¹. Hence, any BS relationship can be positioned on the transactional-relational continuum based on its perceived scores across the various differentiating characteristics. Because of the varying origins and

¹⁰ In SCM the respective terms of 'arms length' and 'collaborative' relationships are more often used. In this thesis they have equivalent connotations.

¹¹ Many relatively recent works adopt the relationalism continuum assumption as well. These papers normally test associations between the quality of the relationship (or the extent to which the relationship relies on relational exchange) and a multitude of other constructs exogenous to the relationship (e.g. Zhou et al. 2008).

approaches of BS relationships research, many such relationship characteristics have been considered. The following section is concerned with this.

2.3.2.3 Relationship characteristics

As the subject matter (inter-organizational or specifically BS relationships) is cross-disciplinary and multi-theoretical, it is reasonable to see extensive cross-fertilization, but also, confusion. Hence, there is a multitude of variables that have been used to characterize and understand BS relationships. Moreover, many of these characteristics are essentially very similar, but are often described using different terminology dependent on the academic field (e.g. strategic management or marketing) and the theory used (e.g. TCE or SET). One account of such relationship characteristics is that made by Morris et al. (1998). Their list is adapted in Table 2-1 and supplemented with key additional literature.

Table 2-2: Twenty-three Key Variables Used to Characterize Relationships (Adapted from Morris et al. 1998)

Variable	Definition	Representative literature
Adaptations	Extent to which adjustments must be made by buyer and/or seller to process, products, or procedures specific to the exchange partner	Cannon & Perreault (1999)
Asset specificity (non-retrievable investments)	Extent to which either party is required to make relationship-specific / non-retrievable investments	Blois (1996)
Commitment	An enduring desire to make maximum effort to maintain relationship	Mohr & Spekman (1994), Wilson (1996)
Complexity of the transaction	How complicated are the products, processes, contractual terms, and human interactions	Blois (1996)
Comparison levels of alternatives	The costs and benefits associated with working with an alternative seller or buyer	Wilson (1996)
Connectedness between transactions	How critical or, alternatively, nonexistent is the interdependence between a set of transactions over time	Blois (1996)
Cooperation/cooperative norms	Reflective of attitudes, expectations, and behaviors the parties have about working jointly to achieve common and individual goals	Cannon & Perreault (1999), Monczka et al. (1998)
Duration of transactions	The extent to which the exchange continues over a period of time	Blois (1996)
Frequency of transactions	This varies from single or occasional to virtually continuous	Blois (1996)
Information exchange	Willingness to openly share information that may be useful to both parties	Anderson & Narus (1984), Cannon & Perreault (1999), Monczka et al. (1998)
Intensity or extent of	Degree to which either party has requirements of the other	Anderson & Weitz

interdependence	that are not immediately available from alternative sources	(1989), Iacobucci & Ostrom (1996), Mohr & Spekman (1994)
Legal bonds	Detailed and binding contractual agreements that specify the obligations and roles of both parties	Cannon & Perreault (1999)
Mutual goals	Strategic and operational outcomes (financial, technical, competitive) from the relationship sought jointly by the parties	Wilson (1996)
Operational linkages/structural bonds	Formal, systematic, and structural interfirm ties that contribute to each firm's business operations, such as shared warehousing	Cannon & Perreault (1999), Lambert et al. (1996)
Performance measurement	Measurement of either party's satisfaction with the performance of the other, often measured on a number of tangible and intangible aspects	Wilson (1996)
Performance uncertainty	Environmental change makes it difficult for either party to determine in advance how it wishes the other to behave	Blois (1996)
Power symmetry or asymmetry of the roles	Extent to which relationships are either equal or unequal where one party may be dominant or submissive	Iacobucci & Ostrom (1996)
Shared technology	Linkages that are established between the parties in terms of information, communications, manufacturing, logistical, and other technologies	Wilson (1996)
Social bonds	Personal ties that develop between or among members of the buying and selling organizations	Wilson (1996)
Trust	Confidence in an exchange partner's reliability and integrity	Dwyer et al. (1987), Morgan & Hunt (1994), Wilson (1996)
Valence of the relationship	Relationships can be classified along a continuum ranging from those who are cooperative and friendly to those who are competitive and hostile	Iacobucci & Ostrom (1996)
Value extraction	Determination of who receives which benefits deriving from the relationship	Wilson (1996)

The work of Morris et al. (1998) is just one attempt to make an account of relationship characteristics. Moreover, many of those characteristics have been occasionally modelled as relationship outcomes or antecedents, i.e. exogenous to the relationship itself. For example, performance, commitment and value are often seen as relationship outcomes (e.g. Lusch & Brown 1996; Morgan & Hunt 1994; Cheung et al. 2011, respectively). Additionally, scholars who have theorized specifically on relational exchange (i.e. relational relationships) have considered an even larger number of relationship dimensions. In a recent meta-analysis on the effects of relational exchange on relationship outcomes, Rajamma et al. (2011) identified 39 such dimensions, many of which are overlapping and interrelated. Notwithstanding, over 13 different variables were found to have been employed as relational exchange outcomes.

In an attempt to conceptually group the disparate variables found in the literature in a concise set of high-order constructs/characteristics that distinguish transactional from relational relationships, Bastl (2011) arrived to the following list:

- Long-term orientation
- Communication behaviours (in terms of quality and extent of information exchange and communication participation)
- Trust
- Commitment
- Operational Linkages
- Interdependence and Power
- Cooperation
- Benefits and Risk sharing

One can readily realize then that there is a large pool of variables from which to choose to investigate empirically a BS relationship. The latter constitutes an integral part of my research, as I essentially seek to understand how the relationship (and certain characteristics of it) between the servitized provider and its partner can enhance the performance of the partner. Hence, a choice of a group of characteristics or a specific framework may be helpful in order to focus investigation. For this purpose, I choose to adopt the Cannon and Perreault (1999) framework of 'relationship connectors'. The presentation of the framework, the way it has been used so far in the literature, and the justification for adopting it here, follow.

2.3.2.4 The Cannon and Perreault (1999) framework of relationship connectors

Cannon and Perreault start their 1999 paper by challenging a premise of the relationalism approach (i.e. the idea that relationships vary along a continuum from transactional to relational). They claim that although it makes perfect sense to conceptualize relationships in terms of multivariate profiles of different characteristics, there is no reason why it

should be assumed that these characteristics are highly correlated to each other. Hence, they apply numerical taxonomy (which does not need to assume correlated variates) to find different prototypical types of relationships. They model buyer-seller relationships as a simultaneous combination or mix of certain relationship characteristics, which they call 'relationship connectors'. These connectors are defined as *"dimensions that reflect the behaviours and expectations of behaviours in a buyer-seller relationship"* (Cannon & Perreault 1999, p.441) and each one of them provides unique or differentiated information about the manner in which firms actually interrelate and conduct commercial exchange. Hence, according to the authors, they should not necessarily be expected to covary. The list of the connectors includes: information exchange, operational linkages, legal bonds, cooperative norms and adaptations by the buyer and supplier. Cannon and Perreault (1999) arrived to this list after drawing from multiple theories and approaches (specifically Social Exchange Theory, Resource Dependence Theory, Relational Contracting, Transaction Cost Economics and the IMP interaction model), relevant empirical research papers, observations of business practices, and interviews with marketing and purchasing professionals. The connectors and their definitions and origins are presented in Table 2-3.

Table 2-3: The Cannon & Perreault 'relationship connectors'

Relationship Connector	Description	Main theory/approach of origin
Information exchange	Information exchange is an expectation of an open sharing of information that might be useful for both parties.	Relational contracting, SET
Operational linkages	Operational linkages capture the degree to which the systems, procedures and routines of both parties (for example customer and supplier) have been linked to facilitate operations.	IMP interaction model
Legal bonds	Legal bonds are detailed and binding contractual agreements that specify the obligations and roles of both parties in the relationship.	TCE, RDT
Cooperative norms	Cooperative norms reflect expectations the two exchanging parties have about working together to achieve mutual and individual goals jointly.	Relational contracting, SET
Buyer and supplier adaptations	Relationship-specific adaptations are investments in adaptations to process, product, or procedures specific to the needs or capabilities of an exchange partner.	TCE, RDT

Even though each connector is distinct from the others, they resemble or are directly related to other constructs in the literature, such as trust, long-term orientation and commitment. However, Cannon and Perreault (1999) claim that because their interviews with professionals focussed on the operational elements of the relationship, these abstract constructs did not fall within the domain specified by their definition of connectors. This is because these constructs are not anchored on business actions and behaviours, as opposed to the relationship connectors.

The contribution of their paper is essentially a taxonomy of BS relationships, which appear to vary in terms of their manifested levels across the six connectors. Eight different types were identified that appear in distinct contexts, determined by the importance of the supply and procurement obstacles faced by customer firms. In addition, it turns out that some patterns of interaction are clearly preferred by buying firms, indicated by the differences in customer satisfaction and supplier performance in the relationship. On a second note, the varying profiles in terms of scores across the connectors make it obvious that a simple transactional-relational continuum is not adequate in discriminating among the relationship types. This means that one should not necessarily expect the five dimensions to covary, for example, high information exchange does not always need to go together with high cooperative norms and operational linkages. Combinations such as low information exchange with high operational linkages and moderate cooperative norms, are also possible.

I continue with the explication of each connector.

Connector 1: Information exchange

“Information exchange is an expectation of an open sharing of information that might be useful for both parties. More open sharing of information is indicated by the willingness of both parties to share important, even proprietary information” (Cannon & Perreault 1999, p.441). Many theories and empirical studies consider information exchange, or other, closely related constructs. For example, information exchange is related to the concept of communication which has been shown to be central for channel performance (e.g. Mohr & Nevin 1990), a pre-requisite for trust (e.g. Morgan & Hunt 1994), and an antecedent of commitment in the relationship (e.g. Anderson & Weitz 1992). Macneil (1980) argues that exchange of confidential information defines relational exchange, while Williamson (1985)

suggests that inadequate sharing of information may lead to market failure. However, as Cannon and Perreault (1999) note, extensive information sharing may increase the likelihood of opportunistic behaviour by any of the two parties.

Connector 2: Operational linkages

Cannon and Perrault (1999) state that “*operational linkages capture the degree to which the systems, procedures, and routines of the buying and selling organizations have been linked to facilitate operations*” (p.442). They argue that the existence of inter-coupled systems tends to specify roles implicitly or explicitly for both parties in the relationship (Heide 1994), while joint activities and processes facilitate the flow of products, services and information, and reduce transaction costs. Practices that are captured by this connector include just-in-time delivery systems, computerized inventory and order replenishment systems, and joint marketing programs. Similar constructs found in the literature include the ‘technical bonds’ of the IMP group (Metcalfe et al. 1992) and ‘operational integration’ of Robicheaux and Coleman (1994). Operational linkages may also involve the routinized activities of individuals. Cannon and Perreault (1999) give the example of service or sales representatives that develop routines to integrate themselves more closely into a buying organization, for example by conducting regular maintenance checks of equipment and monitoring inventories. The authors add that interlinked systems can be standardized and operate the same way across many exchange partners (e.g. the efficient consumer response initiative in the grocer distribution channel). Stern and Reve (1980) also note that operational linkages can create dependence and switching costs for one or both exchange parties.

Connector 3: Legal bonds

Cannon and Perreault (1999, p.443) define legal bonds as “*detailed and binding contractual agreements that specify the obligations and roles of both parties in the relationship*”. They claim that legal bonds provide a governance mechanism to simulate hierarchy when vertical integration is impractical (Stinchcombe 1985). The two primary benefits of legal contracts are the legal protection provided in case something goes wrong, and the regulation of the exchange. However, contracts can become liabilities if they are too rigid (Macneil 1980) and can reduce the flexibility of the firms to adapt to

environmental changes. Also, although formal, detailed contracts are common business practice, many firms prefer to operate with a 'handshake' agreement (Macaulay 1963). Contractual agreements are central to the arguments of Resource Dependence Theory, Transaction Cost Economics and Relational Contracting Theory. At the same time, the connector captures aspects of the 'formalization' construct that has been imported from the organization science literature to study relationships in marketing channels (e.g. Dwyer & Oh 1988).

Connector 4: Cooperative norms

"Cooperative norms reflect expectations the two exchanging parties have about working together to achieve mutual and individual goals jointly" (Cannon & Perreault 1999, p.443). It is implied that both parties behave in a manner that suggests that they understand they need to work together to be successful. For example, treating problems as joint responsibilities reflects high cooperation, while a focus on the fulfilment of individual goals reflects low cooperation. The connector is fundamental for a broad stream of theoretical and empirical research, for instance the IMP group's interaction model (Hakansson 1982) and Stern and Reve's (1980) political economy framework. Additionally, Macneil (1980) refers to relational norms such as solidarity and flexibility in response to changing conditions, where preserving the relationship is an end in itself (Kauffman & Stern 1988). According to some authors, cooperation reflects trust which in its turn acts as a complementary mode of governance in commercial exchange (Bradach & Eccles 1989), and helps in achieving coordination in channels of distribution (Anderson & Narus 1990).

Connector 5: Relationship-specific adaptations by the buyer or the supplier

"Relationship-specific adaptations are investments in adaptations to process, product, or procedures specific to the needs or capabilities of an exchange partner" (Cannon & Perreault 1999, p.443). Adaptive behaviour focuses on the individual behaviour specific to the other party in the relationship. It may include both one-off investments necessary to conclude a specific transaction (e.g. special machinery), and gradual adaptations taking place over time. Relationship-specific adaptations have little value outside of the specific relationship and reflect an aspect of calculative commitment (Anderson & Weitz 1992).

They also help to build switching costs and dependence, reduce transaction costs and increase revenues. A number of theories and empirical papers consider constructs very closely related to adaptations. For example, Social Exchange Theory consider investments to interpersonal relationships (Rusbult 1983), Transaction Cost Economics regard asset specificity as an important determinant of the governance mechanism (Williamson 1985), and the IMP interaction model includes adaptations as a relationship characteristic (Metcalf et al. 1992).

2.3.2.5 The use of Cannon & Perreault (1999) framework in the literature

Cannon and Perrault (1999) followed a structured and exhaustive process to provide validity to their constructs and scales. Firstly, they ensured face and content validity by involving and interviewing a large number of practitioners, predominantly purchasing managers from buying firms. Secondly, they conducted a pre-test with an initial sample of respondents for scale purification. Finally, with the confirmatory factor analysis in the final sample of more than 400 professionals, they established internal consistency, validity and reliability of the scales. This has encouraged many academics investigating buyer – supplier relationships to adopt and/or adapt single items or entire scales of the Cannon and Perreault (1999) relationship connectors for their own purposes. Such works are exclusively quantitative in nature and use statistical techniques (mainly Structural Equation Modelling) to identify or confirm associations or causal relationships between a number of different constructs (e.g. Zhou et al. 2008; Cai et al. 2011).

For the purpose of this work though, it is essential to identify the academic works that have adopted the C&P framework in its entirety. Moreover, it is crucial to understand how the latter has been utilized. To accomplish this, I undertook a search in *Google Scholar*. Within the 1071 items that have cited Cannon and Perreault (1999), I conducted two keyword searches. In the first one, I looked for the specific phrase “relationship connectors” and in the second one I used the following string: “operational linkages” AND “legal bonds” AND “information exchange” AND “norms” AND “adaptations”. These searches (which produced almost identical results) ensured that the sourced papers would have equipped the C&P framework in its entirety. I subsequently screened them to separate the published, academic articles from other types of documents (e.g. working papers, reports). It turns out that very few academic articles have knowingly and explicitly

adopted the C&P framework in its entirety. They are presented in Table 2-4 below. The purpose of each paper and the scope of using the C&P framework are also detailed.

Table 2-4: Academic papers adopting the C&P framework in its entirety

Title	Purpose of the paper	Scope of C&P framework use
Morris et al. (1998)	Trying to delineate the definition of relationship marketing and how relationship marketing is applied by in practice by professionals	Drawing from Cannon’s and Perreault’s working paper. They use the connector scales as a bundle to reflect behaviour of the buyer and supplier in a buyer – supplier relationship. They then statistically associate behaviour with what they call relationship attitudes and relationship perceptions
Penttinen & Palmer (2007)	Analyzing the strategic repositioning of four firms. Identifying two paths: a) Developing new products, services and bundles of them, b) establishing closer relationships with customers	Adopting the framework to “ <i>more fully operationalize</i> ” the concepts of transactional and relational relationships. Through the qualitative analysis of the four cases, the five connectors are used as anchors to capture the strategic repositioning
Penttinen et al. (2010)	Assessing the effect of the introduction of electronic invoicing on one specific buyer-seller relationship	Adopting the framework to “ <i>more fully operationalize</i> ” the concepts of transactional and relational relationships. Through the qualitative analysis of the four cases, the five connectors are used as anchors to capture the changes in the nature of the relationship after the implementation of electronic invoicing
Stewart et al. (2009)	Sharpening the concept of national resilience by recommending a framework where community resilience comprises an integral part	Adopting the connectors’ framework to simplistically describe activities (for each one of them) that can be deployed to facilitate exchange between private and public entities when addressing disaster recovery issues.
Bastl et al. (2012)	Assessing the effects of the adoption of a servitization strategy by a buyer on its relationships with suppliers	Adopting the framework as a lens to capture the expected and actual change in the nature of certain buyer-supplier relationships after the adoption of servitization by the buying firm

There are two clear and separate conclusions drawn from this review:

1) No work focuses on the interrelationships between the connectors. Specifically, in three cases (the two papers by Penttinen and colleagues and Morris et al. 1998) the connectors are assumed to reflect an underlying transactional – relational relationship continuum (which is actually in contrast to the original assumptions and findings of Cannon and Perreault). Hence, the researchers are not concerned with how the connectors influence one another. For instance, Penttinen and Palmer (2007) and Penttinen et al. (2010) simply use the connectors as anchors in order to capture change in buyer – supplier relationships. Bastl et al. (2012) adopt the same assumption and have the same intention. However, although their findings do not necessarily justify the transactional – relational continuum assumption and indicate that there is interplay and mutual influence going on between the connectors, the authors do not comment upon it. Finally, Stewart et al. (2009) only use the connectors to enrich their conceptual framework about community resilience in the event of disasters.

2) No work adopting the framework in its entirety has focussed on the implications of the phenomenon of interest (whatever that might be) on the performance of the firm.

Hence, in short, although the framework describes in a detailed and succinct way the manner in which two firms interrelate and conduct exchange day-to-day, in its entirety it has not been linked to the performance of any actor. Moreover, no attention has been paid on how the connectors interrelate and affect one another. In effect, there is no insight on how the relationship connectors affect one another and how they affect business performance. Note however that this claim holds only for the works that have adopted the Cannon and Perreault (1999) framework in *its entirety* (what I am doing in this research).

After having presented the framework and how it has been utilized so far, I continue with a detailed justification for adopting it in this research.

2.3.2.6 Justification for adopting the C&P framework

Among the different theories and approaches that can provide a framework of relationship characteristics to guide empirical inquiry, I have chosen to adopt Cannon and Perreault's (1999) relationship connectors framework because I believe it suits the purpose and context of this study. The detailed justification follows.

It is commonly suggested that inter-organizational relationships have deep and rich interfaces (Ellram & Hendrick 1995), meaning that multiple individuals from one organization will have multiple relationships with individuals from another organization. The BS relationship is often considered to be a complex system of many interrelated dimensions, which have emerged together over time as a result of the experience and outcomes of ongoing interaction (Håkansson 1982; Ritter et al. 2004). The complexity and repetitiveness are assumed to be more obvious in servitization contexts, where long-term, interdependent, multi-faceted relationships are the norm, and high levels of information and knowledge exchange are required (e.g. Bastl et al. 2012; Johnson & Mena 2008; Johnstone et al. 2009). To take into account the complexity of inter-firm relationships in servitization contexts, I argue that the deployment of the 'connectors' framework is appropriate, as each one of them captures unique and differentiated information about the manner in which two parties interrelate and conduct exchange. Consequently, it allows for more fine-grained collection of information and focussed analysis (Bastl et al. 2012). Moreover, the connectors are anchored on actual day-to-day business activities, as opposed to high-order, elusive, abstract concepts such as commitment and trust. This anchoring in everyday commercial activity becomes central when considering that the purpose of this study is to examine how day-to-day (operational) service delivery performance of the service partner is affected by the business relationship. At the same time however, as Cannon & Perreault (1999) show, the connectors are closely related with or reflect those abstract theoretical concepts. Thus, the framework neither lacks explanatory power, nor relevance to the broader BS relationships research stream.

Secondly, the framework is ideal to guide a comparative study in a research setting such as mine. This is because the connectors can be used as a template for structured and fine-grained qualitative data collection and analysis across a number of sampled provider – partner relationships. Through subsequent comparison and with the application of inductive logic and introspective reflection, it can provide nuanced insight on the role of each dimension of the provider – partner relationship, but also of the relationship as a whole, in the service delivery performance of the partner. This point is explicated in greater detail in the methodology chapter. Additionally, because the constructs have validated reflective scales, they can potentially be connected to service delivery performance in a quantitative manner, with the deployment of statistical and numerical techniques.

It is also advantageous that the framework, as it has been indicated, builds on multiple theories. These include Social Exchange Theory, Resource Dependence Theory, Relational

Contracting, Transaction Cost Economics and the interaction model of the IMP group. The five base constructs ('connectors') capture the key concepts of all these theories, and as a result, reflect key legal, political, sociological, economic and psychological aspects of commercial relationships. Additionally, the authors in the original study (Cannon & Perreault 1999) arrived to these constructs after triangulating theoretical insight with a series of unstructured interviews with marketing and purchasing professionals. The fact that it emerges from both theoretical insight and real-life practice gives the framework profound face validity.

Finally, uncovering how the connectors are interrelated to affect performance, even in a limited context like mine, constitutes a contribution in itself. This is because, as shown earlier, no work adopting the framework in its entirety focussed on the relationships between the connectors and how they affect performance. Hence my endeavour can potentially further enrich the framework and highlight its usefulness and applicability.

After having introduced the framework of relationship characteristics that will guide my research, I proceed with a brief but critical overview of the Buyer – Supplier relationships literature that specifically examines the effects of the relationship and its characteristics (i.e. relational influences) on performance.

2.3.3 Relational influences on performance

This section is entirely concerned with a critical overview of the BS relationship research that examined the influence of relationship characteristics on the performance of the actors. I firstly suggest that the exact type of performance that I focus on has not been explicitly studied in the (dyadic) BS relationship literature. I then argue, and attempt to substantiate with supporting evidence, that the phenomenon in itself is causally complex. This has certain implications for my research, which I discuss towards the end of the chapter.

2.3.3.1 A comment on performance

Because management scholars have devoted substantial attention to the investigation of the effects of BS relationship characteristics on the performance of the buyer or the

supplier, there are literally hundreds of papers that could be considered relevant. Despite this, the effects of BS relationship characteristics on the exact type of performance I seek to examine have not been examined. Namely, the performance of one actor towards another within the network in which the buyer (provider) – supplier (service partner) dyad is embedded. Specifically, towards the buyer's customers, with whom the three form a triad (Havila et al. 2004; van der Valk & van Iwaarden 2011; Wu & Choi 2005). This is because previous studies have largely considered either performance within the dyad (e.g. a supplier's performance towards the buyer) or performance in general (e.g. financial performance – profitability), or both. Examples of the first type include Cai et al. (2009), Cai et al. (2011), Corsten et al. (2011) and Oosterhuis et al. (2011). Examples of the second type include Anderson and Narus (1990), Carr and Pearson (1999), Eisingerich et al. (2008) and Lusch and Brown (1996). Examples of the third type include Flynn et al. (2010) and Lawson et al. (2008).

Moreover, the performance of the buyer or the supplier is often assumed to reflect relationship outcomes such as 'partnership success', 'relationship performance' or 'satisfaction with the relationship'. Hence, operational or financial performance is combined with other, presumably, interrelated facets so as to reflect a higher-order construct. For example, two seminal papers that consider strategic supplier partnership success as the outcome variable and explore its antecedents (Mohr & Speckman 1994; Monczka et al. 1998) blend together satisfaction with the relationship and supplier or buyer performance. Similarly, other works name their outcome variable 'buyer's satisfaction with the exchange performance' and blend buyer satisfaction and supplier performance, under the assumption that if the supplier performs well the buyer is satisfied (Poppo et al. 2008). This means that as part of a systematic literature review, it would be at times difficult to disentangle the effects of relationship characteristics on performance specifically, from the effects on tangential relationship outcomes (e.g. satisfaction).

However, even though the exact relationship outcome (performance towards an actor in the triad) I am looking at has not been considered, and in general disentangling the effects on performance solely is difficult, I do not dismiss the literature as irrelevant. On the contrary, I believe it can be very informative regarding the nature of associations between the different characteristics and eventually performance and thus provide the ground to which my potential findings can be linked and compared. I discuss this in the following section.

2.3.3.2 *A causally complex phenomenon*

Considering the comment made above, I believe that an extensive review of the empirical literature of relational influences on performance will be of little benefit to my research. Henceforth, in contrast to the fashion in which the literature review on triads was conducted, I start by making an argument and subsequently provide evidence from the literature to substantiate it¹². Namely, I argue that the phenomenon of relational influences on performance is causally complex and back this argument with what I consider supporting evidence.

From a high level, one can confidently say that the BS relationship can affect the performance of the buyer and/or the supplier. Management scholars have devoted substantial attention to discover such effects. There is much evidence for example, that vertical collaboration enables buyers and suppliers to reduce transaction costs and prices, improve products and processes, increase profitability etc. (e.g. Helper, 1991; Kotabe et al. 2003; Monczka et al. 1998; Srinivasan & Brush 2006).

However, when seeking a more nuanced picture of *how* this influence is exerted, the many variables that characterize the relationship enter the scene, and there is ambiguity regarding their individual influence on performance, as well as their interrelationships and causal ordering. It is a main presumption and suggestion of this research, that the phenomenon is causally complex (Ragin 2008). This means that the outcome of interest (high performance) may result from different causal paths, along which different (combinations of) relationship characteristics affect one another in many ways. Moreover, they and their interrelations are influenced by a variety of moderating exogenous/contextual factors. The important point is that which relationship characteristics, exogenous variables and associations between them are explored, proposed and tested, depends on the underlying theoretical perspective(s), and/or the industrial context of each work, and/or the discretion of the researcher. To take this a bit further, each theoretical perspective in general terms considers specific variables as precursors of exchange performance, which are causally ordered in specific ways. For instance, a research strand employing Social Exchange Theory (SET) considers commitment and trust as the main drivers of performance because the parties act in the

¹² I include in appendix (A) a table which extracts relevant information from a number of key and recent papers concerned with relational influences on performance.

best interest of each other (e.g. Morgan & Hunt 1994). Generally, commitment and trust are seen to be influenced by relationship specific adaptations of the parties and the degree of interdependence between them (amongst other variables) (Palmatier et al. 2007). On the other hand, in the TCE tradition, exchange performance is generally determined by the relationship specific adaptations and opportunistic behaviours of the parties. This puts trust and commitment further back in the causal ordering, i.e. as antecedents of adaptations and opportunism (Palmatier et al. 2007).

In what follows, I will examine the argumentation for complex causation further and provide supporting evidence with reference to specific areas of ambiguity. I do this either by drawing from specific critical literature review papers, or by comparing and discussing empirical evidence from different published papers.

2.3.3.3 Supporting evidence

An area of divergence and inconclusiveness of findings is that of the effects of the mode of governance of the relationship (formal or relational) on the performance of the exchange parties. Firstly, there is a long debate in the literature regarding whether formal and relational governance are complements or substitutes (e.g. Poppo & Zenger 2002) and whether the two affect performance. Secondly, the evidence regarding the effects of formal control is profoundly equivocal. Some suggest that formal control is necessary to increase supplier performance (e.g. Mayer & Argyres 2004) while others find a negative or indirect effect (e.g. Fryxell et al. 2002; Lusch & Brown 1996). The picture becomes more complex when moderating factors such as relationship tenure and asset specificity are considered (e.g. Poppo et al. 2008) or when formal control is split into behavioural and output control, and their distinctive effects are modelled (e.g. Heide et al. 2007). Similarly, relational governance or informal control based on trust and cooperative norms has been suggested to act as a safeguard against the risk inherent in many transactions, enhance coordination, reduce transaction costs and effectively enhance performance (e.g. Dyer & Singh 1998). This idea does not get unanimous support though. For instance, Lusch and Brown (1996) failed to identify any empirical effect of norms, such as solidarity and flexibility, on buyer performance.

Relevantly, a recent meta-analysis by Rajamma et al. (2011) tried to explain the divergent research findings regarding associations between relational exchange variables and

relationship outcomes¹³. They traced the systematic error in measurement methods and research contexts by coding for four contextual and nine methodological moderators according to the differences across studies. They found out that the empirical association between relational norms and outcomes is highly dependent on how researchers have defined, operationalized and measured their constructs. Specifically, the association depends on: a) what dimensions (relationship characteristics) are included in the definition of relational exchange, b) how the outcome variables are measured (abstract/subjective Vs instrumental/objective), c) who evaluates the relationship (upstream firm Vs downstream firm and high-status employee Vs low- status employee), and, d) where does the data come from (from a single industry or from multiple industries).

The assertion against universalistic associations between relationship characteristics and outcome variables such as performance is supported by papers reviewing the impact of specific relationship characteristics, such as asset specificity. The critical review by De Vita et al. (2011) showed that not only asset specificity is a multi-faceted, complex construct whose definition is still elusive, but also that its effect on inter-firm relationship performance remains inconclusive. Their analysis suggests that:

- 1) The ambiguities and inconsistencies become particularly pronounced when different theoretical perspectives are called upon to explain the relationship;
- 2) The effects on performance may differ depending on the facets of the construct (e.g. human, site, brand capital specificity) that are considered and tested;
- 3) The effects are dependent upon other moderating factors (e.g. longevity of and reciprocity in the relationship, firm size) which may or may not be measured, and;
- 4) The effects on performance may be non-linear, while the majority of works relies on linear methods.

In summary, this means that the effects of asset specificity identified in the various papers depend on which theory is employed (e.g. TCE or SET), what exactly is taken to reflect the construct, and which exogenous variables are factored in.

¹³ Their relational exchange dimensions include information exchange, and cooperative norms such as mutuality, solidarity, flexibility and durability. The outcome variables include performance, commitment and satisfaction.

Furthermore, a special but unique to SCM stream of research which provides such divergent findings and insights is that of Supply Chain Integration (SCI). SCI is defined as *“the degree to which a manufacturer strategically collaborates with its supply chain partners (customers and suppliers) and collaboratively manages intra- and inter-organization processes”* (Flynn et al. 2010, p.59). A major dimension of it is external integration with customers and suppliers, which is normally operationalized through multifaceted scales that encompass relationship characteristics such as information sharing, collaborative practices, operational linkages and shared processes. Many papers have been concerned with its impact on performance (e.g. Droge et al. 2004; Frohlich & Westbrook 2001; Rosenzweig et al. 2003), however, findings remain inconclusive. Although the general proposition is that indeed it affects performance, some have found no relationship between supplier integration and operational performance (Stank et al. 2001a) or even a negative relationship (Koufteros et al. 2005; Stank et al. 2001b). The possibility of foundational propositions becomes more difficult when moderating or mediating effects of variables enter the scene (e.g. product innovation as a mediator of the relationship between SCI and performance [Koufteros et al. 2005], internal integration as moderator [Flynn et al. 2010]). For example, Flynn et al. (2010) show the moderating effects of internal integration and suggest that much of the relevant research that has not factored it in may be unreliable. Interestingly, due to the multicollinearity between the dimensions of SCI, they suggest and apply a configurational method (cluster analysis) to examine the ‘fit’ between them.

The equivocality is especially remarkable with regard to the nature of the individual influence of information exchange on performance. Although there is relative agreement in the literature in that it affects performance, papers exist that find no effect when variables such as commitment and interdependence are factored in (e.g. Krause et al. 2007). Moreover, there are works that hypothesize and prove a direct effect of information exchange on performance (e.g. Wong et al. 2010), while others find the construct to be only a moderator of the effect of other variables (e.g. of operational linkages in Cai et al. 2011). The complicatedness increases when information exchange is broken down into lower order variables, such as communication frequency and quality, and when exogenous to the relationship variables are considered. For instance, Mohr and Spekman (1994) find communication quality to have a positive effect but the extent of information exchange to have a negative one. Also, Oosterhuis et al. (2011) found that communication frequency positively affects performance only when the buyer and the supplier perceive the same level of uncertainty, otherwise the effect is negative.

To sum up, in this section I have argued and attempted to convincingly justify that the phenomenon of relational influences on performance is causally complex. I proceed with the implications of this for my research.

2.3.3.4 Critique and Implications

I believe that the driving motivation of the extant literature discussed in the previous section is to derive generalizable, universalistic propositions about relationship characteristics, exogenous factors and their interrelationships, in order to explain the effect of the BS relationship on the performance of the buyer or the supplier. Largely implicit in this is the decomposition of each individual case or observation to scale scores, each scale reflecting a variable of interest. Additionally, because the research is variable-oriented and in its striking majority, regression-based, the variables (relationship attributes and exogenous factors) are effectively treated as rival explanations of the outcome (performance). This is the implicit aim of such research, as the aforementioned assumption underlines the commonly used statistical methods such as regression analysis.

Because of the inconclusiveness of findings though, only a few universalistic propositions about the effects of, and interrelationships between, variables (the underlying aim of the whole research program) can be made. For example, one could confidently expect that commitment of both parties to the relationship would have a positive effect on the performance of the buyer and the supplier (e.g. Morgan & Hunt 1994; Palmatier et al. 2007), but there are few propositions like this.

My personal view is that in the model-building, hypothesis-testing, deductive Buyer – Supplier relationships literature, researchers have been:

- referring to the same theoretical concept (relationship characteristic or outcome) but using a different name to describe it whilst operationalizing it similarly (for example, ‘relationship performance’ and ‘partnership success’ – section 2.3.3.1);
- using the exact same concept and name but operationalizing it differently (for example, this is the case with ‘asset specificity’ – section 2.3.3.3);
- doing any of the above as part of studies conducted in different and diverse industrial contexts (ranging from studies in the German automotive sector [Corsten et al. 2011] to

Mexican fresh produce [Coronado et al. 2010] to multiple manufacturing sectors in Finland [Yigitbasioglu 2010]);

- including in their theoretical models a number of exogenous (to the inter-firm relationship) factors, in order to explore moderating or mediating effects of relationship characteristics on relationship outcomes. Such exogenous factors may include environmental dynamism, market diversity, firm size, industry uncertainty.

Subsequent researchers, in the quest for universalistic associations between constructs representing relationship characteristics and outcomes, structure their literature reviews around the constructs of interest and formulate (and subsequently test) research hypotheses. There is hardly ever acknowledgement of the four points made above, hence the outcome of all this process appears to be divergent findings and inconclusiveness regarding the associations between theoretical constructs.

I believe that building hypotheses on the basis of the inconclusive findings for the literature will not serve the purpose of my research. Servitization is a nascent phenomenon (academically) and supplier performance in triadic servitized settings has not been considered. Hence I propose an exploratory approach to investigate how the relationship as a whole and the different relationship characteristics individually affect the performance of the partner. Additionally, in contrast to the correlational, variable-oriented approach adopted by the majority of the related papers, I employ configurational logic and a relevant technique to seek *configurations* of variables affecting performance (e.g. Ragin 1987). This endeavour will meaningfully complement the exploratory approach and will not treat the different variables (relationship characteristics) as competing explanations of performance. These points are explicated in the methodology chapter, but before proceeding it is necessary to articulate the research questions.

2.4 Research questions

My research questions are a product of the rationale of the study (section 2.2.9) and the main literature review conducted in this chapter. Thus, I conclude the chapter with their formulation. Prior to that, I provide a brief summary of what I have done so far:

1) I have highlighted the gap in the academic servitization literature and presented the research problem (how to enhance service performance of subcontracted partners towards the provider's customer base).

2) I have demonstrated that the problem can be conceptualized as a phenomenon taking place in settings where three actors from different stages in the supply chain become interrelated to form a business triad.

3) I have justified based on business triads and buyer – supplier relationships literature that in order to address the problem and enhance service performance one could examine the role of the provider – partner relationship.

4) I have argued that the phenomenon generally termed 'relational influences on performance' is causally complex, whereby aspects (characteristics) of the dyadic relationship interact with each other and with contextual factors in a number of ways to produce alternative causal paths leading to increased performance.

5) I have adopted a relevant framework that holistically describes a buyer – supplier working relationship that can guide subsequent data collection and analysis (the Cannon and Perreault [1999] framework of relationship connectors).

This summary leads directly to the formulation of the research questions.

Based on points 1, 2 and 3, and with point 5 in mind, I ask:

1) In a triadic servitized context, how does the provider – partner relationship affect the performance of the partner in delivering the services to the customer base?

With the additional insight briefly captured by point 4 I go one step further and ask:

2) What configurations of dimensions of the provider – partner relationship ('relationship connectors') and contextual factors elicit superior service performance?

Chapter 3 follows with the methodological and philosophical considerations, as well as the research design.

3 METHODOLOGY

3.1 Overview of the chapter

For the convenience of the reader I start the chapter by stating the research questions and justifying the suitability of the chosen research setting. I continue with a discussion on philosophy. Firstly, I comment briefly on the different philosophical stances, especially the two extreme positions of positivism and interpretivism. Subsequently, I suggest pragmatism as an alternative to the positivism – interpretivism debate and present its main premises. The rationale behind the choice and evidence on how pragmatism permeates this research are also discussed.

Section 3.4 follows with the research design. The latter comprises one qualitative (three case-studies) and one quantitative (survey) strand, with the former having priority. After a general note on mixed methods research, I demonstrate my research design diagrammatically.

Sections 3.5 and 3.6 detail the specifics of the two phases. Namely, the sampling strategy, the data collection and analysis methods, and the issue of methodological rigour. Crucially, the initial stage of the qualitative phase comprised a number of exploratory interviews whose intention was to contextualize and operationalize the five relationship connectors of the Cannon & Perreault (1999) framework. The latter, for reasons already detailed in section 2.3.2.6 was the tool employed here to guide data collection and analysis. Importantly, section 3.6 ends with the presentation of the fuzzy-set Qualitative Comparative Analysis (fsQCA) technique, which is used to analyze the survey data and answer the second research question. This narrative is short but comprehensive and should help the reader get accustomed with the peculiarities of a technique very rarely adopted by scholars in the different management disciplines.

3.2 The research setting

3.2.1 Research questions and research needs

To start with, I reiterate the two research questions:

- 1) *In a triadic servitized context, how does the provider – partner relationship affect the performance of the partner in delivering the services to the customer base?*
- 2) *What configurations of dimensions of the provider – partner relationship ('relationship connectors') and contextual factors elicit superior service performance?*

Evidently, it follows that the two research questions should be studied in a B2B servitized setting where the provider relies on independent partner for the delivery of the service elements of the integrated offering. Within this setting, the service partners (which will constitute a fraction of the provider's network) will be in direct interaction with the provider and its customer base (for the delivery of the services). This means that the provider, with any one of the partners and the customer base, will form embedded triads within the wider network.

The search for an appropriate setting (i.e. a provider and its network) was conducted during the case identification phase of the ESRC-funded Product-Service Systems project, and specifically the Service Networks stream. For the purpose of my work, a provider operating in the UK commercial vehicles industry was chosen. The company will be referred to from now on as 'TrucksUK' and its network of independent suppliers as 'TrucksUK network', 'service partners' or simply 'partners'. I begin with an overview of the company based on the initial round of interviews with the TrucksUK CEO and other high-rank executives. More detail about the different stages of the research design and the data collection process will be given later (section 3.4). The sole intention here is to introduce TrucksUK and justify that the setting it provides is appropriate for investigating the phenomenon of interest and answering the research questions. This justification is provided straight after the overview of TrucksUK and its network.

3.2.2 TrucksUK and its network

TrucksUK is the British branch of a large German commercial vehicles manufacturer. Because production has ceased in the UK, TrucksUK is essentially an importer. However, to a great extent it can design and implement its own strategy and practices. One of the initiatives that changed the fate of the company was the turn towards servitization. This was a natural response to an increasingly switched on and demanding UK market. Business customers such as transporters and logistics providers started closing down their service and maintenance workshops to focus on their core business. At the same time, their priority started shifting from the pure purchase price of a vehicle to its total cost of ownership over its useful life. For TrucksUK, the increased focus in, and subsequent revenues from, service contracts are believed to have contributed to a giant increase in the company's market share in the last 20 years¹⁴. TrucksUK individuals characteristically say that they “*sell per kilometre*” instead of simply selling a commercial vehicle. Accordingly, an average of 60 % of the vehicles sold per year have service contracts attached to them¹⁵, which ensures steady revenues over a specified period of time. Currently, slightly more than 50% of TrucksUK's annual revenues come from such contracts. Effectively, the customer instead of buying a truck or bus, now pays a fixed amount of money per week based on the defined services¹⁶. Although customizable, there are three main types of offerings with the importance of, and emphasis on, services progressively increasing. According to the most advanced type, TrucksUK assumes the responsibility of everything that the vehicle will need over a fixed number of years (e.g. preventive maintenance, spare parts, breakdown attendance) apart from fuel. Telemetry technology that monitors the performance of the drivers is also included, as well as a potential buy-back price for the vehicle at contract end. The inception and application of the servitization strategy and related initiatives by TrucksUK are considered so successful, that the German parent often sends representatives from Germany or other countries to be ‘schooled’ by their British colleagues.

¹⁴ From a small, product-led organization in 1992 (2% market share, less than 100 employees), TrucksUK has grown into a major player in the market (13% market share, 1000 employees half of whom are employed in the after-sales organization).

¹⁵ The salesmen are financially incentivized to sell the service package along with the product.

¹⁶ Although the company has independent owner-drivers as customers, the biggest proportion of revenues comes from B2B activities. Big customers include Tesco, Wincanton, WH Smith, BP, the MoD and more. These customers are also more likely to follow the fixed-cost per week route (servitization) than simply buying the truck.

Nevertheless, TrucksUK's journey has been long and at times painful, while there remain hurdles to be overcome. Hence, in order to offer a more holistic picture of the context, I briefly present the current challenges of TrucksUK before delving into the manner in which the services are provided by the network.

To start with, almost 12 years ago TrucksUK bought an underperforming, inefficient UK heavy vehicles manufacturer. Due to the cultural incongruence between the companies and TrucksUK's inexperience in acquisitions, the takeover was painstaking and costly. The impact of the acquisition was mainly felt during 2007-2008. The UK manufacturer had got into some severely underpriced long-term agreements, which meant that TrucksUK spent too much to service those vehicles during their final years. This, coupled with the general economic recession and a poor parts pricing strategy implemented by the German headquarters, brought the company to the verge of destroying what it had built over the previous decade. This had an impact on sales, as well as customer and supplier relationships.

Another challenge is the communication between the sales and after-sales departments. After-sales managers often complain that they are not involved in the sales process from the start, which at times leads to unpleasant surprises, for instance, a customer receiving vehicles that the local TrucksUK network member cannot service due to capacity or infrastructure constraints. Finally, concerns have been voiced regarding the influence exerted by the German headquarters. Some decisions taken centrally seem to lack understanding of the UK context and have created problems. One such decision was the parts pricing strategy mentioned in the previous paragraph. Also, the internal IT systems are admittedly not fast enough to cope with the increasing demand for timely information, which naturally leads to long response times. This is actually the major point about which customers complain.

The provision of services

The services are provided by a network of service workshops. TrucksUK owns 18 of them, with the remaining 51 owned and run by independent service partners. These workshops are entirely focussed on providing the services and selling spare parts. This means that they do not sell TrucksUK vehicles; sales are controlled centrally by the TrucksUK headquarters. This is a unique feature of TrucksUK, which differentiates them from

competition. All other commercial vehicles manufacturers have also moved into services, but they still operate in the traditional manufacturer – distributor model. Namely, the independent distributor/partner buys the vehicle, and the salesmen employed by the distributor are supposed to sell it.

The independent workshops have the legal status of franchisees and are sub-contracted for the delivery of the services. According to the TrucksUK executives, the latter seem to be performing better on average than the wholly owned branches. This seems to occur because they have more at stake if their businesses go wrong, as they do not have the deep pockets of a parent manufacturer. Hence, they compete in their locality by striving to deliver exceptional service and sustain revenues. Owning part of the network however is necessary to ensure presence in major conurbations; independent partners would not afford to invest there. Also, it reduces the probability of a potential hostage situation over labour rates. Reasonably, for the purpose of this study the focus reduces to the independent workshops solely, as the wholly owned ones are effectively subsidiaries of TrucksUK and do not suit the rationale.

Having established that TrucksUK is a servitized manufacturer that relies on independent partners for the provision of the services, I continue by demonstrating that:

- TrucksUK, any of its partners' service workshop and its customer-base (considered for the sake of simplicity as a single entity), form a fully connected triad.
- The setting provides a unique opportunity for a comparative study because TrucksUK monitors, documents and rewards the performance of its workshops according to a consistent and relative performance measure.
- Although the average workshop performance has increased in the last years, it still varies between workshops. Hence, investigating whether the TrucksUK – workshop relationship has a role to play in this variation makes sense. It will also potentially help TrucksUK who have been trying hard to standardize performance levels across the country.

I elaborate on these in the following section.

3.2.3 Justification of suitability

In what follows I consider each of the aforementioned points in turn.

TrucksUK maintains day-to-day interaction with the workshops. This interaction spans across the different organizational levels and departments. Firstly, besides the co-located salesmen, there are individuals from the after-sales organization (e.g. parts representative, repair and maintenance manager, regional engineer) assigned to regularly visit the workshops for business development activities, dissemination of best practices, or just for making sure that everything is all right. Additionally, individuals from several departments at the British headquarters (e.g. contract maintenance, warranty, technical help) are in daily communication with the workshops to facilitate the flow of information through the web-based systems and solve inquiries. TrucksUK also keeps contact with its business customers, especially those who have vehicles under contract. Apart from the live provision of telemetry and vehicle performance data, TrucksUK Key Account Managers (KAMs) normally communicate weekly with their direct counter-parts (e.g. procurement managers, fleet managers) from the big customers. The workshop co-located salesmen are also supposed to maintain contact with the local customer base. Besides this regular communication, there is also the ad-hoc, issue-based phone communication between the customer and the TrucksUK after-sales department. At the same time, the workshops are in direct interaction with the customers of TrucksUK too. This interaction is actually encouraged by TrucksUK. The workshops are supposed to keep regular contact with the local depots of major customers, while there is also interaction during business development activities such as parts campaigns. TrucksUK prefer to let the workshop and the customer 'get on with it' at the local level, and intervene with their assigned individuals only if there is a problem in the working relationship. Of course, certain customer – workshop relationships that are perceived to be highly important may be monitored. Also, due to the UK-specific requirement for commercial vehicles to be inspected every 6 weeks, and because business customers such as big hauliers and logistics providers can have a large number of vehicles, direct partner – customer interaction is very regular.

Although brief, this account justifies that the provider – partner – customer triad is a transitive one, i.e. all three links are in place and represent ongoing interaction. Moreover, the three relationships are interdependent. A TrucksUK Key Account Manager (KAM) nicely summarized this: *“So each one of these three links is as important as each other I would suggest. Each one may get strained and a little weaker, and then you have to make*

sure that it gets strengthened, but the minute one completely breaks is the point I think at which the job stops.” In short, the research setting exhibits the necessary premises of triadic interaction (section 2.3.1.7).

Moving to the second point, while making their offerings more complete and sophisticated, TrucksUK realized how determinative the service delivery performance of the partners is for customer satisfaction. Hence, in the middle of the last decade they consulted some important customers and came up with a list of aspects that had to be looked at and improved. Accordingly, some of them were embedded in the franchise agreement as clauses (e.g. cleanliness, image)¹⁷, while others (e.g. MOT first time pass rate, breakdown response times) were translated into performance measures tied around a specific quarterly financial bonus scheme. These measures effectively show how good each service workshop is at keeping the customer’s vehicles on the road (i.e. maximizing their ‘uptime’). According to several respondents, uptime (or vehicle availability) alongside fuel efficiency are rated as the top priorities by most customers in today’s business environment. Crucially, the scheme is believed to have transformed the network as a whole. For example, the MOT first time pass rate of TrucksUK vehicles was 66% before the initiation of the scheme (worst in the industry) and now stands at 94% (best in the industry). More importantly, the general view is that if the workshop performs excellently in the scheme, customer experience is excellent, and consequently so is customer satisfaction. This contributes to the well-being of the entire triad and eventually customer loyalty. As a TrucksUK KAM put it succinctly: *“If the customer has an excellent experience of dealing with our network member because of the measures we put on that network member, then everybody wins.”* Interestingly, the view that service performance translates into customer satisfaction is shared by the workshop respondents as well. One of the exploratory interviewees stated: *“...you know, I’m enthusiastic about [the scheme] because it makes my life easier. Because if everybody [in the workshop] does what they have to do, what comes out at the end is that the customer is happy. So I am happy. I don’t care if the technician’s got the hump with me, I’ll deal with that”*. On top of this, many interviewees acknowledged the positive impact that the improvement in service has had on the growth of the business.

More relevantly to my work, the fact that the provider has been consistently measuring the service delivery performance of its network members, provides solid ground for

¹⁷ These clauses also set the standard for any workshop that wants to become a TrucksUK franchise. According to legislation, TrucksUK cannot reject any request, however, it can define minimum standards such as parking lot capacity.

objectively sampling workshops based on their relative performance scores. It has also been certified that if a workshop underperforms according to the measure, it underperforms across the whole customer base. The converse is also true. Hence, the measure provides a reliable representation of a workshop's service performance in the triad, and for the purpose of this research the customer base can be thought of as a homogenous population.

Regarding the third and final point, a quick examination of the composite measure of workshop performance, as well as the accounts of the TrucksUK top executives suggest that service delivery performance is not consistent across the network. In the words of the Head of Service and Support: *"some workshops do not seem to compete"* and *"...[the bonus scheme] has still not been taken up by some"*. The Head of Network Development also said: *"there are some who are totally apathetic about it and they're really not doing us any good whatsoever, and they're not achieving anything. So if they're not achieving it suggests to me, in broad terms, that they're not giving good customer service."* A KAM referred specifically to a customer with national coverage who is fed up with the inconsistent service levels it receives in different areas. Finally, the CEO said that he will soon be considering whether to keep those service partners who cannot work along what the integrated product-service offering demands. Making the service more standardized and the performance more consistent is one of the top priorities of the company.

Additionally, apart from the performance of the workshops, the nature of the relationships between the workshops and TrucksUK varies as well. As the initial interviewees confessed, the relationship with some is strained, cooperation is lacking and there is suspicion behind any behaviour or action. One of the sales directors actually feels that such relationships hinder the delivery of the value proposition to the customer. This in short means that the research setting exhibits variation, both in terms of the service performance of the workshops and in terms of the quality of the 51 TrucksUK – workshop relationships.

Having introduced the research setting and justified its suitability, I proceed to the main part of the methodology chapter, starting with my philosophical approach.

3.3 Philosophical stance

It has been a widely held view that methodological choices such as the methods for data collection and analysis and the process of interpretation of the results, are underlined by assumptions about the nature of the social reality (ontology) and about the ways in which it is possible to know this reality (epistemology) (Blakie 2007; Easterby-Smith et al. 2002). In social sciences there exist competing philosophical positions that entail the combination of specific ontological and epistemological assumptions. Adoption of a certain philosophical position usually implies that the researcher will deploy methods that correspond with that position (Easterby-Smith et al. 2002; Van de Ven 2007). This is the reason that management doctoral research needs to be explicit about these issues. I firstly present what is common; the researcher adopts positivism, interpretivism or an alternative position which combines ontological and epistemological elements of the two. I then turn to the approach I adopt here: pragmatism.

3.3.1 Positivism and Interpretivism

According to my understanding of the methodological readings during my PhD, the two contrasting philosophical positions in social sciences are positivism and interpretivism. The account given here is brief and simply illustrates the two 'extremes' in the philosophy of social science. It also constitutes the point of departure for the adoption of pragmatism.

Positivism favours the natural science way of doing research. According to positivism, an independent, external reality is assumed to exist, which the researcher should observe and measure from a detached, 'objective' position. Formulation of hypotheses is favoured, which are to be assessed in large samples in order for the researcher to come up with general 'laws' (e.g. Blakie 2007). It follows that quantitative methods such as experiments and surveys are normally associated with this philosophical position. The intention is to control for confounding contextual influences and falsify or confirm relationships between variables in order to predict phenomena (Van de Ven 2007). On the other hand, interpretivism encompasses the assumption that reality is socially constructed by the meanings that people give to it, and that the researcher is unavoidably part of it, thus incapable of objectively observing it. It follows that exploration and understanding of the world is favoured over explanation and prediction. This takes place in settings with small samples, with the use of qualitative methods such as interviews and discourse analysis, and the context plays an integral part in the interpretation of results (e.g. Guba &

Lincoln 1994). The two positions are the opposite, and for some of their proponents, incommensurable ends of a continuum. For that reason, philosophers of science have developed alternative philosophical stances. One example is critical realism which is supposed to be a middle ground between the two (Bhaskar 2008). It adopts a realist ontology (there exists a 'real' world independent of our perceptions) and a constructivist epistemology (understanding of the 'real' world is based on our perspectives). From a different standpoint (explained herein) another alternative is pragmatism (e.g. Biesta 2010; Cherryholmes 1992). I adopt pragmatism because it provides a solid philosophical ground for mixing qualitative and quantitative methods (e.g. Creswell & Plano-Clark 2006). It also emphasizes the investigation of research problems that stem from, and subsequently inform, everyday practice. Moreover, it fits well with the way I see management research. Namely, its primary purpose should be striving to solve problems that emerge out of context-specific everyday practice. I succinctly present pragmatism and elaborate on why it suits my research in the following section¹⁸.

3.3.2 Pragmatism

I have chosen to adopt the philosophical stance of pragmatism. Pragmatism as a philosophy is commonly associated with the work of three American academics and philosophers; Charles Sanders Peirce, William James and John Dewey (e.g. Tashakkori & Teddlie 2010). It is commonly advocated as the philosophical foundation of mixed methods research (e.g. Johnson & Grey 2010). Because I employ a mixed-methods research design, I have given an appropriate spin to the presentation of pragmatism for the sake of relevance. The design itself however is detailed in the next section.

For some, pragmatism should not be seen as a philosophical position among others, but instead as: *"a set of philosophical tools that can be used to address problems [...] one of the central ideas is that engagement in philosophical activity should be done in order to address problems, not to build systems"* (Biesta 2010, p.97). Pragmatism considers the

¹⁸ Without breaking the flow, I would like here to note that in my opinion many qualitative researchers and methodologists are often overly harsh on positivism just to make their point for qualitative research. They often consider positivism as naive and useless. They seem however to ignore the fact that there is literally no social science which currently implicitly adopts positivism *per se*, and even calling quantitative researchers as positivists is misleading. Rather, quantitative social science research is underlined by what is called post-positivism. This position is a development of positivism which relaxes its strong assumptions and adopts a probabilistic view of reality (see Johnson & Grey 2010 for more). I have used the word 'positivism' here simply to illustrate the two presumably opposing ways of doing research.

research problem, rather than the philosophical paradigm (i.e. combinations of interlocking ontological and epistemological assumptions) as the determinant of the methods to be used in a study (e.g. Tashakkori & Teddlie 1998). Additionally, its proponents favour *“a more practical orientation that emphasizes individual components of philosophy and theory as guiding research activities”* (Teddlie & Tashakkori 2010, p.13). The emphasis on the research problem and the anticipated consequences of the research (Cherryholmes 1992), and on individual philosophical assumptions rather than paradigms, are two crucial tenets of pragmatism.

An interesting position comes from Morgan (2007)). He de-constructed the term paradigm and used Kuhn's (1970) own line of thinking to claim that the ‘metaphysical paradigm’ (essentially, conducting research that adheres to established sets of tripartite linkages of ontology, epistemology and methodology) has outlived its usefulness. Instead, he called for a ‘pragmatic approach’ where the main focus is the research problem that then determines the methods used. Furthermore, in pragmatism, inter-subjectivity substitutes objectivity and/or subjectivity and ‘methodological eclecticism’ substitutes ‘methodological monism’. Inter-subjectivity refers to the common world we create from our individual subjective worlds (Biesta 2010), while methodological eclecticism means that the researcher selects and integrates the most appropriate of the many qualitative and quantitative techniques to thoroughly investigate a phenomenon, irrespective of what epistemological tradition each method is associated with (Tashakkori & Teddlie 2010).

This means that pragmatism rejects the incompatibility of methods position, which stems from the view that specific methods are interconnected with specific (bundles of) philosophical beliefs (paradigms) that are incommensurable (see Tashakkori & Teddlie 2010). Modern pragmatists believe that such a position is misguided and reminiscent of adherence to *“monolithic interlocking sets of philosophical assumptions”* (Teddlie & Tashakkori 2010, p.13) and artificial boundaries between the qualitative and quantitative approaches. Thus, pragmatism has been seen as advocating mixed-methods approaches (see Creswell & Plano-Clark 2006; Morgan 2007; Tashakkori & Teddlie 2003; Tashakkori & Teddlie 2010).

Prior to presenting the research design, a few further comments on pragmatism are in order. It is true that there are variants of pragmatism, like, for example, there are variants of realism (or even critical realism). The aforementioned properties however seem to be common. In fact, there are additional shared premises. A number of scholars have

attempted to group them, such as Johnson and Onwuegbuzie (2004) and Cherryholmes (1992). These accounts are effectively based on the views and arguments of the three most significant pragmatists mentioned earlier (Pierce, James and Dewey) as well as contemporary pragmatist philosophers such as Richard Rorty and Susan Haack. These premises are permeated by the rejection of dualities, dichotomies and 'either ors' that are often advocated by methodologists and embraced by students. In short, pragmatism:

- Rejects the qualitative – quantitative divide. For some proponents even the use of these terms is misleading (e.g. Biesta 2010).
- Supports the view that knowledge comes from the person – environment interaction, dissolving subject-object dualisms (e.g. Cherryholmes 1992).
- Views knowledge as both constructed and resulting from empirical discovery, calling for balance between empiricism and constructivism (e.g. Johnson & Onwuegbuzie 2004)
- Believes in ontological pluralism, i.e. reality is complex and multiple (e.g. Cherryholmes 1992).
- Believes that there are multiple routes to knowledge and researchers should provide 'warranted assertions' rather than claims to an unvarying 'Truth'. Pinning down causal entities and claiming laws is pointless. Instead, research should uncover tendencies or probabilities of how entities act (e.g. Johnson & Onwuegbuzie 2004).
- Views theories instrumentally, i.e. they are not either 'True' or 'False', instead, they are more or less useful for predicting and explaining (e.g. Johnson & Onwuegbuzie 2004).
- Incorporates values into inquiry and acknowledges that research happens in social/political/historical contexts (e.g. Cherryholmes 1992).

I believe that the premises of pragmatism permeate all the stages of my research, from the conceptualization of the design to the interpretation of the results. I leave this for the reader to assess. As a conclusion however I want to make a couple of relevant points. Firstly, instead of deciding on the research methods based on a paradigmatic 'package' of assumptions, in a pragmatic manner I put the research questions to the forefront and decide according to them. These research questions express an aspect of a context-specific (i.e. servitization) research problem (i.e. how to make the service partners perform) which implies desired consequences (i.e. improving the partner's performance through the working relationship). Furthermore, the questions have been informed by what *I think* is theoretically known (Cherryholmes 1992), and a useful 'tool' has been adopted to frame the answers to the questions (the Cannon & Perreault 1999 framework).

These research questions require a mixed-methods research-design to be answered so that the research problem can be addressed thoroughly. The research will not however make any claims for unassailable, universal relationships related to the phenomenon (e.g. between constructs), instead, it will produce assertions warranted with evidence and will seek for inferences that may be transferable to similar contexts¹⁹.

I proceed with the detailed presentation of the research design.

3.4 Research design

3.4.1 Introduction

I have deployed a mixed methods research design. *“Mixed methods research is the type of research in which the researcher combines elements of the qualitative and quantitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis and inference techniques) for the broad purposes of breadth and depth of understanding and corroboration”* (Johnson et al. 2007, p.123).

Mixed-methods designs are gaining appreciation and popularity amongst social and behavioural scientists, and an active academic community has gradually established their methodological and philosophical foundations (e.g. Tashakkori & Teddlie 2003; Tashakkori & Teddlie 2010; Creswell & Plano-Clark 2006; Morgan 2007). There are still of course points under debate (e.g. should the language of mixed methods research be an amalgam of the languages of qualitative and quantitative research?). However, there is a remarkable degree of convergence of opinions on many subjects, for example, the rejection of the paradigm incommensurability and method incompatibility positions.

Although the attempts for the establishment of mixed methods research and the formalization of its aspects are primarily taking place outside of the business and management disciplines, there are indeed favourable arguments coming from within. For example, Jick (1979) had argued that the combination of qualitative data (to elaborate on

¹⁹ ‘Inference transferability’ is a term introduced by pragmatist mixed-methods researchers (e.g. Tashakkori & Teddlie 2010). It borrows the word ‘inference’ from statistics, and ‘transferability’ from pure qualitative research.

the phenomenon under study) and quantitative data (to provide preliminary tests of the proposed relationships) can promote both insight and rigor. As Kathleen Eisenhardt (1989, p.538) puts it, this combination can be highly synergistic; Quantitative data *“can keep researchers from being carried away by vivid but false impressions in qualitative data”*, and in reverse, qualitative data can bolster findings coming from the former. Furthermore, Edmondson and McManus (2007) and Forza (2010) argue that the state of prior knowledge is a key determinant of the appropriate research methodology and suggest that theory in management research falls along a continuum from mature to nascent. When theory is at an intermediate state of development, Edmondson and McManus (2007) argue that researchers: *“can supplement qualitative work with quantitative data to discern unexpected relationships, check their interpretation of qualitative data and strengthen the confidence in qualitatively based conclusions”* (p.1166). Intermediate theory research often draws from separate bodies of literature to propose provisional theoretical relationships. It may also investigate theoretically ‘mature’ phenomena in new contexts (Edmondson & McManus 2007). This is the case with my work. The phenomenon of relational influences on performance in itself has been extensively studied with the use of many theories (even though the unassailable conclusions are few and general – see section 2.3.3.3). However, inter-organizational networks and relationships in the context of servitization are under-researched subjects (section 2.2.7). Moreover, theory development in business triads is still at a nascent stage (section 2.3.1.7). With the use of the Cannon and Perreault (1999) framework I intend to theoretically relate previously developed and ‘mature’ constructs (the connectors) in a theoretically and empirically nascent context (business triads in servitization).

Finally, arguably the most elaborate rationale for mixing qualitative and quantitative methods comes from Bryman (2006), who articulated sixteen specific purposes. Showing how some of his points map onto my research will comprise a succinct conclusion to the methodology chapter (section 3.7). The point to be made before proceeding is the following; mixing qualitative and quantitative methods is not only philosophically, but also practically justified. Crucially, the justification can be found within the management research domain.

I continue with the research design I employ.

3.4.2 The design

An issue that has fuelled a lot of discussion is the formalization of mixed methods research designs. For this reason a number of typologies of designs have been proposed (e.g. Morse 1991; Teddlie & Tashakkori 2009). The types differ primarily across three aspects (Creswell & Plano Clark 2006):

- 1) the timing of the two strands (e.g. whether the quantitative or the qualitative strand is conducted first or whether they are undertaken simultaneously);
- 2) their relative importance (e.g. whether one is more important than the other), and;
- 3) the stage at which the two strands are mixed (e.g. the data collection or the analysis).

In this research I employ an *exploratory sequential design* (Creswell & Plano Clark 2006). This means that the qualitative strand is conducted first and has a relative priority over the quantitative. The latter builds on the final or intermediate results of the former, and without it, it would be difficult to comprise a stand-alone study. The results of the two strands are analyzed independently and are combined and compared in the interpretation phase. These points are highlighted from the next section onwards. Figure 3-1 illustrates the phases of the design from a macro level. The procedures and products of each phase are detailed diagrammatically as a summary to the chapter (section 3.8).

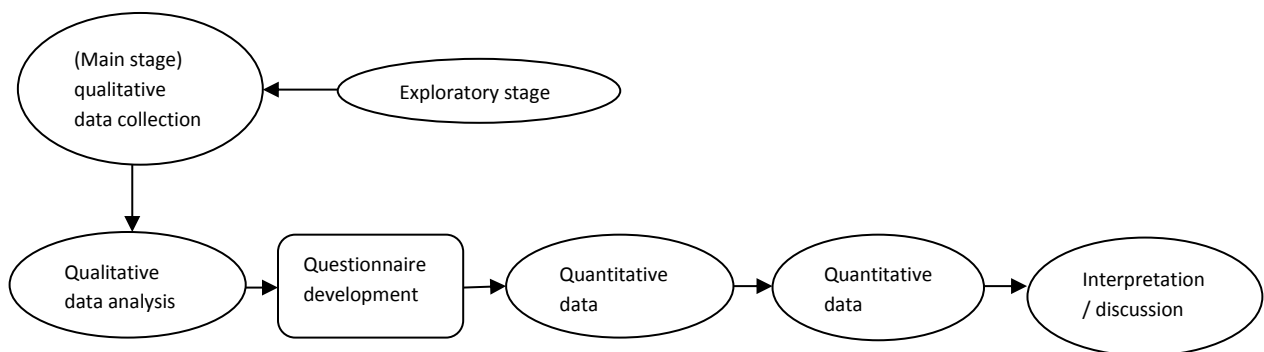


Figure 3-1: Research design from a macro-level

Before elaborating on the two main phases of the design, a comment is in order regarding the primary drive of my research. Some proponents of mixed methods favour the

specification of a 'primary drive', i.e. deductive or inductive, depending on which part (quantitative or qualitative) is more important (e.g. Creswell & Plano Clark 2006, Morse 1991). An exploratory sequential design is associated with an inductive theoretical drive, because the quantitative phase is supplementary to the (relatively more important) qualitative. However, contemporary commentators believe that stating the primary drive is not necessary, and emphasize that the fundamental characteristic of mixed methods research is the iterative, cyclical approach to research that includes both deductive and inductive logic (Tashakkori & Teddlie 1998). In any case, I can state that the primary drive of my research is inductive because:

- 1) I infer through inductive logic about the role of each connector in the performance of the partner, to provide an elaborate answer to the 1st research question.
- 2) Based on these inferences I construct some tentative, testable hypotheses.
- 3) The hypotheses are tested in the second (quantitative) phase and the results are complementary to the results of the first phase, providing the ground for further induction and the answer to the 2nd research question.

3.5 Qualitative phase

As an introduction to this section I provide the rationale for adopting the case-study approach to answer the first research question, and also present the structure of the section.

The phenomenon under study is the influence of the provider – partner working relationship on the service performance of the partner in servitized settings. My first research question essentially focuses on *how* the relationship affects service performance. To answer *how* questions, case-studies have been purported to be an appropriate method (e.g. Yin 2009). Additionally, the phenomenon of interest is complex (section 2.3.3.2) and hence needs to be purposefully investigated in depth in its real-life context (servitization), over which the researcher has little or no control. Case-study research is suitable under such circumstances (Eisenhardt 1989; Yin 2009). In a case-study, the phenomenon cannot be isolated from its context as in laboratory research, because the boundaries between context and phenomenon are not clearly evident (Hartley 2004). In order to deal with the

complexity and provide nuanced understanding, case-study enables the documentation of actual practices and behaviours (Voss et al. 2002; Yin 2009).

In this study, a multiple, comparative case-study approach was followed (Yin 2009). The research question necessitates that the unit of analysis for this study is the firm-level relationship between the two organizations. This means that a 'case' is a provider – partner relationship (Yin 2009). Actually, and more importantly for the quantitative phase, because some service partners own more than one workshop, the unit of analysis is the TrucksUK – service workshop relationship. Within the TrucksUK network setting each case-relationship is investigated in-depth. Each one of them operates within its own context and bears its own history. For example, some relationships are older than others. Some relationships may differ because the workshop has additional franchise agreements with other manufacturers, or because it is located in a rural location. Additionally, from a higher level, the TrucksUK network exhibits its own context and history. It operates in the UK commercial vehicles industry which is becoming increasingly regulated, it is affected by the strategic decisions of the parent, and it is younger than the networks of more established competitors. More importantly, the focal firm (TrucksUK) demonstrates an intense and persistent drive towards servitization. All these points indicate that contextual influences may be various and multi-faceted such that the phenomenon and the context become entangled. A comparative case-study design suits this setting well (Yin 2009).

Case-studies are also ideal for grasping the meaning that participants attribute to the phenomenon of interest (Denzin & Lincoln 2005). This is crucial in my study because to examine the inter-firm working relationship's dimensions and understand their influence on service performance, it is necessary to capture the experience, attitudes and views of the interrelating individuals. The case-study results should be an empirically founded 'theory', or simply, a number of interrelated assertions that can potentially be transferable to similar contexts, i.e. servitized contexts whereby the provider sub-contracts service delivery to independent partners.

Before conducting the main case-studies, I undertook a number of exploratory interviews. Amongst its other uses, this initial stage helped me decide which cases to choose to provide a plausible and satisfactory answer to the research question. This and its other outcomes are presented in the following section. Afterwards, I turn to the main three case-studies.

3.5.1 Initial stage: Exploratory interviews

Having established that TrucksUK is an appropriate setting for answering the research questions, I proceeded to a number of exploratory interviews that had three purposes:

- 1) To help me understand the different KPIs encompassed by the composite measure of service performance (section 3.5.1.1).
- 2) To inform the purposive sampling of cases (section 3.5.1.2).
- 3) To help contextualize and operationalize the relationship connectors for full-scale data collection (section 3.5.1.3).

Nine interviews were conducted. Six were with key actors from TrucksUK and three with individuals from the workshop that was sampled first (Table 3-1). The latter were utilized for contextualizing the connectors. In general lines, all exploratory interviews revolved around topics such as the evolution of the network, the financial bonus scheme, TrucksUK’s overall network strategy and specific practices, and the modes of interaction between TrucksUK and the workshops. Documentation (e.g. the bonus scheme brochure) and TrucksUK’s website were also consulted. Prior to reporting the data analysis procedures for contextualizing the connectors I briefly present the composite performance measure of workshop service performance (which comprised the outcome variable throughout the study) and how it informed the purposeful sampling.

Table 3-1: Roles and nicknames of interviewees

Title (Pseudonym)	Organization
Case identification phase	
CEO (Aaron)	TrucksUK
UK after sales director (Ashley)	TrucksUK
Head of after sales business development (Clark)	TrucksUK
Commercial Manager for key accounts (Stead)	TrucksUK
Retail sales director (Bjorn)	TrucksUK
National Key Account Manager 1 (Usein)	TrucksUK
Exploratory interviews	
Head of UK network development (Antony)	TrucksUK
Head of UK service and support (Colin)	TrucksUK
National Key Account Manager 2 (Nathan)	TrucksUK
National Key Account Manager 3 (Robbie)	TrucksUK
Regional sales manager for the North West (Quinton)	TrucksUK
Regional manager, customer and technical support	TrucksUK

South (Lee)	
General manager (Doug)	ServCo SW
Parts manager (Dom)	ServCo SW
Service, marketing & business development manager (Drew)	ServCo SW
Main phase (case-studies)	
General manager (Doug)	ServCo SW
Service, marketing & business development manager (Drew)	ServCo SW
Service operations manager (Dina)	ServCo SW
Service advisor (Donna)	ServCo SW
Principal (Bob)	ServCo E
Workshop controller (Barney)	ServCo E
Parts manager (Bart)	ServCo E
After-market Manager (Bill)	ServCo E
Principal (Tim)	ServCo S
Parts manager (Tony)	ServCo S
Service manager (Todd)	ServCo S
Warranty & contracts manager (Trevor)	ServCo S
Repair & maintenance manager (Larry)	TrucksUK
Regional manager, customer and technical support South (Lee)	TrucksUK
Regional manager, customer and technical support East (Layton)	TrucksUK
After-sales Key Account Manager (Louis)	TrucksUK
Total number of interviews: 29	

3.5.1.1 Service performance measure

As mentioned in section 3.2.3, since 2007 TrucksUK have been measuring the quarterly service performance of their workshops with a composite measure. The latter encompasses five to seven KPIs. Although some have remained the same since 2007, others have been substituted with new ones by TrucksUK in order to target improvements in different aspects of service delivery. Each KPI sets a standard that the workshop has to achieve. Among these KPIs the MOT first time pass rate is the most crucial one. This is because any vehicle that fails to pass has to remain off the road for at least a day, which counts against the vehicle availability promise of TrucksUK. Whether a vehicle passes or not, depends entirely on how well it has been prepared by the service workshop. TrucksUK demand that each workshop achieves the MOT first time pass rate standard every quarter, otherwise there is no bonus money. If however the workshop achieves the

standard it earns £1 to £2 pounds extra (depending on the quarter) for every hour of servicing vehicles under fixed-cost contract and warranty. It can also earn up to an additional £5 pounds for every hour depending on how many of the other KPIs it achieves. All the KPIs tackle additional aspects of service delivery performance. For example, one measures the promptness of undertaking the 6-week necessary vehicle inspection. Another one has to do with parts availability. A third one captures on-time breakdown attendance, while a fourth one entails the flagging of any vehicle that will be off the road for more than half a day, in a TrucksUK system so as the latter can intervene.

The TrucksUK Head of Service and the CEO were happy to share all the related data with me. These were in Microsoft Excel format. The Excel spreadsheets included the name, ownership and location of each workshop, the KPIs used every year and whether the workshops achieved them or not, the number of service hours for each, and the resultant bonus money in pounds. Because my study is effectively a snapshot at a particular point in time rather than a longitudinal one, I am interested in the current, or at least the relatively recent performance of the workshops. Hence, I focussed on the KPIs from 2009 onwards. To construct a consistent composite measure that can be directly comparable between workshops and across time, I had to omit one KPI (parts availability) which was not used in all years (2009 – 2011). I then determined the standards for each by consulting the original standards and averaging them. I also did not penalize workshops for not achieving the MOT first time pass rate standard. In the end, my quarterly, consistent, composite performance measure ranged from 0 to 5 depending on how many KPIs a workshop achieved per quarter. The mean score comprised the service delivery performance of each workshop for this study. Sampling of the case-relationships was based on workshop performance and is discussed in the next section. The measure also comprised the outcome variable in the second main phase of the research design as it will be explicated shortly.

The last point I would like to make is that performance in this study is contextually defined and what it connotes is clear. As mentioned, it refers to how good each workshop is in keeping the vehicles of TrucksUK customers on the road and it comprises of a number of aspects reflecting this. As stated in the literature review (section 2.3.3.1) it is often the case in the BS relationships literature that performance refers to various things or encompasses diverse concepts. As the Academy of Management Review editors put it (AMR editorial 2010), the construct of performance has significant surplus meaning and depth of connotation, which in effect means that it is rarely clear. I believe that here I have avoided this pitfall.

3.5.1.2 Sampling

It has been suggested that early theory development for understudied phenomena can take place with a lesser number of case studies (e.g. Edmondson & Mcmanus 2007). As this is the case with my area of study, I purposively sampled three workshops. Sampling was based on the workshops' average performance score since quarter one of 2009 and until quarter two of 2011. In particular, I implemented a stratified sampling strategy (Patton 2002). This means that based on the composite measure, sampled one workshop performing better than average, one performing averagely and one performing worse than average. As the purpose of the study is to uncover the role of the provider – partner relationship (and its five relationship dimensions) in the service performance of the workshop, the relationship between each of the three workshops and TrucksUK constituted the unit of analysis. The intentions of this sampling strategy were firstly, to get a high-quality and detailed description of each case-relationship, secondly, to capture major variations between the three, and thirdly, to explore whether there are important shared patterns that cut across cases (Patton 2002). Hence, the role of the relationship in the service performance of the partner will derive its significance from having emerged out of relative heterogeneity.

The high performance workshop is located in southwest England and will be referred to as ServCo SW. ServCo SW was sampled after the recommendation of the TrucksUK Head of Service due to its excellent and consistent service performance. A big advantage was that access was unconditional. The general manager was very keen to get involved with academic researchers in order to share his workshop's recent success, but also to get some independent insight.

Regarding the averagely performing workshop, I went for the one exhibiting the population mean performance score. Initially, the CEO sent an e-mail to the workshop principal and kindly asked him if he could talk to me. He also emphasized the fact that the research is independent and TrucksUK will not get access to the data. Luckily, the principal stated his interest and I took over from there to organize data collection. Because the workshop is located in East Anglia, it will be referred to from now on as ServCo E.

Conversely, it was a challenge to approach badly performing workshops. In order not to make the potential respondents suspicious and bias the results, I decided not to refer to TrucksUK for help like in the previous cases. I started with those at the bottom end of the

ranking and specifically two workshops with awful performance (scores in the composite service performance measure between 1 and 2 out of 5). My attempts were unsuccessful. I continued with workshops performing relatively better but because the relationship between most of them and TrucksUK is not ideal, the workshop general managers were either unresponsive or unwilling to participate. In hindsight, this indirectly indicates that the performance of the partner and the state of the provider – partner relationship are interdependent. This means that I had to eliminate a number of candidate workshops. Nevertheless, I managed to sample one performing worse than ServCo E. Because it is located in one of the most southern parts of Great Britain it will be referred to as ServCo S. The sampled workshops, their scores and some descriptive characteristics are included in Table 3-2.

Table 3-2: The three independent partner workshops

Name	Location	Performance (since 2009)*	Dual franchise**	Number of employees
ServCo SW	Southwest of England	4.19 / 5	-	52
ServCo E	East of England	3.67 / 5	X	34
ServCo S	South of England	3.2 / 5	-	11

*The average performance score for all workshops (independent and wholly owned) since 2009 was 3.67.
 **Whether the workshop has a franchise agreement with additional commercial vehicles manufacturers.

3.5.1.3 Contextualization and operationalization of the relationship connectors

The main outcome of the exploratory interviews with the TrucksUK managers and the three respondents from ServCo SW, was the contextualization and operationalization of the five major constructs of the study; the Cannon and Perreault (1999) relationship connectors. This was a necessary step before full-scale qualitative data collection, because the framework originally consisted only of quantitative scales. Hence, it was not readily applicable for in-depth, context-sensitive qualitative inquiry. Along the same lines with Bastl et al. (2012), I sought to identify the context-specific facets and manifestations of the connectors which guided subsequent data collection and analysis. This resulted in the construction of an interview protocol which can be found in appendix (B). The outcome also facilitated greatly the construction of the questionnaire for the second phase, through the suggestion of new scale items and the adaptation of old ones.

Briefly, from the transcribed exploratory interviews I gathered the material which referred to the working relationship between the workshop and TrucksUK. I used the five relationship dimensions as pre-defined categories, and applied *descriptive coding* (e.g.

Wolcott 1994) to code the relevant data into child-nodes of these connectors/categories. For example, under 'information exchange', the analysis suggested two major child-nodes: 'face-to-face interaction' and 'web-based communication'. I also analyzed the case identification phase interviews because the interviewees often referred to the TrucksUK network of partners. Having coded the data, I cyclically went back and forth between the data and the original abstract definitions (presented in section 2.3.2.4), with the intention to identify context-specific facets and manifestations of the constructs that could potentially indicate differences between the different provider – partner relationships. The result is presented below, and as already mentioned, was transformed into an interview protocol to guide the main data collection phase. For the sake of continuity, I start each connector sub-section by reiterating the respective original definition and description.

Connector 1: Information exchange

“Information exchange is an expectation of an open sharing of information that might be useful for both parties. More open sharing of information is indicated by the willingness of both parties to share important, even proprietary information” (Cannon & Perreault 1999, p.441). Information exchange is related to the concept of communication which has been shown to be: 1) central for channel performance (e.g. Mohr & Nevin 1990), 2) a pre-requisite for trust (e.g. Morgan & Hunt 1994) and 3) an antecedent of commitment in the relationship (e.g. Anderson & Weitz 1992).

From the exploratory interviews it emerged that the construct will refer to the level and quality of information exchange during communication between TrucksUK and each workshop. Communication and information exchange take place in two ways. Firstly, through the IT enabled web-based systems, and secondly, during direct interpersonal interaction between counterparts over the phone or face-to-face. Hence, the construct will be reflected through 1) the perception of the respondents about the level and quality of information exchange between them and their counterparts and 2) their perception regarding information exchange through the web-based systems and portals.

Regarding the first facet, many touch-points between the provider and the workshop were identified, as communication takes place across multiple levels. Hence, there are a number of manifestations that may demonstrate variation across the different provider –

workshop relationships. Manifestations will include, for instance, the intensity and openness of communication between the personnel of the workshop and the sales department (KAMs and co-located retail salesmen), and between the workshop managers and the provider's regional after-sales engineers. Regarding the second facet, differences across the case-relationships can be manifested through the timeliness and completeness of the information that the workshop exchanges with the provider through the electronic means (for example, necessary customer and vehicle information).

It has to be noted that certain issues pertinent to the TrucksUK HQs are homogenous across the different TrucksUK – workshop relationships, hence will not indicate any variation. For example, due to centralized policy, the provider does not share proprietary information individually with the partners but shares some strategic information (performance, market share, future strategy etc.) during a yearly event organized for the whole network. Also, at the operational level, the absence of an out-of-hours communication link exists across all relationships, hence should affect the operation of every workshop. However, each workshop may have a different perception about these facts, and about how much its operation is affected. This is something that will be taken into consideration when analyzing the data so the comparison between the case-relationships is consistent.

In conclusion, the construct will signify the level and quality of information exchange in the relationship.

Connector 2: Operational linkages

Cannon and Perreault (1999) state that “*operational linkages capture the degree to which the systems, procedures, and routines of the buying and selling organizations have been linked to facilitate operations*” (p.442). They argue that the existence of inter-coupled systems tends to specify roles implicitly or explicitly for both parties in the relationship (Heide 1994), and that joint processes facilitate the flow of products, services and information, while reducing transaction costs. Operational linkages may also be considered to include the joint routinized activities of individuals from the two parties. They give the example of service or sales representatives that develop routines to integrate themselves more closely into a buying organization, for example by conducting

regular maintenance checks of equipment and monitoring inventories. Bastl et al. (2012) also consider joint engineering activities as a manifestation of this connector.

Cannon and Perreault (1999) add that interlinking systems can be standardized and operate in the same way across many exchange partners (e.g. the efficient consumer response initiative in the grocer distribution channel). This is similar to my context. All service partners have to use the web-based systems of the provider (intranet, specific web-sites) for a number of reasons. For example, to transmit information about the status of customer vehicles, or to record and report particular defects and repairs. Another reason would be to locate and acquire information regarding servicing processes or customer-specific information and preferences. The interlinking systems implicitly or explicitly specify roles and procedures to be followed. For example, in each workshop a person may be responsible for correctly and efficiently inputting the relevant data on the appropriate website to make warranty related monetary claims. Or the parts manager has to correctly and efficiently use the right systems to order or return parts, while somebody else may have to update the status of vehicles when new parts are fitted in. Additionally, there are specific routines that need to be adhered to, when for example a workshop conducts a repair on a vehicle of which it is not the home dealer. Not doing the right things on the web-based systems may result in monetary losses for TrucksUK or a network member. Using efficiently the systems requires effort. The TrucksUK after-sales director actually admitted that they are *“very onerous”*. Moreover, their influence trickles down to the shop-floor as well, as the technicians have to be meticulous in recording their activities in order to facilitate the input of the data to the systems.

It follows that for a workshop to become operationally integrated with the provider, the roles and processes that come with the interlinking systems need to be followed. Hence the facet that will indicate difference across the different provider-partner relationships will be the degree of adherence to the implicit or explicit roles and routines ‘imposed’ by the interlinking systems. I argue that this will be manifested through the familiarity and competence of the employees with these systems. Information about this can be gathered from the interviews with individuals from each workshop, as well as from each workshop’s TrucksUK counterparts (e.g. regional engineer).

The second facet of the construct, in accordance to Cannon and Perreault (1999) and Bastl et al. (2012) is the existence of joint activities between individuals from the two parties. The exploratory interviews revealed a number of manifestations. For example, there may exist joint activities between the TrucksUK co-located salesmen and the workshop service

managers (e.g. visiting customers), and between the TrucksUK parts representatives and the workshop parts managers (e.g. joint marketing activities).

Overall, the two facets in conjunction will reflect the degree to which a workshop is operationally integrated with TrucksUK.

Connector 3: Legal bonds

Cannon and Perrault (1999) define legal bonds as “*detailed and binding contractual agreements that specify the obligations and roles of both parties in the relationship*” (p.443). They claim that legal bonds provide a governance mechanism to simulate hierarchy when vertical integration is impractical. The two primary benefits of legal contracts are the legal protection provided in case something goes wrong, and the regulation of the exchange. However, contracts can become liabilities if they are too rigid (Macneil 1980) and although formal, detailed contracts are common business practice, many firms prefer to operate with a ‘handshake’ agreement (Macaulay 1963).

As already noted, the provider for strategic reasons has decided not to own its entire service network. Its service partners have the legal status of franchisees. The franchise agreement is signed by all service partners and prescribes the standards that each workshop has to achieve and maintain in order to initially acquire and retain the partner status. These standards are monitored regularly. The agreement also specifies general rules and obligations regarding everyday processes (e.g. fitting only genuine parts when the vehicle is under contract, how to make warranty claims), and states the commitment of the partner to abide by the continually introduced guidelines and procedures describing service and repair activities (e.g. repairing a seat). Some of them may bring about fines and penalties in case of fraud or misconduct. Like the conformance to the prescribed standards, abidance by the aforementioned operational rules and processes is also audited. On the whole, the purpose of the agreement is twofold; Firstly, it ensures that TrucksUK has a standardized and professional image due to all workshops bearing the right colours, levels of cleanliness etc. Secondly, it ensures that the vehicles (whose technology is getting more and more sophisticated) are serviced and repaired in an optimal way by the service partners. Rules and obligations with this intention also act as safeguards against customer demands. For example, regarding a specific fault with the fuel tank, TrucksUK recently introduced a set procedure that the workshop has to follow

to ensure that the fault is not due to the quality of the fuel used by the customer, before committing to any replacement of parts.

At the same time, there are instances when the service partner is included in service level agreements (SLAs) between TrucksUK and customers. Clauses of concern to a service workshop may include customized arrangements such as overnight servicing and the provision of a courtesy van, or smaller requirements in order to ensure standardization (e.g. oil re-fill level, place for stickers to be put). These SLAs can be local or nationwide and the involved workshops provide their written consent. They are also supposed to have a perfect understanding of what is covered by the contract.

It can be reasonably assumed that the legal bonds per se are the same across all TrucksUK - workshop relationships. To this commonality one should add the presumably standardized and homogenous expectations and behaviours of TrucksUK with regard to these bonds. Hence, I argue that variation across the different TrucksUK – workshop relationships with respect to this construct, will be indicated by capturing the perception of the individuals engaged in the different workshop – TrucksUK relationships, about the degree of reliance on the explicit and contractually prescribed rules and procedures. This means that the definition and interpretation of this construct departs slightly from Cannon and Perreault (1999), towards what organization theorists consider as *formalization* (e.g. Hage 1965; Hage & Aiken 1967). Hence, the construct will be manifested through the degree of rigidity of the rules and procedures, the degree to which deviations from what is prescribed are tolerated by TrucksUK, and the degree to which arrangements and resolution of issues can happen in an informal, not by-the-book manner.

Connector 4: Cooperative norms

“Cooperative norms reflect expectations the two exchange parties have about working together to achieve mutual and individual goals jointly” (Cannon & Perreault 1999, p.443). It is implied that both parties behave in a manner that suggests that they understand they need to work together to be successful. By some authors, cooperation reflects trust which in its turn acts as a complementary mode of governance in commercial exchange (Bradach & Eccles 1989), and helps in achieving coordination in channels of distribution (Anderson & Narus 1990). Drawing from Cannon and Perreault (1999) and Bastl et al. (2012) the

construct has a number of manifestations. Most of them resemble the relational norms of Macneil (1980), such as solidarity, flexibility, mutuality and durability. Some manifestations follow:

- Concern about each other's profitability;
- Recognition that problems are joint responsibilities;
- Recognition that combination of both parties' efforts is necessary;
- Willingness to make cooperative changes;
- Whether the stronger party takes advantage of its bargaining position and behaves autocratically, and;
- Perception of a 'partnership mentality' as opposed to a purely commercial relationship.

All these are applicable in my context. For example, the exploratory interviews uncovered behaviours signifying a partnership mentality (e.g. workshop managers supporting the co-located salesman). At the same time, the workshop respondents vigorously expressed the expectation to be supported to serve the provider's customers. They also recognized the commonality of objectives and long-term goals, which can only be fulfilled through cooperative efforts. These manifestations are expected to vary in magnitude across the different provider – partner relationships and can produce rich insight. For example, according to three exploratory interviews from ServCo SW, the fact that the co-located salesmen are actively supported with whatever they need is not happening everywhere.

In short, this dimension will capture the perception of individuals regarding whether their relationship with TrucksUK is a cooperative effort with common goals, as opposed to an adversarial one.

Connector 5: Relationship specific adaptations by the service partner

"Relationship-specific adaptations are investments in adaptations to process, product, or procedures specific to the needs or capabilities of an exchange partner" (Cannon & Perreault 1999, p.443). Adaptive behaviour focuses on the individual behaviour specific to

the other party in the relationship. It may include both one-off investments necessary to conclude a specific transaction (e.g. special machinery), and gradual adaptations (e.g. training). Relationship specific adaptations reflect an aspect of calculative commitment in a relationship (Anderson & Weitz 1992) and help to build switching costs and reduce transaction costs.

In my context, the focus limits to the relationship-specific adaptations by the service workshop. That is because the provider treats all partners equally and follows a consistent way of managing its relationships with them. Any adaptation it has resorted to (e.g. introduction of a parts callout system) applies to the relationship it maintains with all partners. Manifestations that may display variation between different relationships and potentially explain differential service partner performance are the following:

- Changes in personnel such as recruiting additional administrative staff, or investments in time and money for employee training (e.g. technicians), specifically in order to be able to cope with the workload coming from the provider and its customers.
- Investment in facilities and infrastructure in order to reach the standards necessary to become a member of the provider's network.
- Investment in capital equipment and tools specifically for dealing with the provider and its customers.
- Operational adaptations such as changes in opening hours (e.g. introduction of a night-shift or a weekend-shift).

Overall, the construct will indicate the degree to which the workshop has adapted itself according to TrucksUK's will.

The contextualization of connectors was crucial for the development of the interview protocol, as well as the original template that guided the case-study data analysis. These points are discussed in the following section.

3.5.2 The case-studies

3.5.2.1 Data collection

Business-to-Business relationships have rich interfaces involving the interaction of individuals at many organisational levels (e.g. Dwyer et al. 1987; Ellram & Hendrick 1995; Ring & Van de Ven 1994). Thus, in each workshop I selected and interviewed at least four individuals with different roles (Table 3-1 in section 3.5.1). All of them were in regular interaction with TrucksUK, hence were considered knowledgeable about the working relationship. Epistemologically speaking, the interviews are treated as providing insight into the experience of the participants outside of the interview situation (King 2004). Hence, respondent triangulation and the use of an interview protocol (appendix B) to make the accounts systematically comparable were important. I acknowledge however that in such situations it is highly unlikely to find a uniform perception between respondents (Blois 2002). Thus, the multiple views on the TrucksUK – workshop relationship, in conjunction, are considered to comprise the holistic, inter-subjective account of the firm-level working relationship (the unit of analysis).

A typical interview started with general questions capturing the respondent's perception of the quality and history of the relationship between TrucksUK and their workshop, and their everyday experience of dealing with TrucksUK. The interview continued with questions intending to capture information specific to the facets of each construct (relationship connectors), and I was actively asking for examples to uncover idiosyncratic cues and manifestations. The facets of the connectors and the related questions formed an interview protocol, which as mentioned, was significantly facilitated by the outcome of the exploratory interviews (contextualization of connectors). For instance, as discussed earlier, information exchange has two primary facets: level and quality of information exchanged during direct face-to-face interaction, and level and quality of information exchanged through the web-based systems. Accordingly, the questions were phrased in such a way as to gather relevant information, and by probing appropriately I tried to uncover case-specific cues.

Although I tried to stick closely to the structure and questions of the protocol, this was not possible in all instances. Firstly, some interviewees were more comfortable answering certain questions. For example, the relatively lower-level employees could not provide information about their workshop's relationship-specific adaptations, which are largely of strategic nature. Secondly, some were happy to talk non-stop about the firm-level

relationship and I only probed appropriately to uncover specific manifestations of the constructs. In order to avoid the social desirability bias and the possibility that the respondent makes implicit connections between the different topics covered and their workshop's performance, I refrained from using the phrase 'your performance'. Instead, as seen in the protocol, I probed for the perceived *implications* of the state of affairs they were discussing.

In TrucksUK I managed to interview four individuals in regular interaction with the targeted workshops. These interviews comprised the last stage of data collection and took place after initial analysis of the interviews conducted in the workshops. Their intention was mainly to test and validate the emerging findings and assess the degree of agreement between the views of individuals from the two exchange parties. As shown however in the within-case analysis, they provided genuine insight about aspects of the connectors (e.g. the level of familiarity of the workshop with the interlinking web-based systems), and helped in explaining some views expressed by certain workshop individuals.

3.5.2.2 Data analysis

Data collection and analysis happened concurrently. In between the different data collection sub-stages (i.e. interviews in the 1st, 2nd and 3rd case workshops and validation interviews in TrucksUK) preliminary analysis of the previously conducted interviews had already taken place. In this way I could validate and embellish my emerging impressions and interpretations regarding the role of each relationship connector in the performance of the workshop (Ezzy 2002).

All interviews were recorded, verbatim transcribed and input into a qualitative data analysis software (NVivo 9.0). I will at first present the overall *analysis strategy* and will afterwards delve more deeply in the specifics of the analysis process by discussing the *coding strategy*. To start with, I followed the template analysis strategy (King 2004). A list of codes ('template') was generated *a priori*, based on the literature and the outcome of the exploratory interviews (contextualization of connectors). Reasonably, it was of a hierarchical nature. The five connectors comprised the level-one categories, and the facets of each were organized as provisional sub-categories. The template was used in the within-case analysis for each case separately. Manifestations and case-specific cues were coded according to which facet and connector they reflected. All data were scrutinized at least three times before the template was considered 'final' (King 2004). As it is common,

the latter was a revised version of the initial template. As the reader will soon see, the within- and cross-case analyses, as well as the answer to the 1st research question (sections 4.2, 4.3, 4.3.2 respectively) are structured around the connectors and their respective facets. More detail on the data analysis process however is provided in the remaining of this section, where I discuss the specific coding strategy I applied.

I predominantly followed the guidance of Bazeley (2007) and Saldana (2009). Saldana specifically is a proponent of pragmatism. He believes that there is no 'best' way for coding data, and like all methodologies, methods and research questions, the coding strategy followed depends on the context. Hence, a coding scheme can consist of different methods in a 'using the right tool for the right job' manner²⁰. In other words, coding is "*an idiosyncratic enterprise*" (Glesne 2010, p.153) and "*because each qualitative enterprise is unique, the analytical approach used will be unique*" (Patton 2002, p.433).

Contrary to the idea of a clean state (Glaser & Strauss 1967), answering the research question required the purposive search for evidence relevant to the five relationship dimensions. In addition, the five dimensions had been used *a priori* to frame the semi-structured interviews. Hence, as mentioned, they comprised the starting level-one categories in the coding scheme, and *structural coding* (Saldana 2009) was utilized throughout to categorize the data. For that matter, classification reasoning and intuition was used in order to determine which data 'look alike' (Lincoln & Guba 1985). The facets of each construct from the literature and the exploratory phase were set as provisional sub-categories across the three cases, under which, case-specific manifestations, quotes and examples were coded. This means that *provisional coding* (Miles & Huberman 1994) was also implemented. The provisional codes however were revised, expanded or deleted as data was collected and analyzed (Dey 1993). This later led to the refinement of the definitions and facets of the five relationship connectors. As Rubin & Rubin (2005) recommend, refinement of the contents of each category has to take place before comparing or asserting relationships between them.

More on the technical side, several codes appear as *process codes* (e.g. Strauss & Corbin 1998), with the use of gerunds in the code titles connoting action or some sort of activity in the data. Process codes included those capturing behaviours of individuals from the workshops that reflect cooperative norms. Examples of process codes include 'supporting co-located salesmen' and 'trying to retrieve lost customers'. *In-vivo codes*, i.e. codes that refer to words or short phrases from the actual language used by the participants, were

²⁰ He calls this *pragmatic eclecticism*.

also used to capture case-specific cues. For example, the ServCo S service manager used the phrase 'forgotten about' to express what in his opinion TrucksUK think of his workshop, while the principal of ServCo E characterized certain TrucksUK individuals as 'bullies'. Both were used as in-vivo codes under the relevant sub-categories. To a certain degree, *simultaneous coding* (Miles & Huberman 1994) has also been applied, whereby two or more codes are applied to a single datum. This is not unusual. "*Complex social interaction does not occur in neat, isolated units*" (Glesne 2010, p.150) so the data within the categories cannot always be discretely bounded. The boundaries are 'fuzzy' at best (Tesch 1990). For example, some accounts of events given by participants were so rich that they illustrated points related to both cooperative norms and legal bonds or information exchange and operational linkages.

Throughout the process I have been linking analytic memos to NVivo nodes to reflect on the coding process, and document my thoughts on the research questions, categories, chronology of events and emerging relationships between categories. Crucially, the analytic memos captured the importance and role of two emergent factors that are exogenous to the working relationship between the provider and the partner. These are: 1) the size of the workshop and, 2) the proportion of the workshop's revenues coming from fixed-cost TrucksUK service contracts and warranty activity²¹. Because it turned out that they affect the different relationship connectors, their inclusion in the analytic story is necessary. Their role is presented in the next chapter (section 4.3.2).

Having coded the data, full within-case analyses and case reports were initially produced. The cross-case analysis followed. Its intention was to provide the ground for answering the first research question: '*How does the provider – partner relationship affect the performance of the partner in delivering the services to the customer base?*' This required me to discern the role of each relationship connector and exogenous factor in the performance of the workshop, and the interplay between them. Accordingly, the case-reports were input in NVivo. A second cycle of coding followed, which involved the original data corpus, the case-reports and the analytic memos. *Pattern coding* (Miles & Huberman 1994) was mainly applied this time, and each code reflected an association or causal relation between the connectors, exogenous factors and service performance. For example, two links that seemed to be salient across the three cases were those between the constructs of information exchange and service performance, and operational linkages and information exchange (section 4.3.2). The respective pattern codes that captured

²¹ This has been termed Product-Service penetration as discussed in the analysis chapter.

these associations were: 'information exchange increases service performance' and 'operational linkages enhance information sharing'. Rather than formal theoretical propositions, pattern coding helped me formulate a number of *warranted assertions* (Biesta 2010) capturing the relationship between the main constructs of my study. These assertions were effectively compiled into an analytical model, which constitutes the answer to the 1st research question. It demonstrates the role of the provider – partner relationship in the service performance of the partner by providing a nuanced picture of how each relationship dimension (connector) contributes.

Before continuing with the quantitative phase, I believe that a note on the validity and reliability of the qualitative case-study work is necessary.

3.5.2.3 Methodological rigour

Because the case-study phase comprised the first and fundamental part of my research, methodological concerns about rigour should be addressed here explicitly. Hence, a comment on validity is in order.

Gibbert et al. (2008), Yin (2009) and Eisenhardt (1989) among others, provide explicit guidelines for establishing methodological rigour and assessing the quality of the findings of case-study work. Commonly, there are four related concerns: internal validity, construct validity, external validity and reliability. In short, internal validity in qualitative research refers to the plausibility of the causal relationships proposed, so as the phenomenon of interest to be accurately reflected. Firstly, internal validity here was enhanced by the use of a multi-theoretical framework of variables (the Cannon & Perreault 1999 connectors) that guided the investigation for plausible causal relations (Yin 2009). Secondly, as mentioned in the previous section, the second stage of the analysis focussed specifically on discerning relationships between the relationship connectors, exogenous factors and service performance. All associations are substantiated with evidence and are tabulated in section 4.3.2 of the findings. Thirdly, it could be said that internal validity increases due to the recruitment of interviewees from both exchange parties for all case-relationships. Although the workshop respondents were more compared to the TrucksUK ones, the validity interviews with the latter ensured that the findings are not entirely based on accounts from the one side only.

Construct validity refers to the correct operationalization of the concepts being studied (Yin 2009). The exploratory interviews and their transcription and analysis for contextualizing the relationship connectors had exactly this purpose. The recruitment of interviewees with diverse roles within the workshops should also enhance construct validity. Also, the definitions and descriptions of the constructs have been reviewed by my supervisor, my academic panel and another two academics. Comments towards further clarifying the constructs were accommodated.

External validity is concerned with the establishment of the domain in which the findings can be generalized (Yin 2009), and it is very close to the concept of generalizability. A comment on the generalizability of the outcome of the research as a whole is provided in the conclusions chapter. For this part of the research it needs to be mentioned that external validity, *per se*, is limited to the TrucksUK network setting. To this end, the use of a purposive stratified sampling strategy (section 3.5.1.2) ensured variation in terms of the outcome variable (service performance). Hence, the account of the phenomenon of interest (relational influences on performance) emerged out of relative heterogeneity (Patton 2002), which enhances external validity. The detailed presentation of each case-study context, as well as the research context in general, provide the ground for inferring about the transferability and applicability of the findings, but as mentioned, the issue is left to be discussed in the conclusions chapter.

Reliability refers to the possibility that a researcher will reach the same conclusions if they repeat the same study with the same steps all over again (Yin 2009). The deployment of an interview protocol that was inductively derived from the exploratory interviews and repeatedly improved before subsequent data collection is supposed to enhance reliability (Yin 2009). Additionally, all key decisions and a chronological trail have been made transparent in previous sections. Finally, the utilization of the qualitative data analysis software NVivo for establishing a document database for each case and systematically analyzing the interviews must have also enhanced reliability.

The chapter continues with the presentation of the quantitative phase of the research design.

3.6 Quantitative phase

3.6.1 Introduction

The second main phase of the study consists of the construction, distribution and analysis of a questionnaire. As discussed in section 3.4.2, its nature is complementary and it should not be considered as a stand-alone study. This is because it relies heavily on input from the exploratory interviews, and the qualitative phase interim and final findings (as will be explicated herein). The quantitative work commenced with the questionnaire construction which should have ideally taken place after the completion of the main qualitative phase (case-studies). However, due to time constraints this turned out to be impossible. Hence, during the analysis of the second case-relationship data (ServCo E – TrucksUK) I started identifying appropriate scale items. At this stage, I had already identified two emergent exogenous factors that played a role in the performance of the workshops (workshop size and percentage of workshop revenues coming from fixed-cost TrucksUK contracts and warranty activity). Additionally, I had contextualized and adequately operationalized the relationship connectors. These two points significantly facilitated the development of the questionnaire (as detailed in the following section). On the negative side, in hindsight I realized that some items could have been phrased in a better way if the within- and cross-case analyses had been conducted in their entirety before the development of the questionnaire. I discuss this in the analysis chapter (section 4.4.3) and include it as a limitation. The phase finished with the analysis and interpretation of the data after the main qualitative phase had finished. The results triangulated and extended the findings from the qualitative phase as elaborated in the next chapter.

In the next section, the data collection process is detailed, while section 3.6.3 provides an outline of the data analysis process as well as a description of the analytical method employed, fuzzy-set Qualitative Comparative Analysis (fsQCA).

3.6.2 Data collection

To identify and target appropriate, knowledgeable individuals in the workshops, I consulted the TrucksUK Head of Service and one of the managers from the sub-department dealing with the financial bonus scheme. In each workshop, the principal (or

general manager) was deemed to have a holistic view of the relationship, hence he was considered the ideal respondent. However, the Head of Service said that in most of the medium sized and large workshops, additional respondents (e.g. the service operations manager, workshop controller) could confidently respond to the questionnaire. This opinion resonated perfectly with the impression I had got from the qualitative phase up to that point. Three individuals from ServCo SW (1st case) and two from ServCo E (2nd case) were in regular and multi-level interaction with TrucksUK, and had a holistic picture of the firm-level working relationship. I believe (and my two TrucksUK 'advisors' agreed) that they would comfortably and knowledgeably answer to the questions. In the end, a list of 108 target individuals from the 51 workshops was constructed. These individuals were firstly sent an e-mail by the Head of Service. The e-mail included a very brief summary of my research and an encouraging note to participate. It also stated that the research was being conducted independently of TrucksUK, who would never get access to the data. A couple of days later I followed up with an e-mail to all members of the list, in which I introduced myself and attached the data collection instrument. The latter consisted of:

- 1) An introductory letter to the potential respondent, providing a description of the study, its purpose, as well as guidelines for completing the questionnaire (appendix C). With regard to the latter, the participants were given two options to respond. Firstly, they could print and return the filled up questionnaire by using the pre-paid envelopes provided. Secondly, they could simply respond to the online version of the questionnaire which I developed on the Qualtrics web page. A generic link was included, but each potential respondent also received a Qualtrics-constructed individual link which was pasted at the bottom of the e-mail. Finally, the letter emphasized my commitment to treat all data confidentially.
- 2) A short series of questions intending to capture basic contextual characteristics (e.g. years that the workshop has been a TrucksUK network member), and most importantly the number of employees of the workshop. The latter reflected size, i.e. one of the two exogenous factors that emerged from the qualitative phase to affect the relationship connectors and the service performance of the workshop. With regard to the second exogenous factor (percentage of overall revenues coming from fixed-cost contract and warranty activity) the 2011 figure was available from TrucksUK and was duly used.
- 3) Multi-item scales for each relationship connector. These were largely based on previously used scales but also on the outcome of the exploratory interviews and the interim findings of the main qualitative phase. Specifically, some items were adopted in their original form, some were adapted to fit my context, and a few

were newly developed to tap the unique context-specific facets and manifestations (e.g. the first facet of operational linkages – section 3.5.1.3). The items for each connector with their literature sources are provided below (

4) Table 3-3), but the instrument in its entirety can be found in appendix (C).

The literature source of items is not limited to Cannon and Perreault (1999). This is because:

- some were verbalized by earlier researchers and had been utilized to reflect some relevant construct;
- the verbalization of some items by later researchers fits my purpose and context better, and;
- information exchange includes items that reflect information quality (last five items).

Table 3-3: Items by connector with literature sources

<p>1) Information exchange (adapted from Cannon & Perreault 1999, Chen & Paulraj 2004, Monczka 1998) [1-7 Likert scale, strongly disagree...strongly agree]</p> <ul style="list-style-type: none"> - We share sensitive information with [.]²² (e.g. financial, competition). - [.] is provided with any information that might help them. - Exchange of information takes place frequently, informally and/or in a timely manner. - We are provided with any information that might help us. - We have frequent face-to-face planning/communication with our [.] counterparts. - We keep each other informed about events or changes that may affect the other party. - Information exchange between [.] and us is timely. - Information exchange between [.] and us is accurate. - Information exchange between [.] and us is complete. - Information exchange between [.] and us is adequate. - Information exchange between [.] and us is reliable.
<p>2) Operational linkages (adapted from Cannon & Perreault 1999) [1-7 Likert scale, strongly disagree...strongly agree]</p> <ul style="list-style-type: none"> - We have got closely linked business activities with individuals from [.] - The efficient usage of the web-based systems of [.] is essential to our operations. - Some of our operations are closely connected with the operations of [.] - We adhere very closely to the procedures specified by the [.] web-based systems (<u>new</u>). - We are very comfortable using the [.] web-based systems (<u>new</u>).
<p>3) Cooperative norms (adapted from Cannon & Perreault 1999 and Prahinski & Benton 2004) [1-7 Likert scale, strongly disagree...strongly agree]</p> <ul style="list-style-type: none"> - Both sides are concerned about the other's success and profitability. - [.] will not take advantage of a strong bargaining position against us. - [.] and us must work together to achieve our mutual goals.

²² [.] = TrucksUK

<ul style="list-style-type: none"> - Our relationship with [.] is better described as a cooperative effort rather than an adversarial effort. - When we have a problem, [.] help us solve it. - When we are solving problems jointly, [.] are very cooperative in resolving them. - We support MAN Truck&Bus as much as we can <u>(new)</u>.
<p>4) Legal bonds (adapted from Jap & Ganesan 2000) [1-7 Likert scale, strongly disagree...strongly agree]</p> <ul style="list-style-type: none"> - In our relationship with [.] whatever is specified in the legal contracts is followed very closely. - The only way we seem to communicate effectively with [.] is when everything is spelled out in detail. - Over time we have developed ways of doing things that never need to be expressed formally. - We adhere very closely to the terms and obligations specified in the legal contracts between us and [.] <u>(new item)</u>. - [.] are keeping their relationship with us very rigid and formal <u>(new item)</u>.
<p>5) Relationships-specific adaptations by the service partner (adapted by Cannon & Perreault 1999 and Heide & John 1990) [1-7 Likert scale, strongly disagree...strongly agree]</p> <ul style="list-style-type: none"> - We have made significant investments in tools and machines dedicated to the relationship. - We have made substantial commitments in time and money for employee training to be able to deal with [.] - Just for [.] we have changed our opening hours <u>(new item)</u>. - Just for [.] we have changed our marketing - If we switched to another commercial vehicles franchisor, we would lose a lot of investments made in the relationship with [.]

Before distribution and in order to increase face and content validity, the instrument was reviewed by four academics and three practitioners. The academic panel included three individuals from Cranfield School of Management specializing in IOR and servitization, and one more who had been working with TrucksUK for two years as part of the Cranfield PSS project. Secondly, the questions were reviewed by the Head of Service of TrucksUK and one of his subordinates, plus the principal of ServCo E. Only a couple of comments with regard to structure and phrasing were made and were subsequently accommodated.

3.6.3 Data analysis

After three reminding notifications, 39 completed questionnaires from 31 different workshops had been received. To increase the response rate I referred to the TrucksUK CEO for help. Accordingly, he sent an encouraging e-mail to the members of the list, similar to the one the Head of Service had initially sent. As a consequence, five additional individuals from three workshops replied. As a last resort I tried to reach the general managers from the remaining 17 workshops. My efforts resulted to another four individuals from four workshops responding. Hence, the final sample consists of 47 completed questionnaires from 38 workshops. As mentioned earlier, the pool of potential

respondents was 108 (43.5% response rate) and the entire population of independent workshops is 51 (74.5% representativeness).

For the sake of continuity, the data analysis process is detailed in the analysis chapter (section 4.4.3). It can be noted here however that all 47 questionnaires were utilized to establish scale reliability (using SPSS), but nine of them were excluded from the main analysis. For the latter, only one questionnaire per workshop was retained. This was the one completed by the relatively higher rank employee in the workshop, as it was assumed that they had a deeper and all-around knowledge of the company-level working relationship. For example, if both the principal and the service manager of a workshop replied, the response of the latter was excluded.

This section also needs to introduce and present the analytical technique employed. This is done below.

3.6.3.1 Fuzzy-set Qualitative Comparative Analysis as the analytical technique

This sub-section introduces fuzzy-set Qualitative Comparative Analysis (fsQCA). It presents its main characteristics and analytical steps. fsQCA is an advancement of simple (or crisp-set) QCA, which was developed by a political scientist and sociologist, Charles Ragin (1987). Political science and comparative sociology are the fields in which the method has remained more popular. However, relatively recently and due to its advantages (discussed herein) it has been imported to management research and its sub-disciplines (Fiss 2007; Fiss 2011; Grandori & Furnari 2008; Kent & Argouslidis 2005; Kogut et al. 2004; Meuer 2011; Ordanini & Maglio 2009). The introduction provided here is similar to the one provided in the previously cited works. For a more extensive account the reader may want to refer to Ragin (1987) where the ideas behind QCA are developed, and Ragin (2008) for a detailed demonstration of fsQCA. Alternatively, for a quicker but more relevant to the management discipline introduction, one could refer to Peer Fiss's articles in *Academy of Management Review* (2007) and *Academy of Management Journal* (2011). Even though some of the steps in the analysis are common, for the sake of relevance in this introduction I focus more on fsQCA rather than (crisp-set) QCA.

To start with the epistemological premises of the method, fsQCA (and of course QCA) examines and systematically compares entire *configurations* of variables (in QCA language: 'conditions'), instead of analyzing net effects of *individual* independent

variables. For instance, instead of seeking the individual effects of each relationship connector on service performance, the technique will identify configurations of connectors that enhance (or hinder) performance. Thereby, it does not treat each condition as a competing explanation of an outcome (like for example multiple regression), rather, it aims to uncover the conjunctural impact of those conditions. In this way it maintains the integrity of each individual case (Ragin 2008). Due to its configurational nature, fsQCA is ideal for examining complex causation, as it is the case with the phenomenon of relational influences on performance. It achieves this by allowing for multiple solutions; several configurations of conditions can lead to the same outcome of interest. For example, a configuration of high operational linkages and cooperative norms may be equally effective in eliciting high service performance with a configuration of high relationship-specific adaptations and information exchange. The latter is often referred to as 'equifinality' (e.g. Doty et al. 2003; Fiss 2007). Formally, equifinality represents the idea that *"a system can reach the same final state from different initial conditions and by a variety of different paths"* (Katz & Kahn 1978, p.30). Moreover, fsQCA does not need large samples neither does it assume normality of the data. Its strength actually is dealing with medium sized samples (12 to 50), which are normally too large for traditional qualitative analysis methods to handle systematically, and too small for mainstream statistical techniques to produce robust results. Finally, because it is based on set-relations rather than correlations, fsQCA can tackle causal asymmetry. This means that both the presence and the absence of a condition (as members of different configurations) can lead to the occurrence of the outcome. Such relations are impossible to identify with commonly used, linear statistical techniques. All these points make it an appropriate method for answering the second research question. In what follows I provide a detailed account of the logic and mechanisms of the method.

fsQCA (and QCA) relies on set theory to organize the data and Boolean comparative logic to identify conditions that in conjunction lead to an outcome of interest (explicated later in the section). Set theory is the branch of mathematics that studies sets of objects. Fundamental to fsQCA is the treatment of values of variables as membership scores within clearly defined sets. Each case is assigned a set-membership score in each set which takes its name and substantive meaning from its respective original condition/variable. For example, in this work every case will be assigned a score signifying membership in the 'set of relationships with high information exchange', the 'set of highly performing workshops' and so on. The main difference between crisp-set QCA and fsQCA can be spotted here. Crisp-set QCA assigns and handles binary set membership scores (0 or 1), which signify full non-membership and full membership respectively. On the other hand, fsQCA is based on

fuzzy algebra and allows any gradient score between 0 and 1. The higher a case's score in a target set, the more 'in the set' it is supposed to be. Typically, a score of 0.50 connotes 'neither in nor out' of the set and is also known as the 'cross-over point' or the point of 'maximum ambiguity'. A crucial step in any fsQCA exercise is the assignment of set membership scores. This procedure is called *measure calibration* and resembles the similarly named, typical step of engineering and physical sciences research. According to the fsQCA proponents, calibration should be based on external, objective criteria or on all available theoretical and substantive knowledge. In this work, the context-specific substantive knowledge gained from the main qualitative phase is used. Based on their original values for each variable, the cases take their membership scores for each respective set according to two methods:

- Direct calibration, whereby three thresholds are used to code the original values and subsequently transform them into fuzzy-set scores: The point of full inclusion in a target set (a fuzzy set score of 1), the point of full exclusion (a score of 0), and the cross-over point (0.50). Transformation is based on a simple algorithm that takes into consideration the relative differences in the original values and can be left to the fsQCA software (Ragin 2008).

- Indirect calibration, whereby the researcher develops their own coding scheme of qualitative scores (that can take any value between 0 and 1) and assigns them to the original values of each variable. An exemplar scheme would consist of values of 0, 0.20, 0.40, 0.60, 0.80, 1.00 and would be informed by theoretical and empirical knowledge. Transformation into fuzzy-set scores is based on a fractional logit model estimation (see Ragin 2008 for more detail).

In any case, calibration decisions have to be made clear and transparent, because in essence they are an outcome of the subjective assessment of the researcher. Both methods are applied here depending on the variable under calibration and all decisions are detailed and justified (section 4.4.3.2).

Provided that each case has acquired a fuzzy membership score in each set, Boolean comparative logic is applied to analyze interdependencies between conditions and the outcome²³. For that reason, a truth table is utilized to exhibit all possible logical combinations of present and absent conditions. The number of rows in the table will be 2

²³ The Boolean operators AND, OR and NOT are used, which should be familiar to the reader due to their deployment by search engines.

to the power of k (2^k), where k denotes the number of conditions. For example, here k equals 7 (the five connectors plus the two exogenous variables). Listing all possible configurations and assigning each case to one possible configuration is an automated process, but very important to derive the solutions. When set memberships are binary (simple QCA) assigning cases to configurations is straightforward and can even be done manually. On the other hand, fuzzy-set configurations are collapsed to crisp-set (0 1) ones by the fsQCA software. The idea behind this is that in an imaginary vector space with 2^k corners, one for each possible crisp-set configuration, each case will be relatively closer to just one of them, depending on its fuzzy membership scores in the sets (Ragin 2008). From the truth table to produce the solutions, the software applies Mill's method of difference (Ragin 1987). This means that if two configurations differ in a single condition but show the same outcome, the distinguishing condition is not causally associated with the outcome and can be eliminated.

By listing all possible configurations rather than just the empirically observed ones, the researcher can engage in thought experiments so as to further minimize the data. In a thought experiment one may assume that a certain unobserved configuration (also known as 'logical remainder') leads to the occurrence of the outcome. For example, even if a configuration of high information sharing and high cooperativeness was not empirically observed, it could be assumed that it leads to high performance. Such assumptions should always be based on all available theoretical and empirical knowledge, and with regard to the focal example, it can be claimed that the extant literature would justify such a decision. These simplifying assumptions are utilized by the fsQCA software to produce the solutions. When all possible simplifying assumptions are included, the produced solution is called 'parsimonious', and the conditions comprising each resultant configuration are called 'core'. The latter are necessary in any representation of the data. On the other hand, when the simplifying assumptions are in accordance to theoretical and substantive knowledge, the generated solution is called 'intermediate' and the added conditions to each 'core' configuration are called 'peripheral' or 'contributing'. Normally, researchers present both solutions. The parsimonious is short and simple but the intermediate is more interpretable because it includes the contributing conditions which add richness to the picture. More on the solutions and how they are derived can be found in the findings chapter (section 4.4.3.3) and in Ragin (2008).

In order to assess the quality and relevance of the results, fsQCA uses two coefficients: 'coverage' and 'consistency'. Consistency is the more important of the two and is estimated first. It refers to the degree to which the set relation in question is exhibited.

Specifically, it refers to the degree to which the fuzzy-sets representing the empirically observed configurations are sub-sets of the outcome set. The formula (Ragin 2008) penalizes substantially large misses (e.g. if the fuzzy-set membership score of a case for the outcome is 0.3 and the score for a particular configuration is 0.9) and is less harsh with near-misses. The measure ranges from 0 to 1 but what threshold to use is a matter of debate and it should depend on the observed scores (Fiss 2011; Ragin 2006). What is certain is that scores below 0.80 signify considerable inconsistency, hence this constitutes the lowest possible acceptable consistency threshold. Coverage gauges the empirical relevance or importance of the conditions of each configuration to the outcome (Ragin 2006) and resembles the R^2 in regression analysis. It effectively measures how much of the outcome is covered by a configuration in a solution and by the solution as a whole. Few guidelines exist about coverage thresholds, so it is often assessed in a relative manner after the consistent configurations have been determined.

The analysis in section 4.4.3 is presented in a step-by-step manner, hence all the issues discussed are clarified and demonstrated in practice. Before ending this section, it is necessary to list the disadvantages of fsQCA. Firstly, calibration is effectively subjective. This is why the researcher's judgements and the way he uses the theoretical and substantive knowledge should be made transparent. Secondly, distinguishing core from contributing conditions is beneficial; however, the results *per se* do not say anything about the relative significance of each condition. This though will be ameliorated by considering the findings of the two main phases (i.e. case-studies and fsQCA) in combination. Thirdly, the technique is still relatively new, hence there is ongoing development in its computational processes while debates upon certain issues have not ceased (e.g. consistency and coverage). Nevertheless, as previously stated, it constitutes a suitable method to answer the second research question. Briefly, this is because it is configurational in nature, can deal well with complex causation, and is case-oriented rather than variable-oriented. Therefore, it promises to insightfully supplement the results of the qualitative work, as well as provide an interesting contrast to the conclusions drawn from the mainstream statistical analysis techniques used in the relevant literature of relational influences on performance.

3.6.4 Methodological rigour

Before concluding the chapter, a short comment on the methodological rigour of this phase is in order. The reliability analysis based on Cronbach alphas and item-to-total correlations ensured reliability of the scales (section 4.4.3.1), but as it will be discussed, internal validity could not be ensured due to the small number of returned questionnaires (N=47). This is because the sample size deemed the conduct of a confirmatory factor analysis impossible. This however has also been the case in other survey studies that employed fsQCA (see section 4.4.3.1). To increase face and content validity, as mentioned earlier, I ensured that academics and practitioners reviewed the data collection instrument. Additionally, in any fsQCA exercise, validity of the results is also enhanced by the transparent and detailed justification of all calibration decisions (Ragin 2008). This is presented in section 4.4.3.2. Also, all steps and procedures suggested in Ragin (2008) have been followed closely during data analysis. Finally, external validity is limited to the TrucksUK network and context, but it can be reasonably claimed that the findings can apply to the population of TrucksUK – service workshop relationships. As noted, 38 out of the 51 relationships are included in the analysis and their performance levels vary. Hence the sample can be considered to be representative. As it has been mentioned, a comment specifically on the generalizability of the combined research findings can be found in the conclusions chapter. The next section concludes the methodology chapter.

3.7 Conclusion

Based on Bryman's (2006) 16 reasons for mixing methods, I would like as a conclusion to emphasize the way in which the two strands integrate and complement one another. Firstly, obviously the exploratory interviews and case-studies enhanced the development and analysis of the questionnaire. Due to the former, existing items were modified and new ones were added. Additionally, the insight I had got regarding the role of the two exogenous factors made the data analysis with fsQCA much more informed. It assisted both the calibration of the measures and the interpretation of the results. Secondly, the fsQCA phase was used to test the hypotheses (that were formulated based on the outcome of the qualitative data analysis) in the population of TrucksUK network members. Otherwise, the hypotheses would have remained untested statements, having emerged out of the analysis of only three case-relationships. This means that the supplementary quantitative strand partly offsets a major weakness of the qualitative work

which is the lack of generalizability. Thirdly, as Bryman (2006) says, the integration of both strands offers a more comprehensive account of the area of inquiry. Not only do I uncover the role of each relationship connector and the provider – partner relationship as a whole in the service performance of the partner (RQ1), I also discover configurations of connectors and exogenous variables that enhance performance (RQ2). Moreover, the manner in which I bring together the results of the two phases in the discussion section is an attempt towards triangulation. The intention is to increase the validity and credibility of the results of the study as a whole.

3.8 Summary of the chapter

I began this section by showing that TrucksUK and its network is an appropriate setting for investigating the two research questions. I continued with the presentation of pragmatism, a philosophical stance which favours the employment of mixed methods research designs. The design I adopted here is known in the literature as exploratory sequential because the qualitative part is prioritized over the quantitative. The quantitative however supplements the findings of the qualitative, contributing to the more thorough examination of the phenomenon. The two main phases of the design were presented in detail from section 3.5 onwards, and based on Bryman (2006), I commented on how the two strands complement each other (section 3.7). As a recap, a detailed diagrammatic demonstration of the research design wraps up the chapter (Figure 3.2).

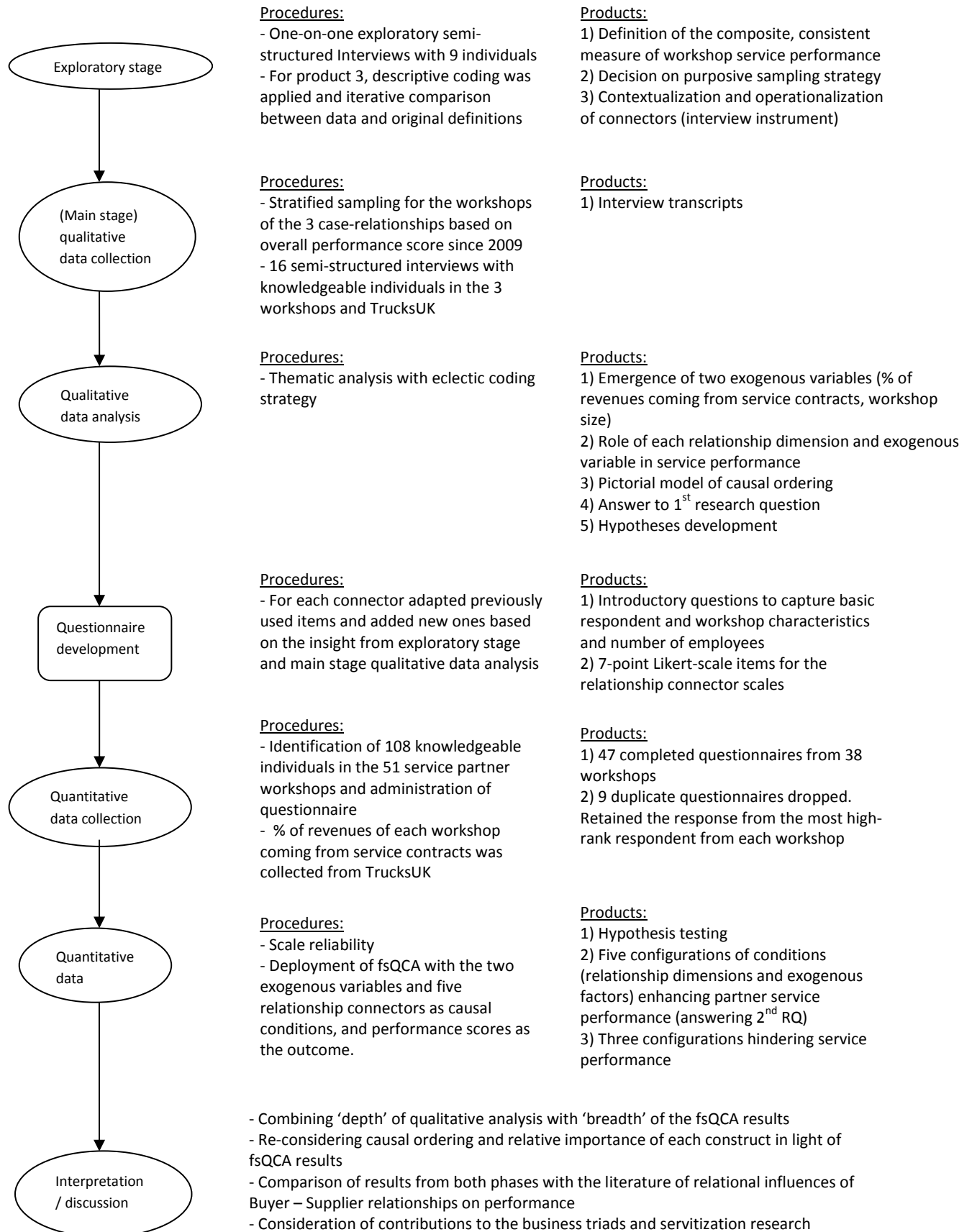


Figure 3-2: The design diagrammatically

4 ANALYSIS AND FINDINGS

4.1 Overview

This chapter presents the findings of the two strands of the research design. It begins with the qualitative part. Firstly, the within-case analysis of the three case-relationships is presented (section 4.2). For each case, I begin with some background information about the respective workshop, and continue with the evidence for each connector. Secondly, the cross-case analysis is conducted (section 4.3). It begins with a comparison of the three case-relationships across the five connectors, which shows that the more relational the relationship, the higher the performance of the workshop. This observation feeds directly into the inquiry that attempts to answer the first research question (section 4.3.2). As part of the answer, the role of each relationship connector and exogenous factor is discerned. The interplay between them is also uncovered and captured in an analytical model. The model, which is a product of the analysis, effectively constitutes the answer to the first research question. It provides a nuanced understanding of how the provider – partner relationship affects the service performance of the partner towards the provider’s customer base.

The model indicates that there are different causal paths (or ‘recipes’) for high partner performance, which is in accordance to the insight generated from the literature review (i.e. the phenomenon of relational influences on performance is causally complex). Taking this into consideration, the second part of the chapter begins with the formulation of four hypotheses (section 4.4.2). It continues with the configurational analysis, i.e. the answer to the second research question (section 4.4.3). As part of this, four *equifinal* configurations of relationship dimensions and exogenous factors are found to enhance the service performance of the partner, three of which have two neutral permutations. Prior to the results, the scale reliability analysis and all the necessary preceding steps undertaken in the fsQCA software (e.g. measure calibration, specification of simplifying assumptions) are reported and discussed (sections 4.4.3.1, 4.4.3.2, 4.4.3.3). This part of the chapter ends with a brief discussion of the hypotheses and the results. An integrative discussion that brings together the outcomes of both strands (qualitative and quantitative) and links them back to the relevant literature is kept for the next chapter.

4.2 Within-case analysis

In this section I present a thick case-by-case description structured around the five relationship connectors. As already mentioned, a 'case' in this study is a provider – service workshop relationship. For each one of them, I start with some background information. This information includes evidence on the levels of service delivery performance, some historical and workshop-specific contextual characteristics (e.g. whether it is a sole franchise), and some important figures (e.g. proportion of revenues coming from fixed-cost contracts and warranty). For illustration, views of respondents referring to the relationship with TrucksUK are also presented. This material should help the reader gain a basic understanding of the context of each case and digest the connector by connector evidence that follows. It should also facilitate the evaluation of the credibility and trustworthiness of the arguments and interpretations I make in the cross-case analysis.

4.2.1 Case 1: TrucksUK – ServCO SW relationship

Background

ServCo SW operates in the southwest part of England (close to one of the major British ports) and has been performing consistently well for TrucksUK for a number of years²⁴. On top of this, it has been declared Motor Transport dealer of the year for the commercial vehicles industry in 2010, while in terms of its overall performance as a TrucksUK network member, it was one of the 2011 runners-up. At the time of data collection, there were 53 people employed.

ServCo SW is the only commercial vehicles workshop in its holding group (which primarily runs dealerships of luxury cars) and does not do its own service contracts. As the general manager said, this decision is mainly due to risk aversion and the inherent costs of offering contracts:

“But just as easy, it could have blown an engine and all the other things. Then you've got to have somebody to administer it, for the debits coming in and payments going out. Why would I want to do that? Why would I want to take the risk?”
(ServCo SW general manager)

²⁴ Average scores according to the consistent, quarterly, composite performance measure (see section 3.5.1.1): 4.22 / 5 (since 2007), 4.17 / 5 (since 2009).

Instead, the workshop provides a set labour rate plus parts discount rate for non-TrucksUK customers, or TrucksUK customer vehicles that are out of contract.

TrucksUK is ServCo SW's only franchisor. Having remained a sole franchisee and not doing own contracts makes sense because ServCo SW is entirely satisfied with the absolute value and proportion of overall revenues coming from the TrucksUK part of the business. An estimated 90% of the work comes from operators with TrucksUK vehicles. More importantly, 54% of the workshop's 2011 turnover came directly from TrucksUK for supporting fixed-cost contracts and warranty. As explicated in the methodology section, the delivery of the services is effectively sub-contracted by TrucksUK to its service partners, for as long as the contract between TrucksUK and the customer prescribes. ServCo SW has for years been relying directly on TrucksUK for about half of its yearly revenues, a fact seen very positively by the ServCo SW interviewees. This is because half of the workshop's revenue is effectively guaranteed ('ring-fenced' is the word commonly used). It also means that ServCo SW is used to dealing with large fleets under TrucksUK service contracts. This is not a surprise because several large hauliers and logistics companies (who prefer to have their vehicles under contract) have operations around the port. Nevertheless, the workshop also repairs vehicles and sells parts of other makes. In fact, it is introducing new ways to enter the market (e.g. on-line parts sales), and aspires to become a one-stop shop for any customer. A current challenge is the existence of small garages with low overheads, which during the recession have been giving large discounts and have taken work off ServCo SW.

ServCo SW individuals think their advantage over the competitors in the area is their opening hours, as the workshop is currently open 24 hours a day during the week and has an extended weekend shift. Actually, this arrangement is due to the persistence of the general manager who managed to sustain it even during the first couple of years of the recession and against the recommendation of the board. The fact that no technician became redundant during this difficult period and the support provided to the staff by the general manager seems to have inspired high employee commitment and loyalty:

"As I say a lot of people who work here have all been here a long time... A lot of people have gone away and then come back because they've sort of missed working here." (ServCo SW service and operations manager)

Customer satisfaction is ServCo SW's key priority and there are many indicators demonstrating this. For example, the internal performance measures for the employees,

the intense commitment to training, the assignment of a third party to conduct customer satisfaction audits, and the customization of certain service processes to cater for specific customer preferences. Each one of these is seen to contribute to customer loyalty.

I continue with the detailed description of the workshop's working relationship with TrucksUK, structured around the five relationship dimensions. For this case only, the first one or two paragraphs of each sub-section comprise a recap on what each connector refers to in this research setting. Although this information is partly a repetition of what has been discussed in the methodology chapter (section 3.5.1.3), it should help the reviewer enter more smoothly into the results of the within-case analysis.

Information exchange

As discussed in the methodology chapter (section 3.5.1.3), TrucksUK is very much reliant upon bidirectional, speedy and streamlined information exchange through the designated web-based systems and portals. Through them, it tries to provide its service partners with all types of operational information (e.g. specific tests and procedures to be undertaken, customer-specific preferences) in order to enhance and optimize the service processes and customer experience. At the same time, it expects the workshops to provide relevant and complete information (e.g. when diagnosing a defect). However, electronic information exchange, although important, is not as paramount as inter-personal interaction and communication. TrucksUK know this and have established specific roles (e.g. regional service engineer, business development manager) to inform and assist the network members whenever necessary, and to develop a relationship with individuals from the workshops. Additionally, there is interpersonal communication between the two parties during the quotation stage of a customer contract. In this way, TrucksUK try to make sure that the workshop has sufficient resources (e.g. opening hours, number of technicians) to cope with the amount of vehicles potentially coming into its area and with any specific customer demands (e.g. collection and delivery). Communication is also supposed to take place between the co-located salesmen and the workshop employees, and between the latter and the several functions in the TrucksUK HQs depending on what the issue is.

Thus, and as discussed in section 3.5.1.3, the construct of information exchange will be reflected through 1) the perception of the respondents regarding the levels and quality of

the information exchanged with their key counterparts (e.g. regional engineer, co-located salesman) over the phone or during visits and meetings, and 2) the perception of the respondents regarding day-to-day information exchange through the web-based systems and portals. Having introduced what the construct of information exchange refers to, I proceed to the case-specific evidence.

To start with, ServCo SW individuals acknowledged that they have multiple contact points with the TrucksUK HQs. However, these links are used almost exclusively when issues come up (e.g. a monetary claim has not been paid, a vehicle has gone out of contract, a customer is complaining). Most communication and information exchange take place through the web-based systems. The latter are used both for sending information to TrucksUK (e.g. forms describing defects) and for receiving (e.g. information about new vehicles contracted in the area, customer specific preferences). ServCo SW people seem to generally be happy with the level and quality of the information exchanged through the different TrucksUK websites and portals. Similarly, the accounts of the interviewed TrucksUK individuals indicate that TrucksUK as an organization is satisfied with this aspect of information exchange in the relationship. This is because amongst the employees of the TrucksUK after-sales organization, ServCo SW are considered to be one of the best in providing relevant and complete (even proprietary) information in a prompt and efficient manner. Examples include the monthly figures regarding turnover and parts sales per customer and the necessary information that needs to be captured and shared when diagnosing a defect. The regional engineer also confirmed that ServCo SW employees are always able to locate and use any readily available information on the different portals.

However, it is a common belief amongst the respondents that web-based communication in itself would not be enough. This idea was most illustratively expressed by the general manager of ServCo SW. When comparing TrucksUK with one of their competitors with whom he used to have dealings for six years in the past, he emphasized the significance of human interaction:

“...Again, they had all database systems where you couldn't actually pick the phone up and speak to anybody. It was very, very difficult to get a real human being on the end of the phone. And as a dealer, you feel very much isolated because you've got the problem with the customer screaming and shouting, I want this fixed, and the only thing you can hit to find out is the computer screen. The difference I would say is that TrucksUK at the moment, do put a human face in. We have an engineer, we have a business manager, which is the two sides of the business, and I can pick the

phone up and say look Trevor or Roy, 'this has gone wrong' or 'I need this help' or 'what do you think'. So you can't solve everything by computer systems and processes that take away the human interaction. And if they try to do that totally, I think they'll fail miserably." (ServCo SW general manager)

So, although ServCo SW tend to rely a lot on their experience and expertise when servicing and dealing with TrucksUK customers, when problems occur a need arises for communication with certain TrucksUK departments (e.g. technical support, contracts) or the assigned regional managers (e.g. the business manager or the regional engineer):

"It's more if we're not sure of where to go with something or we want their support for one of their customers, we can only do what we can do here to a certain degree." (ServCo SW service, marketing and business development manager)

Based on the interviews with ServCo SW employees, it appears that the norm is that TrucksUK individuals respond in a timely and helpful manner, and issues are resolved promptly. However, there are exceptions to this. Normally these have to do with the communication with the parts organization and the contracts department. For example, regarding parts, there is a sense at times that TrucksUK do not have the resource to provide the information in a timely manner;

"And it's only really when we've run out of ideas, or we're at a loss to sort it out ourselves that we actually need to talk to somebody [at HQs]. And, of course, the problem there is that you actually want to talk to somebody not in ten minutes time, not in 15 minutes time. You actually want to talk now and maybe sometimes that doesn't always happen, and you have to leave a telephone message." (ServCo SW parts manager)

Also, when information exchange between ServCo SW and contracts is not timely enough, the service delivery performance towards the customers is believed to decrease:

"...and it does give you sometimes problems when you're talking directly to the customer, you want a quick answer and you can't get a quick answer and that, in fact, lowers your service level to the customer." (ServCo SW general manager)

Additionally, the ServCo SW individuals believe that their work is negatively affected during out-of-office hours, because there is nobody in TrucksUK they can talk to. Then, communication is restricted to the computer-based, faceless systems. According to the

general manager, the introduction of an out-of-hours interpersonal link would directly translate into superior service delivery performance, as the workshops would be able to resolve issues and turn around vehicles more quickly. That would translate into customer satisfaction:

“There’s a direct relationship between that link being available and customer satisfaction and anybody that wants to tell me otherwise is in cuckoo land.” (ServCo SW general manager)

On the other hand, when it comes to the level and quality of information exchange with the key counterparts (co-located salesmen, regional engineer, and regional parts representative), all respondents from the workshop seemed to be very happy with it. There is regular and open communication with these individuals, and it is not always ad-hoc. For example, they hold weekly meetings with all three co-located salesmen, where each side’s weekly agendas and outstanding issues are discussed openly:

“we have [TrucksUK] salesmen on site here who don’t work for us, and on a Monday morning we will generally always have a meeting with them just to see who are they dealing with and then we’ll tell them who we’re dealing with, if we can give them any leads or they can give us any leads for service work, so we try and work together with them.” (ServCo SW service, marketing and business development manager)

The TrucksUK regional engineer confirmed the good initial impression about this aspect of communication. When asked whether the relationship between his company and ServCo SW could be improved, he replied by emphasizing the currently satisfactory level of information exchange:

“But there’s not a great deal I could see changing. We have regular contact with them; we have regular face-to-face, regular phone contact. If there’s any specific dealer issues I’ll speak to [ServCo SW general manager] or he’ll speak to me, and it gets dealt with. So I guess nothing that springs readily to mind, let’s put it that way.” (TrucksUK regional manager, customer and technical support South)

In short, besides the few concerns, which, as will be shown, pertain all TrucksUK – workshop relationships (out-of-office-hours communication, timeliness of certain departments), the respondents in this case are generally happy with the exchange of necessary and mutually beneficial information during communication and interaction. As

it will be argued, the level and quality of information exchange are very much dependent on the construct of operational linkages.

Operational Linkages

As mentioned in section 3.5.1.3, for their TrucksUK part of the business all independent partners need to use the specific IT tools and websites/portals defined and designed by TrucksUK. These systems' primary purpose is the exchange of information. The workshop is supposed to be able to:

- Efficiently transmit information to TrucksUK (e.g. description of defects and repairing activities), and
- Locate and receive information (e.g. customer specific preferences, guidelines for service activities).

Due to the commonality of the systems across the different TrucksUK – workshop relationships, the first facet of the construct is thought to be the adherence to the roles and routines that these web-based systems implicitly or explicitly specify. For example, in each workshop a person may be responsible for correctly and accurately inputting the relevant data on the appropriate website to make warranty related monetary claims. In addition, the parts manager has to use the relevant systems to order or return parts, while somebody else may have to update the status of vehicles when new parts are fitted in or when they are going to be off-road for over 12 hours. The adherence to these roles and routines can be manifested in the familiarity with and competence in the use of these systems. For relevant and complete information to flow freely and quickly between the workshop and TrucksUK, familiarity with and efficient usage of the interlinking web-based systems is necessary. As already discussed in section 3.5.1.3, the second facet of the operational linkages construct is the existence of joint activities between the workshop employees and TrucksUK individuals. In what follows I firstly provide evidence for the first facet and continue with the second.

According to the TrucksUK interviewees, the people in ServCo SW appear to have a good understanding of all websites and portals, are clear with the purpose of each, and are very competent in using them. This means that the roles and routines specified by the

interlinking systems are carried out efficiently and competently. For example, regarding the submission of monetary claims, the TrucksUK repair and maintenance manager said:

“We want to start monitoring dealer performance in terms of claim; the quality of the claim, the submission times and I’m providing some feedback to the men and then start thinking, ‘Well, do we need to run training courses now?’ depending on the quality. ServCo SW are going to be very near the top but there’s a lot of others who you think...oh, we’ve just got to get them in.” (TrucksUK repair & maintenance manager)

The regional manager also acknowledged that ServCo SW are the best in the area in undertaking other routinized tasks such as updating the status of customer vehicles or checking out for and calculating possible discounts for customers. These and other tasks can only be undertaken quickly and correctly if the assigned individuals are competent with the systems:

“To my knowledge, all of the guys down there are competent in using that, they can pull every piece of information that they need to.” (TrucksUK regional manager, customer & technical support South)

When it comes to the ServCo SW respondents, nobody expressed any complaints regarding the level of complexity of the IT systems and the roles that come with their use. This may be because ServCo SW have dedicated individuals assigned for undertaking specific tasks, hence it is reasonable to assume that they have developed some sort of expertise. This task allocation is possible because the workshop employs enough back-office personnel. The commitment to careful task allocation and specified routines is seen by TrucksUK:

“But the way ServCo SW work it's they stick to a structure, everything is they've got certain routines that they work to. And we can see that, there are work processes being put in place and they're very rigid. And they've got the right teams in place to do the right jobs.” (TrucksUK regional manager, customer & technical support South)

Additionally, the familiarity and experience with the systems naturally increases with exposure to TrucksUK vehicles, especially vehicles under fixed-cost customer contracts or warranty. As mentioned earlier (*background* sub-section) and emphasized by the TrucksUK regional manager, ServCo SW are privileged in that regard:

“And this is the difference with ServCo SW. They have got into the routine, through experience, and there's a lot of guys that we deal with ServCo SW within TrucksUK. You've got the petroleum guys, the national fleets, so eventually they've obviously seen this and they've got everything onboard now.” (TrucksUK regional manager, customer & technical support South)

Overall, the effective task allocation and the increased exposure to the TrucksUK service offering seem to have increased the experience and competence of the employees with the web-based systems. Hence, adherence to the implicit roles and routines is high, signifying operational integration. The latter is also reflected through the second facet of the construct, routinized joint activities. I turn to this next.

As detailed in the previous section, ServCo SW appreciate the fact that interpersonal communication and interaction with TrucksUK individuals is possible when the systems fail, or when certain issues fall outside of what these systems cater for. Such communication and interaction is enhanced by the existence of routinized joint activities, the second facet of operational linkages. To start with, all respondents stated that in the workshop everybody works closely with the three co-located salesmen:

“We get involved with the salesmen quite a lot in ServCo SW. I don't know if all the dealers get that involved. We don't have to do it.” (ServCo SW service operations manager)

Rather than solely ad-hoc interaction, ServCo SW and the salesmen have formalized joint activities, such as review meetings, customer visits to holistically promote the TrucksUK value propositions, and exploratory marketing campaigns over the phone;

“I work quite closely with the salesmen and we go out for customer visits together so we'd go as a team, so he goes as the manufacturer and I go as the service agent to sort of try and sell the package.” (ServCo SW service, marketing & business development manager)

ServCo SW employees feel that they are unique in that respect, indicating their perception of high operational integration with the salesmen. These joint activities seem to facilitate open and fine-grained information sharing between the salesmen and ServCo SW and, according to the interviewees it gives the impression to the customers that both parties are working for them. Moreover, there are regular joint marketing campaigns with the TrucksUK parts representative; while there have been instances whereby the regional

engineer attended customer meetings jointly with ServCo SW. Also, because ServCo SW as a workshop deals with many of the most important customers of the provider, at several instances the general manager or the service operations manager get involved in yearly or quarterly customer review meetings. This also constitutes a joint activity, and may provide ServCo SW with valuable insight about the business of TrucksUK and its customers.

In short, TrucksUK and ServCo SW seem to be satisfied with the level of operational integration in the relationship. ServCo SW individuals competently and efficiently fulfil the roles and routines specified by the interlinking web-based systems, and at the same time, there are many joint activities between individuals from the two parties.

Legal bonds

This connector encompasses the legal agreements between TrucksUK and each one of the service partners, and all the rules and obligations they specify. Because these legal agreements are the same across all TrucksUK – workshop relationships, variation with regard to this dimension will be exhibited through the respondent’s perceived degree of formalization of the relationship (see section 3.5.1.3 for more detail). This perception is reflected through the behaviours and expectations of the parties in the working relationship. In the related discussion in section 3.5.1.3, discomfort with the explicit rules to be followed, signs of TrucksUK intolerance to deviations from what is prescribed, and the possibility of informal arrangements, were suggested as the different manifestations of the construct.

ServCo SW seems to adhere very closely to the terms and conditions specified by the legally binding agreements between them and TrucksUK. Their extensive experience with TrucksUK fixed-cost contract customers (and their exposure to TrucksUK vehicles in general) has led to a clear and holistic understanding of the rules and procedures that need to be followed on a day-to-day basis. This impression was confirmed in the interviews with TrucksUK respondents. For example, the TrucksUK repair and maintenance manager stated that when making monetary claims, ServCo SW have a clear *a priori* understanding of what can be claimed and paid for. It is also evidenced through the workshop’s excellent performance in recent audits conducted by TrucksUK. Examples of issues that are normally audited include whether the workshop fits genuine TrucksUK parts to vehicles under contract, whether broken parts are kept for proving that

replacement was necessary, whether claims have been submitted in a proper and truthful way in terms of hours worked:

“From a dealer standpoint of view, from the contract point of view I think that they're probably one of the best and I think they demonstrated that over the years.”
(TrucksUK regional manager, customer & technical support South)

The standards with which each workshop has to comply in order to maintain the franchise (e.g. image, cleanliness) are also monitored twice a year. ServCo SW has never faced any problem. Furthermore, the respondents seem to feel comfortable with how explicit the relationship is; adhering closely to the detailed rules and terms prescribed in the contracts is associated with the certainty that tasks are undertaken in the right way. This also prevents fines and revenue losses:

“...so we have to keep everything very rigid in place with those procedures to make sure that the work is done correctly and it is charged to the right place, so those are followed closely.” (ServCo SW service advisor)

It also seems that the perception of some respondents about the degree of explicitness of the firm-level relationship is affected by the existence of long-lasting and close interpersonal relationships. For example, the relationship between the ServCo SW general manager and the TrucksUK repair and maintenance manager. When issues arise, such as the rejection of claims, these relationships play a role in resolving them in a flexible manner, leading to the avoidance of time-consuming escalations:

“I've known [...] for 16 years so we have a relationship anyway, we know and respect each other for what we've done and when there is a conflict I think there's a lot of trust there and we resolve issues in an informal manner.” (ServCo SW general manager)

The TrucksUK regional manager also indicated that when necessary, his relationship with the general manager of ServCo SW can help overcome difficulties posed by explicit rules in the contracts:

“I can phone ServCo SW, it'd be just as quick, never mind that, do the job and we'll sort it out on Monday.” (TrucksUK regional manager, customer & technical support South)

In short, the strict 'by the book' approach adopted by ServCo SW is combined with the flexibility offered by the informal, interpersonal resolution of problems. As a result, tasks are undertaken correctly, while the prevailing perception is that the relationship is not overly formalized.

Cooperative norms

This dimension captures the perception of individuals regarding whether the relationship of their company with the other party is a cooperative, team effort with common goals, as opposed to an adversarial one. This will be reflected through the expectations, behaviours and actions of individuals from both parties (see section 3.5.1.3)

From the fieldwork at ServCo SW it became evident that the respondents consider their workshop's future to be intertwined with TrucksUK's, and perceive the existence of a shared overall mission and mutual day-to-day goals. For example, according to the service operations manager:

"Yes it's working as a team, we always try and think of it as – we want the customers, they want the customers so it's very much a team effort." (ServCo SW service operations manager)

This belief seems to be shared by the lower-level administrative staff:

"We think TrucksUK should be free to focus on supplying more vehicles to [the customer], then to develop their business with them, rather than damage control, if you like, because we're actually looking after the customer well, they're free to concentrate on other aspects of their relationship." (ServCo SW service advisor)

On the whole, all ServCo SW respondents were clearly concerned about the manufacturer's profitability and long term success. But for the manufacturer to be successful, it is paramount that the workshops, including ServCo SW, deliver exceptional service to the customer base. For this to happen, ServCo SW needs to be supported day in, day out:

"They're out to try and build their empire as much as we are so although we're a private partner, they do support us in that goal because they know that if we don't

supply good service to the customer then that's going to have a knock on effect to their sales in the future." (ServCo SW service advisor), and:

"We would ask for their support and that's when we would assume that they would help us out because it's to help them in the long run with the relationship with their customers as well." (ServCo SW service, marketing & business development manager)

And it turns out that ServCo SW is generally happy with the level of support they receive. All respondents acknowledged that whenever an issue arises, the different TrucksUK departments are very helpful in resolving them. There is also the perception that decisions and actions taken out of hours are, most of the times, supported and accepted by the provider. For example:

"Generally it depends on what it is but to my knowledge if we've ever done something because we think that's the right thing to do, they have always backed us up, so I think generally speaking we would only do what we think is right anyway and so they would, as long as we inform them the next day of what we've done and why we've done it, they would generally be quite supportive yes." (ServCo SW service, marketing and business development manager), and:

"...and we've got a great relationship now with [TrucksUK regional manager]. And he knows if I make a decision it has been the correct decision." (ServCo SW general manager)

The general manager added that apart from not being critical to out-of-hours decisions, TrucksUK in general do not exhibit dictatorial behaviours. This is highly appreciated because in his experience, most automotive manufacturers are overly strict with their dealers. For example, when referring to certain relationship-specific investments to which the workshop has resorted (longer opening hours, special machinery), the general manager said:

"Nobody's actually really... they come and ask but they don't really put any pressure on us to say you must do this." (ServCo SW general manager)

Furthermore, the perception of a shared future and common goals is manifested through certain, distinctive behaviours. Apart from instances at which ServCo SW personnel 'did the extra mile' for the provider (e.g. the general manager interrupting his weekend to get

involved in resolving an emergency issue with a vehicle), the cooperative spirit is exhibited with regular and established behaviours.

Firstly, it is common for ServCo SW and TrucksUK to share the monetary costs for repairing customer vehicles at certain instances, a decision characterized as 'win-win'.

Secondly, the ServCo SW service operations manager seeks to identify expiring service contracts and tries to make the customer extend them.

Thirdly, ServCo SW makes sure that the co-located salesmen are supported daily. This, seems to be very important because, according to the general manager *"these guys have been left on a limb"* by TrucksUK. For instance, the general manager aptly showed his support to the most recently employed salesman by taking him out to introduce him to customers:

"I've been out with him a number of days to get him off the ground, take him round the customers that I know, rather than just letting him flounder. He's had very little support. Again, he actually complained to me that the support from his area manager out of Bristol is just not there. So what do I do? Do I turn a blind eye, or do I get in there and support him, and say look, this is all good for ServCo SW?" (ServCo SW general manager)

In turn, the salesmen have been reciprocating the support they receive, by for instance, 'giving' to ServCo SW customers who are not keen on buying TrucksUK trucks but may be interested in either buying parts of other makes or in a direct services arrangement (e.g. set labour rate).

Fourthly, ServCo SW is actively trying to win back the parts business that TrucksUK lost due to its inappropriate pricing. Sometimes even without making a margin on the part:

"...at the moment we want to try and satisfy every customer we can, and in fact what that does mean from time to time, is that we will almost not lose... well almost lose to get back those customers. It's about creating the goodwill back again, because truth be told, most people, I would say, would prefer to deal with the OEM supplier, because it makes sense." (ServCo SW parts manager)

The general manager indicated the overall commitment of both parties to a common future and the recognition that success is an outcome of joint effort, with a summative quote:

“So it is very much a symbiotic relationship where we work in harmony or try to at least provide a top level service so that the customer will buy TrucksUK and continue to buy TrucksUK.” (ServCo SW general manager)

It is interesting that the account of the TrucksUK regional manager confirms that ServCo SW is indeed that cooperative and devoted to a common cause. For example, he praised the behaviour they exhibit when TrucksUK individuals visit the workshop:

“I find it to be... It's good compared to some workshops. You're made to feel welcome when you got there. There are other workshops you can go, but they'd sooner be off doing what they're doing: earning money.” (TrucksUK regional manager, customer & technical support South)

He also acknowledged the fact that when ServCo SW has taken a wrong decision they promptly admit responsibility for it:

“If these guys have made a mistake or he [the general manager] genuinely feels that they were at fault, he'll say can we do a deal. And you'll get other dealers who will go carte blanche ‘not my problem’, and expect me to sign a cheque on TrucksUK's behalf.” (TrucksUK regional manager, customer & technical support South)

Moreover, he praised the truthfulness and trustworthiness of ServCo SW, especially when compared to other workshops he deals with:

“They [ServCo SW] will send me an escalation and I'll have a quick look, yeah, fine, sign off, process it. Because I know that what the guy sent to me is right. There's other dealers that when they send me, right, it will go straight onto the system, we'll pull the claim, we'll have a look at the claim line by line to make sure that what is in that claim is what he's putting on the escalation. So, I will check religiously every single bit of paper that comes across my desk because there's a bit of me, a little tiny bit, that doesn't trust what I'm being told by that individual.” (TrucksUK regional manager, customer & technical support South)

Finally, he also stated that TrucksUK, especially seniors, have a lot of understanding for the ServCo SW management team because their bosses are not familiar with the commercial vehicles industry. As mentioned, the holding group of ServCo SW owns mainly luxury car dealerships:

“He [the ServCo SW general manager] has got a lot of pressure being put on him by the group to make that dealership perform. The added problem for him is that it is the only commercial vehicle business that his directors actually run, because they're a car business historically. So he's got a very difficult job... We understand that he's got people making decisions who don't come from a commercial vehicle background.” (TrucksUK regional manager, customer & technical support South)

As indicated in the first part of this sub-section, this understanding seems to be appreciated and reciprocated by the ServCo SW individuals.

Overall, the relationship appears to be a cooperative one at all levels, where the key individuals recognize the commonality of goals and the intertwined future. Norms such as mutuality, flexibility, durability and solidarity are reflected through the everyday behaviours of individuals from both parties.

Relationship adaptations

As discussed in section 3.5.1.3, the adaptations of TrucksUK are homogenous across the different TrucksUK – workshop relationships, hence my focus is constrained to the relationship-specific adaptations by the partners. The latter will reflect the changes to which the service workshop has resorted, in order to be able to deal with TrucksUK. According to Cannon and Perreault (1999) it will include both one-off and gradual adaptations, such as investment in equipment and training respectively.

ServCo SW as a workshop has resorted to significant relationship-specific adaptations. The general manager, years ago, realized that it would be to its workshop's benefit to listen to TrucksUK's suggestions instead of ignoring them:

“You cannot swim up the river all the time [] so you are better off swimming with the manufacturer and try to work with them than telling them that it is wrong.”
(ServCo SW general manager)

Firstly, ServCo SW has changed its opening hours mainly to be able to deal with one of TrucksUK's biggest national customers. The latter has approximately 100 vehicles under contract in the workshop's proximity. The workshop is open 24 hours a day during the week and also maintains a long weekend shift. As mentioned in the previous section, this arrangement has not been imposed by TrucksUK. It has been a voluntary adaptation after suggestion from the TrucksUK Head of Service. With this arrangement, TrucksUK customers, and especially the aforementioned large haulier, can leave their vehicles to be inspected and serviced overnight and have them ready in the morning.

"To [large TrucksUK customer] I think it's our opening hours would be a definite, they expect their vehicles to come in during the night and be ready for the morning, if we didn't operate 24 hours we wouldn't be able to offer those services." (ServCo SW service operations manager)

It is noteworthy that the workshop retained its extended opening hours even during the recession, even though this was not seen positively by the board of directors. The general manager is very happy that this commitment to TrucksUK has paid off and now that the market is picking up again he does not need to make any changes in the workshop's operations:

"As the market has picked up and I took a judgement with my director and said I think in 2011, the market will start to rise and it has, so I've got that bit right. Maybe I'm lucky, maybe I'm not. But we're in place with the right staff. We haven't got to go down recruiting, we haven't got to try and find night shift and weekend shift because we've still got them." (ServCo SW general manager)

Secondly, the workshop employs a dedicated parts representative who goes out to customers and tries to promote and sell TrucksUK parts. According to the respondents, ServCo SW is one of the twelve network members who have done this. As mentioned, TrucksUK had its prices significantly wrong during the recession and lost many parts customers. They are now in the process of trying to win them back through campaigns and the introduction of less expensive lines. Thirdly, the employees of ServCo SW have undertaken extensive training to be able to deal with TrucksUK vehicles and fulfil all the day-to-day essential procedures prescribed by the web-based systems and contracts. The general manager is committed to delivering excellent service and thus it is common sense for him to send his personnel for training whenever necessary, no matter how expensive it is:

“We need to make sure that we are, if you like, fully ready to support that product by investment in staff and training and knowledge.” (ServCo SW general manager)

This is an idea which clearly resonates with all interviewees. For example:

“Yes we have to do the training through TrucksUK to have the technician which is right really, if they want us to work on TrucksUK vehicles then we need to have the right staff training to do it and that is a ServCo SW investment.” (ServCo SW service, marketing and business development manager)

This was corroborated in the interviews with the TrucksUK regional engineer and the repair and maintenance manager. They said that ServCo SW are one of the proactive few who will actively ask for additional training when they feel it is necessary (e.g. when they recruit someone new). Due to their pro-activeness they have managed to achieve an all around expertise, and have more than one person capable of undertaking one task (e.g. more than one electrician). This, according to the regional manager, is very important, because if one expert in something is on holiday or on sick leave, there is always somebody else in the workshop able to do his job.

Lastly, ServCo SW has invested heavily in infrastructure over the years (e.g. a new tachograph bay, new offices) because of TrucksUK, but they admit that this attracts operators of other makes as well. The extended opening hours are also believed to be a competitive advantage over the nearby workshops, as ServCo SW can bring in vehicles of other makes that break down in the area. Hence, it looks like that although all adaptations took place because of TrucksUK, some of the returns from them come from outside of the specific relationship.

The latter point however does not offset the fact that all the discussed adaptations and investment took place because of the TrucksUK relationship.

Summary

ServCo SW as a workshop has been consistently performing exceptionally according to the TrucksUK performance measures. It won the workshop of the year award in 2010 and was a runner-up in 2011. Additionally, the relationship between the two parties has been long, stable and harmonious. Apart from dealing to a great extent with TrucksUK vehicles, the

workshop seems to be very dependent on TrucksUK financially, as evidenced by the proportion of revenues coming from fixed-cost service contracts and warranty (54% of the total revenues in 2011). This has ring-fenced half of ServCo SW's business and seems to affect the behaviours and expectations of the respondents in their relationship with TrucksUK, specifically with regard to the constructs of relationship adaptations, operational linkages and legal bonds. The organization seems to have invested heavily in infrastructure and personnel, and has voluntarily adapted its operation (e.g. nightshift) to cope with the many TrucksUK customers and rise to the expectations. Additionally, there are employees specializing in the roles and processes that are necessary for the correct usage of the interlinking TrucksUK web-based systems, hence, adherence to the roles and routines they implicitly define is high. This, together with the existence of joint activities between respondents and TrucksUK representatives reflect a high level of operational integration. Clearly associated with these is the perception of intense and open information sharing with key TrucksUK contacts (e.g. co-located TrucksUK salesman, regional after-sales engineer, business development manager) and through the web-based systems. The only concerns expressed were about the response times from certain departments (parts and contracts) and the absence of an out-of-hours communication link, features which are homogenous across all TrucksUK – workshop relationships. The fact that social interaction complements the technical systems is perceived to be very important. The cooperative spirit exhibited by all individuals, apart from facilitating rich information sharing, also contributes to the fast and smooth resolution of emerging issues in an informal manner. This alleviates the perception of ServCo SW respondents about the degree of formalization of the relationship. The team spirit and the perception of an intertwined future and common goals were evident throughout the interviews, and were reflected through cooperative behaviours and norms, and phrases such as *“symbiotic relationship”* (ServCo SW general manager).

For the convenience of the reader I provide summary information for each connector in a table format (table Table 4-1). I do this for each of the three cases and at the end of the section I combine the three summary tables into an aggregate one.

Table 4-1: Summary information by relationship connector for 1st case-relationship

CONNECTOR	SUMMATIVE EVIDENCE
Information exchange	<ul style="list-style-type: none"> - Frequent and open interpersonal communication. - ServCo SW considered to be one of the best in transmitting and receiving all sorts of information through the electronic means. - ServCo SW concerned at instances with timeliness and response times from certain TrucksUK departments only.
Operational linkages	<ul style="list-style-type: none"> - Great familiarity with the web-based systems and adherence to the implicit roles and routines due to increased exposure to TrucksUK vehicles under contract, task allocation and training. - Joint activities with the salesmen, parts rep and regional manager.
Legal bonds	<ul style="list-style-type: none"> - Clear understanding of the general standards and rules that need to be followed in day-to-day operation. - Long-term personal relationships give the possibility to resolve issues informally decreasing the perceived degree of reliance on the explicit rules.
Cooperative norms	<ul style="list-style-type: none"> - Unanimous belief that future is intertwined with TrucksUK's and success is dependent on joint effort to achieve individual or common goals - Positive reciprocity, apt norms and willingness to proceed to cooperative changes. - Cooperative spirit permeating all organizational levels and aspects of exchange
Relationship-specific adaptations	<ul style="list-style-type: none"> - Commitment to extended opening hours and training. - Investment in infrastructure and in dedicated parts representative.

I continue with the TrucksUK – ServCo E case. Although, in principle, I maintain the same sub-structure followed previously, in a few instances I deviate from it in order to more vividly showcase the intricacies of the 2nd case- relationship.

4.2.2 Case 2: TrucksUK – ServCo E relationship

Background

ServCo E operates in the east of England and has dramatically improved its performance during the last five years²⁵. In 2010 it was declared for the first time as one of the only six 'silver' service providers of the TrucksUK network, demonstrating its tremendous performance improvements. However, according to the TrucksUK regional engineer, due to a couple of incidents that caused conflict between the principal and the TrucksUK HQ at

²⁵ Average scores according to the consistent, quarterly, composite performance measure (see section 3.5.1.1): 3.2 / 5 (since 2007), 3.67 / 5 (since 2009).

the back end of 2010, 2011 was not as good. The relationship was impaired and ServCo E did not seem to try as hard as in recent years. Still, the TrucksUK regional engineer characterized the service provided by the workshop as “*bang on*”. At the time of data collection the number of employees was 34.

ServCo E’s holding group owns both car and commercial vehicle workshops. It is one of the large traditional UK dealership chains with a national presence. ServCo E is solely focussed on commercial vehicles, just like ServCo SW. Conversely to ServCo SW, it has not remained a sole franchise. Instead, it has another two agreements with Japanese manufacturers²⁶. Additionally, it does its own maintenance contract. The latter is standardized and elementary compared to TrucksUK contracts and it does not cover repairs. The principal does not see a risk in doing that as long as there is a lot of pricing ‘homework’ done for each vehicle.

Before the current principal was appointed (7 years ago) the performance levels of the workshop were awful (“*the worst performing workshop*” according to the principal) and the relationship with TrucksUK was very strained. The holding group had briefed the new principal to try and make that part of the business work and bring some stability to an organization which had been constantly changing in terms of organizational structure and leadership. Since then, he has managed to turn things around by introducing a ‘customer is king’ culture and improving the employee morale. He claimed that ServCo E as an organization says yes to almost any customer request, delivers exceptional service to keep the promise, and is absolutely transparent in its communication with its customers. He also needed to invest intensely in personnel and infrastructure. As a result of these actions, the workshop during his period has been transformed for the better and the improved scores across the different TrucksUK KPIs justify this. However, the workshop’s dependence on the TrucksUK part of the business remains small. The workshop controller actually said that the TrucksUK vehicle base in the area is approximately three times less than that of the market leader. More importantly, only 19% of the revenues in 2011 came from contract maintenance and warranty activities, which actually constitutes an increase compared to previous years. The principal says that this is because the TrucksUK sales organization has been bad at selling trucks in the area, mainly due to a “*lack of hunger*”:

²⁶ It has to be understood that the workshop works as a traditional dealership for the other two brands, i.e. it sells directly to the customer, as opposed to the TrucksUK arrangement of the salesman being employed by the manufacturer. It is however noteworthy that the two other makes do not directly compete with TrucksUK as they target different commercial vehicle markets (light trucks and vans).

“I personally think they’ve got issues with their sales team. They’ve got good ones, and I know it’s life, you have good, you have bad and things in between. I just don’t think they’ve got enough good to actually sell the package because the package is right.” (ServCo E principal)

He claims that this is the reason behind the decision to introduce the two additional brands and the own service contracts. However, although the three brands offer variety he would surely prefer to be a sole franchise:

“So we do have different product offerings I have with the three brands. And I can benchmark the manufacturers in terms of what they offer us in parts support, training, technology. But the truth is I’d rather just have TrucksUK because it would make my life a whole lot easier. But the other truth is TrucksUK haven’t done a good job selling trucks in our area. So we’ve had to go out and make our own marketplace.” (ServCo E principal)

On other grounds, like ServCo SW, ServCo E seems to be a great place to work according to the interviewees:

“There’s a good atmosphere out there. I don’t know, it might sound a bit cheesy, but actually they are a good company to work for and has its benefits. I don’t know we’re just lucky. I’ve been to other dealerships and it’s like a morgue, there’s no laughing, there’s no joking, we’ll have a laugh or a joke. Socially we all play golf. We go out golfing. Or we go out for a night out. We’ll go out and have a few beers, and that all helps.” (ServCo E workshop controller)

I continue with the evidence for each relationship connector. This time, I do not provide introductory information about what each connector refers to. For that, the reader should consult the previous section and 3.5.1.3 of chapter 3.

Information exchange

Information exchange in the 2nd case is somewhat different to that in the 1st one. I start this section by referring to the similarities and proceed with the aspects that differ. This approach should help the reader to more easily understand the contingencies of each case and assist them in drawing their own conclusions.

In line with the ServCo SW case, communication and interaction between ServCo E and the TrucksUK HQ takes place on a daily basis and across multiple organizational levels and departments, but is predominantly ad-hoc (when issues arise). Like ServCo SW, ServCo E employees seem to contact TrucksUK HQs only when necessary, otherwise relying on information exchange through the web-based systems:

"I do interact with TrucksUK daily because there are a lot of procedures and you have to interact, you can't remember everything and generally on a daily basis someone [at TrucksUK] gets the pleasure of a conversation from me. Or I'm waiting for an e-mail, or they want an e-mail for something. So it's every day, one way or the other. Different departments every day." (ServCo E workshop controller)

Like ServCo SW, they have a generally positive view regarding the electronic means of communication and are happy with the levels of information exchange through them. For example, regarding the on-line technical information:

"...what's really good on the TrucksUK website is all the technical information [...] I go and look at all the technical information just to see what's been released. If they've got a problem with this or just in case I need anything in the workshop. Or I'll encourage technicians, 'Did you see that thing on [specific TrucksUK portal] about checking the oil pumps?' 'Yeah. Saw that Bob. I'm actually doing one at the moment'. I think that communication's getting through because that's important. [...] So it's getting reported. Communication through their websites I'd say is pretty damn good." (ServCo E principal)

On top of this, TrucksUK are quick to react when the web-based systems fail and information exchange through them is deemed impossible:

"Yeah, they're quite good. Everything they change, they tell you. Anything new they tell you and they're pretty good at communicating. And like today, all the parts systems have gone down so as soon as they knew we were told and they've put in a procedure on how to resolve that and what they're doing to fix it." (ServCo E parts manager).

However, like ServCo SW, they expressed concerns about the timeliness of certain types of information conveyed from certain departments (e.g. the national salesmen, contracts department). For example:

“Sometimes we’re waiting for someone to say yes you can do that. And that might take a day, and that’s a day lost.” (ServCo E workshop controller)

Furthermore, even though the workshop is not tremendously affected by the lack of an out-of-hours communication link, the controller shared his concerns about the appropriateness of this arrangement:

“TrucksUK is a big product and if we had lots and lots of TrucksUK vehicle base [to service] I don’t know how we’d do it if they were only there nine to five. You know, we are a sixteen hour outfit, possibly they should be.” (ServCo E workshop controller)

Finally, like ServCo SW, when it comes to their interaction with certain key counterparts (regional engineer, parts representative), the ServCo E respondents seem to be satisfied with the level and quality of information exchange. The regional engineer confirmed that his communication with the principal and workshop controller is frequent and open, and helps in fulfilling emergency tasks:

“If they call me and want something, it is done... If I call them and I want something, it is done.” (TrucksUK regional manager, customer and technical support East)

Where this case starts to deviate somehow from the ServCo SW relationship is with regard to the communication and interaction between ServCo E and the remaining TrucksUK counterparts. I turn to this next.

Unlike ServCo SW, all respondents in this case indicated that information exchange between them and the co-located salesman is very brief and ad-hoc and that there is no formalized review meeting. The principal is actually aggrieved about this:

“The difference is that if that salesman worked for me, he would sit in front of me every week and tell me what’s going on.” (ServCo E principal)

A recent event, whereby, to the principal’s surprise, one of the workshop’s best customers appeared with newly bought TrucksUK vehicles, vividly illustrates the perceived inadequate information exchange:

“...and the salesman stood in the reception and I just said, ‘Well, that’ll be a new truck for [customer x] is it?’ He said, ‘Yeah. They’ve ordered four’. I said, ‘They’re our best customer. I didn’t know about that. I thought they were buying used trucks

now'. 'No, no, the used trucks aren't working for them, so they've gone back to buying new'. I said: 'So they must've ordered those three months ago, 12, 14 weeks ago'? He said: 'Yeah. About that'. And I said: 'You didn't think to tell me'? My best customer in my whole business. My very, very best customer.' (ServCo E principal)

The principal found that incident so embarrassing that he instigated a meeting with the regional sales manager to complain. Furthermore, he is also unsatisfied with the communication regarding strategic issues by key account managers and seniors:

"Communication by people who are perhaps driving policy leaves a lot to be desired." (ServCo E principal)

He again referred to a recent event whereby he found out about a *"very important"* upcoming change concerning the network, through talking to another workshop principal rather than directly from TrucksUK. Such concerns were not voiced in the ServCo SW case. Finally, it was interesting to validate these ideas through the interview with the TrucksUK regional engineer. When referring to the communication between the TrucksUK seniors and ServCo E he said:

"They are as bad as one another, they can't be bothered some times. TrucksUK don't tell them about the sales or whatever [...] when there is a problem, they do not talk to one another enough. If they talked more there wouldn't be a problem." (TrucksUK regional manager, customer and technical support East)

This means that an important counterpart of ServCo E within TrucksUK believes that information exchange in the relationship is inadequate. Hence, the overall picture is not one entirely biased by the views of the ServCo E respondents.

To summarise, the level and quality of information exchange with the service side of the TrucksUK organization is perceived to be satisfying (the adjective 'fantastic' was used a couple of times), but this is not the case for TrucksUK sales and higher-level departments. Hence there is a feeling that problems arise that could have been resolved if certain communication links were used, or if information had been richer and more relevant. The current situation is very much related to aspects of operational linkages, as will be demonstrated.

Operational linkages

Like the previous case, I start this sub-section with evidence for the first facet of the construct (adherence to the roles and routines specified by the web-based systems) and continue with the second facet (joint activities).

As already mentioned, every independent workshop including ServCo E has its own IT infrastructure, but for its TrucksUK business it has to use the TrucksUK intranet and web portals. Within ServCo E, all respondents seemed knowledgeable about them and comfortable with the routines they specify. No complaints were expressed about their complexity either. Interestingly, the workshop controller acknowledged the need to know how to use the systems in order to exploit their potential. For instance, referring to the importance of identifying and using customer specific information which may translate in effective and efficient servicing of vehicles, he said:

“...they’ll tell you if a customer has a specific need, even if it’s not my regular customer, or a customer I may see at some point like big hauliers, they have their own specific needs. That’s all on the website, you can view that, type [big customer name] they’ll tell you what their need is... something special on a service, it’s all on the website. It’s very good. You just need to know how to use these.” (ServCo E workshop controller)

He mentioned that even though the workshop does not have such a big TrucksUK vehicle base, with investment in training and internal knowledge transfer, he and the staff have reached an adequate level of familiarity with the web-based systems. Hence, the roles and routines are adhered to, and all the necessary procedures are undertaken efficiently. Also, due to an increasing workload, a new person has been recruited to help the controller with the use of the websites and the fulfilment of the constantly increasing tasks. At the same time, one of the receptionists has been assigned with the specific responsibility of some of the procedures:

“We are taking someone on to help me out, so they know the electronic procedures. And we’ve taken on a second service receptionist who deals with some of the procedures that I was doing, so I suppose that is an investment. That’s not just her job, but is part of her job.” (ServCo E workshop controller)

Furthermore, the TrucksUK regional engineer confirmed that everybody at ServCo E is pretty good with the systems (he has personally trained them to use some systems), which has increased their ability to acquire and transmit information:

“...they are self-sufficient, they may get stuck sometimes and call me or technical, I have to admit they are very absorbent to the new TrucksUK ways of working, what we need them to do.” (TrucksUK regional manager, customer and technical support East)

In terms of the second facet of this connector, ServCo E individuals do not have any evident joint activities with the salesman. The low level and quality of information sharing with him is definitely associated with the absence of joint activities. On the other hand though, there are close linkages when it comes to the parts business. The ServCo E after-market manager and the TrucksUK regional parts representative jointly undertake a number of business development activities (e.g. seasonal campaigns, exploratory customer visits):

“So he comes along, we do business development, either with promotions or special offers or seasonal campaigns. So we just go out to the customer to really assess our service to the customer, and also TrucksUK's service to the customer.” (ServCo E after-market manager)

This feature however is very new, as the after-market manager had only been employed for three months when the interview took place. Finally there have been two recent joint customer visits with the regional engineer. The reason was to accommodate customer complaints which were based on a mistaken perception about what ServCo E should be doing for those customers.

In short, the workshop employees seem competent enough with the systems, an impression confirmed by the TrucksUK regional engineer. Additionally, there are evident joint activities with TrucksUK individuals, even if the co-located salesman is not involved in any of the activities (like in the ServCo SW case).

Legal Bonds

ServCo E try to adhere to the explicit rules and procedures specified in the legally binding agreements as closely as they can. They understand that because the product is of high quality and complex technology, TrucksUK and their German parent have to constantly introduce formalized procedures to be followed. This is in order to gather as much information as possible, standardize servicing activities and ensure that the trucks are repaired in the best possible manner.

“There’s a procedure for every job you do, and it’s challenging to remember every procedure for every job, and every form you fill in or every escalation, or every, it goes on and on and on, and that’s become more prolific within the last year and a half.” (ServCo E workshop controller)

However, it looks like that within the workshop a perfectly clear understanding of some of these explicit procedures is missing. The principal stated that in general the terms in the contract which refer to the service processes (e.g. making warranty claims) entail a degree of ambiguity, which at times necessitates local interpretation that can lead to unpleasant outcomes. And because of this ambiguity, TrucksUK should probably be a bit more tolerant to deviations from the prescribed rules. To illustrate this he referred to a recent audit conducted by TrucksUK which ended up with a fine:

“But there’s a risk with taking local interpretation because when they do a claim audit, we’ve just had a claim audit and they’ve sent me a bill for £3,000. So discrepancy complaints - nothing fraudulent but the technician forgot to write something or he forgot to print a report off his TrucksUK accounts. Here’s a penalty, here’s a penalty and I find it petty.” (ServCo E principal)

He continued by characteristically noting that he understands that legal contracts have to be ‘in black a white’ in order to set standards that are measureable. However, “*we live in a grey world*” so TrucksUK should probably be less strict:

“...they say that’s the franchise agreement so I just kind of... I sit and listen to what they’ve got to say. If we can make improvements I go away and make improvements because I don’t live in a perfect world. I’ll make improvements. If not, I just say, ‘Yeah. Okay.’ Shake my hand, thank you.” (ServCo E principal)

The other respondents from ServCo E seem to agree that TrucksUK should not be so overly reliant on the prescribed rules. For example, the workshop controller replied to the question 'how could TrucksUK become better' in the following way:

"[...] if we do forget something, you know we're not machines, and they cannot continually keep putting out procedures upon us. Procedures are now running the whole of my life at work. I'm always thinking is there a procedure for this, is there a procedure for that, rather than concentrating 100% on getting the vehicle out of the workshop." (ServCo E workshop controller)

He would particularly appreciate some more leniency and less red tape when decisions have to be taken on the spot:

"You know, let's sometimes have a bit of trust and a bit of goodwill, and let's get the vehicle back on the road. And then we'll worry about the rights and wrongs. The customer spends a lot of money a month to lease his vehicle from TrucksUK, sometimes we need to help the customer out, and get the vehicle back on the road." (ServCo E workshop controller)

The TrucksUK regional manager admitted that *"rigidity frustrates ServCo E"* and that he sometimes gets the impression that in ServCo E they see no benefit out of the close abidance to the explicit rules.

These points indicate that ServCo E would be more comfortable if the relationship was less reliant on explicit procedures and if TrucksUK were more tolerant with deviations from the prescribed behaviours. In short, the relationship can be considered as more formalized than the first case.

Cooperative norms

In terms of cooperative norms, the picture here is more complex than in the ServCo SW – TrucksUK relationship. Overall, there is recognition of a shared future and common goals, and relationships between certain individuals and departments are undoubtedly cooperative. However, the cooperative spirit does not seem to permeate all levels and aspects of the working relationship between the two organizations. I examine the two different sides of the story in turn.

Like ServCo SW, ServCo E respondents consider their future to be intertwined with the future of TrucksUK, even though they are not necessarily dependent on TrucksUK's future success. As mentioned, the workshop is located in an area traditionally dominated by another commercial vehicles manufacturer, hence, a relatively small percentage of the workshop's turnover comes from servicing TrucksUK vehicles. To illustrate this, the workshop controller mentioned that the business (in terms of workload) with one of TrucksUK's competitors is about three times as big. However, there is recognition that both parties have to work together to be successful. For example, according to the workshop controller:

"Yes, we can't do it without TrucksUK; TrucksUK definitely can't do it without us. We work as a team, or try to work as a team to keep that customer happy. You know, I'd like to see all the contract maintenance customers to have new vehicles. Get rid of the old ones, let's have some new TrucksUK vehicles because then I've got them [to service] again for another three or five years." (ServCo E workshop controller).

Moreover, ServCo E has as an objective to steer as many customers as possible towards buying TrucksUK vehicles. To achieve this, they strive to provide exceptional service to customers of all makes and gradually convert them, and this seems to have worked in instances:

"And we do have a couple of notable successes where we've taken on repair and maintenance business. The customers who've had [vehicles of other makes] and they are now running TrucksUK. That's our efforts, not TrucksUK's efforts, we've done that. And that's our strategy locally. Bring in all makes business, do a very, very good job on them, make sure we have the competency to support that fleet and the technology and eventually convert them." (ServCo E principal)

They are also trying to change the customers' perception that TrucksUK parts are still inappropriately expensive and always use these as first selling option:

"That's what you get, so it's our job to go to market, go to town and just to try and get the confidence back and break that perception down." (ServCo E aftermarket manager)

The TrucksUK regional manager confessed that ServCo E is an advocate of the product and always exhibit cooperation and teamwork in their relationship with him. Additionally, the principal explicitly stated that he *"is working with a common goal"* with the regional

manager and their relationship is “solid”. The workshop controller also mentioned that if he asked to see the regional manager, the latter would come down to the workshop even on the same day. Furthermore, even though there are no formalized meetings or joint activities with the co-located salesman, the latter is frequently supported (e.g. he is provided with a courtesy van when needed, the parts manager does parts pricing for him). In compensation, the salesman occasionally provides the workshop controller with a name of a customer who would be interested in a simple service contract with ServCo E. The workshop controller and parts manager actually consider him as being one of ServCo E’s employees.

This however does not tell the whole story about the multi-level ServCo E – TrucksUK relationship. Indeed, there seems to be variation between respondents (but also within the same respondent’s account depending on what TrucksUK contact or department he is referring to) regarding the sense of teamwork and cooperation in the working relationship. I consider this next.

The principal believes that even though ServCo E as a network member is doing a great job for TrucksUK, the salesmen do not put enough effort to ‘feed’ it. He explained that in the last year TrucksUK only sold four vehicles in the area while he managed to sell forty on his own²⁷. Additionally, ServCo E respondents have perceived autocratic behaviours by TrucksUK senior managers in the past. The principal, however, tends to stand his ground whenever he thinks that giving in will not help ServCo E financially:

“There are people in the organisation who are bullies. They think they can just march in and tell me what to do. And there have been many occasions when I’ve put my hand up and said, this is ServCo E. An independent business with an independent investment who happen to have one of your franchises and we’ve adhered to the franchise standards. We don’t do anything fraudulent and we make the investment where we believe it’s appropriate. If it’s not appropriate we won’t spend it because it’s somebody else’s money. There’s two million tied up in my little bit of the business” (ServCo E principal), and:

“...or they come and say ‘well, we just decided’. ‘Have you really? Well, I can tell you, your decision doesn’t fit my business. If I go off and spend that money, I know I

²⁷ As mentioned, ServCo E is a triple franchise and the principal can sell vehicles of the other two makes. This, as discussed already is not the case with TrucksUK; sales are centrally controlled and only salesmen employed by TrucksUK can sell TrucksUK vehicles.

won't get a return on it'. 'But you'll have to'. 'Stop there. There's the door. You go out'. And there are people in the organisation who are still like that." (ServCo E principal)

The principal also added that the parts department at times demonstrate their bargaining power in a bad way:

"[...] what the parts organisation forgets... okay we've got a franchise agreement, legally binding contract, we buy our TrucksUK parts off them and so on. They miss the point that actually I'm a customer. I spend probably £170,000 a month with TrucksUK parts. Now, to me, I'm a customer. If I'm giving you something, hard-earned money I'm a customer. And they don't think of us that way, they just think it's a private capital partner who has to buy parts off us." (ServCo E principal)

Additionally, certain people at the HQs criticize decisions and actions taken out of office hours, even though an instant call had to be made to return a vehicle to the road:

"They're still a little bit of, you made that decision, is wrong, irrelevant if we're closed or not, you should have waited till the next day. No, we have to make a call, right or wrong, and it's got to be done [...]. We don't close at five o'clock, should the manufacturer really close at five o'clock?" (ServCo E workshop controller)

The regional engineer's account is very important for illuminating this dynamic. He admitted that many people in TrucksUK (especially seniors) still operate with an *"outdated perception"* about ServCo E:

"...it is just the perception that whenever something goes wrong in their area it is always ServCo E's fault." (TrucksUK regional manager, customer and technical support East)

This, according to him leads to frictions and to ServCo E (especially the principal) often feeling let down, even though they are doing their best to make it right for TrucksUK. An incident at the back end of last year has strained further the relationship and probably affected the perceptions of the interviewees. The regional manager confessed that ServCo E admitted *"dropping the ball"* and being at fault, committed that it will never happen again, and asked for some leniency. TrucksUK did not make things easier for the workshop and the story ended with ServCo E having to pay an £8,000 penalty. Having felt disappointed with TrucksUK's attitude, ServCo E reciprocated by not trying much in 2011:

“...it is a ‘you don’t help so I won’t bother’ type of attitude.” (TrucksUK regional manager, customer and technical support East)

This has reduced information exchange between the two parties and may also explain the fall in service delivery performance during 2011. Moreover, the engineer added an additional feature that has frustrated ServCo E. There have been instances when the latter has brought in potential fixed-cost contract customers to TrucksUK, but because their vehicles were 3-4 years old the deals never happened. This is because TrucksUK priced the contracts very high and the potential customer rejected them, so ServCo E lost some secure business and steady cash flows.

The engineer believes he is doing his best to ease out the tension and balance the perceptions. He is trying to make TrucksUK and customers understand that ServCo E are sometimes judged based on their previous tarnished reputation while in fact the service has been objectively good, and the principal is trying to make the product a success in a traditionally underselling area. He is also trying to placate the ServCo E principal and has actually instrumented a meeting (scheduled to take place a few weeks after data collection ended) between the two parties. Participants were supposed to include himself, the principal, and the TrucksUK CEO, After-sales Director and Head of Service.

Drawing from the variation in the accounts of the respondents, overall one could say that the sense of team-working is not always there and the cooperative spirit is not perceived to permeate all aspects of exchange at this point in time. It gives the impression that ServCo E often do not feel treated as well as they believe they treat TrucksUK’s customers.

Relationship adaptations

Without a doubt, ServCo E has proceeded to significant relationship-specific adaptations since the current principal took over. In terms of infrastructure, ServCo E has invested heavily. New offices, new MOT and wash bay, new IT systems and service vans are only some of it. As mentioned in the background sub-section, the relationship with TrucksUK was quite bad before the appointment of the current principal. So this rapid and significant investment was necessary to bring the workshop up to the required level. The principal acknowledged that the workshop has started getting the return from the TrucksUK investment, even though that does not come necessarily from within the TrucksUK relationship. Like in the ServCo SW case, ServCo E respondents admitted that

these investments originally made to satisfy the TrucksUK standards have some use outside of the relationship as well. In the view of the workshop controller, the state-of-the-art infrastructure helps the workshop generate additional work as customers may bring their non-TrucksUK vehicles for service because of the good image and professionalism of the workshop.

In terms of personnel, ServCo E has taken on one service receptionist and one administrator because, as the workshop controller put it, *“you need more and more people to carry out the procedures”*. However, the first two recruits are not entirely dealing with TrucksUK. They also undertake similar tasks for the other two franchisors of the workshop. Also, the workshop employs somebody specifically to cater for all the necessary administrative stuff and procedures that have to do with the KPI bonus scheme. It is noteworthy that because the quarterly monetary bonus is proportional to the labour hours claimed, which in their turn are proportional to the vehicle base under fixed-cost TrucksUK contracts or warranty:

“...the financial reward doesn’t offset what it costs to run, to employ someone full time for all the [bonus scheme] requirements” (ServCo E workshop controller).

This shows that ServCo E has been committed to improve every aspect of its operation. Furthermore, an additional person has been hired to help the workshop controller with his daily duties related to TrucksUK. When it comes to personnel training, ServCo E invests heavily, just like ServCo SW does. The interviewees actually doubted whether such intense investment in training is really justified considering the small percentage of work coming from business with TrucksUK:

“...we want to do as much training as we can, but we’re also here to make money. We’re not a wholly owned branch, we’re an independent, and we spend a lot on training here, and TrucksUK should look at, we’re not wholly owned and it costs us a lot of money.” (ServCo E workshop controller)

In addition, the holding group of ServCo E has recently subcontracted two repairers in locations within the general area of ServCo E, where TrucksUK customers can have their vehicles under contract or warranty serviced. The TrucksUK salesman can also use the existence of these two sites as ammunition for achieving sales in the general area of ServCo E, which traditionally has not been in favour of the TrucksUK product.

Finally, the newly recruited aftermarket manager has specifically been briefed to try and rejuvenate the underselling TrucksUK parts business:

"[...] which is why I employ an aftermarket manager. And he's wholly responsible for parts. His brief is just make it work. It's more or less... it's not broken, we could just do a lot better. If we can do better we can do better for TrucksUK." (ServCo E principal)

In overall, the relationship specific adaptations of ServCo E may lag temporally those of ServCo SW and may concentrate on different aspects of the business relationship. However, the impression is that ServCo E has also modified significantly their operation as a consequence of dealing with TrucksUK.

Summary

From being one of the worst performing workshops in the network, after the appointment of the current principal six years ago ServCo E has managed to reach high standards of performance. The principal has insisted a lot on changing the mindsets of the employees and on continually investing in infrastructure and personnel. The relationship-specific investments were necessary, and benefits are also being reaped from their use outside of the relationship. Being located in an area traditionally preferring the market leader, the TrucksUK part of the business for the workshop remains low. The same happens with the proportion of total revenues coming from fixed-cost TrucksUK service contracts (19% in 2011). This has led to the introduction of simple maintenance contracts and two additional franchise agreements. It looks like these decisions were taken out of disappointment towards the TrucksUK sales organization, and, according to both ServCo E and TrucksUK respondents, are not seen favourably by the TrucksUK senior management. The fact that the workshop is still carrying its old, bad reputation and an incident at the back end of last year, have created a dynamic which seems to have affected the perceptions and behaviours of the respondents. Especially the principal feels that at times he has to fight against a reputation of being uncooperative and distant. In effect, anything negative happening within the relationship tends to be highlighted. For example, the almost non-existent information exchange with the co-located salesman, which was the main complaint expressed to the TrucksUK regional sales director. Interestingly, perceptions regarding the different links and modes of interaction vary. This variation was

observed between respondents, but also within the same respondent's perception of different TrucksUK levels and individuals. For example, information exchange through electronic means is deemed satisfactory, while information exchange with the sales department and senior TrucksUK management is not. The same happens with cooperative norms. The sense of cooperation and teamwork is not always felt by the respondents, even though they claim that they are trying their best to make it right for TrucksUK and strive to increase the brand's presence in the area. According to the TrucksUK regional manager, the recent incident and the way it was dealt with by TrucksUK eventually resulted in ServCo E not *"having been bothered too much"* in 2011. ServCo E admitted they were at fault and asked for leniency but TrucksUK reacted in a rigid and indifferent manner. The inflexibility frustrates ServCo E and at times it is believed that their efforts are not recognized. They also perceive their relationship to be overly formalized and relying heavily on needless explicit procedures, while TrucksUK are thought of as less tolerant to deviations from the prescribed rules than they should be. Finally though, the appointment of new people in order to better cope with the increasing number and complexity of tasks and procedures has increased the adherence to the roles and routines that come with the interlinking systems.

Before proceeding to the third case, for the convenience of the reader I summarize the connector-by-connector information for the TrucksUK – ServCo E relationship in Table 4-2.

Table 4-2: Summary information by relationship connector for 2nd case-relationship

CONNECTOR	SUMMATIVE EVIDENCE
Information exchange	<ul style="list-style-type: none"> - ServCo E happy with information sharing through web-based systems and key counterparts, but not with seniors and the sales department as a whole. Considered (by TrucksUK) to be efficient in web-based info exchange. - ServCo E and TrucksUK HQs both reluctant at times to engage in exchange of information so issues tend to fest up.
Operational linkages	<ul style="list-style-type: none"> - Great familiarity with the web-based systems and adherence to the implicit roles and routines, mainly due to investment in training and recruitment of extra personnel. - Recent collaboration for expansion of parts business, joint customer visits for problem solving with regional engineer. No activities with the co-located salesman.
Legal bonds	<ul style="list-style-type: none"> - Perception that relationship is overly reliant on explicit rules and procedures. - Perceived inflexibility and intolerance to deviations from the prescribed reflected through the reactions to recent fines imposed upon them by TrucksUK. - Informal part of the working relationship does not seem to be as developed.
Cooperative norms	<ul style="list-style-type: none"> - ServCo E devoted to a common future with TrucksUK. Belief that they do their best to prove it but feeling let down by TrucksUK seniors and sales. TrucksUK seemingly operate based on a mistaken perception about ServCo E. - Cooperation and common goals with regional engineer and the after-sales organization but in overall team spirit is not always felt.
Relationship-specific adaptations	<ul style="list-style-type: none"> - Significant investment in infrastructure to change the bad reputation. Subcontracted two repairers to increase TrucksUK presence in the general area. - Extensive training even though some unnecessary, recruitment of new personnel.

The analysis of the third and final case-relationship follows.

4.2.3 Case 3: TrucksUK – ServCo S relationship

Background

ServCo S is located in one of the most southern parts of England. Although it performs worse compared to ServCo SW and ServCo E, it is noteworthy that its performance scores have been improving recently²⁸. Consequently, it has been achieving quarterly monetary bonuses more often. All in all, there are 11 full-time employees, making ServCo S one of the smallest workshops in the TrucksUK service network. In the last couple of years the workshop has lost and never replaced three employees. The principal acknowledged the need to employ more people *“but the work must come first”*. The small size is a factor that

²⁸ Average scores according to the consistent, quarterly, composite performance measure (see section 3.5.1.1): 3 / 5 (since 2007), 3.20 / 5 (since 2009).

impacts several aspects of the workshop's operation and its relationship with TrucksUK, as will be demonstrated later.

ServCo S started as a family business around 20 years ago and has been dealing with TrucksUK for the last 15 years. The area being relatively rural, there are no operators with big fleets. This means that the workshop deals predominantly with small businesses and owner drivers, who are less likely to put their vehicles under fixed-cost contracts. Hence, in 2011 around 20% of the workshop's revenues came from service and repair activities for contracted or under warranty vehicles. Additionally, a bit less than half of the workload is with TrucksUK vehicles, and the principal is trying to promote his business as an all-makes workshop. Unlike ServCo E however, ServCo S has remained a sole franchise.

"We do a lot of trailers, all makes really. That's the way we have to promote ourselves, simply because we haven't got the TrucksUK vehicles out here to sustain it. They're just not in the area. So if we just relied on TrucksUK we wouldn't be here."
(ServCo S principal)

Like ServCo E, to counteract the relatively low revenues coming from TrucksUK fixed-cost contracts, ServCo S have introduced their own type of service contract. These are simple and like in the previous case cover only the easily planned maintenance activities. According to the principal, this has increased customer retention and provided steady cash flows:

"I won't say that we've made a fortune. It's regular payments, it's regular work, it's good for cash flow; but it does tie the customer in to you, and that's what you've got to do. Keep them somehow." (ServCo S principal)

Like the principal of ServCo E, the principal of ServCo S is not happy with the sales organization of TrucksUK. He believes that concerns about administrative issues and trivialities which count towards the salesmen's performance, take the focus away from selling trucks:

"There's too much being analysed and their time is being taken up doing too much admin, when they could be just out selling to people, which is what they want to do, at the end of the day. And I cannot influence that at all, I'm afraid." (ServCo S principal)

As a consequence, he believes, sales have suffered in the area. However, a new new-vehicle salesman started a few weeks before the interviews, which has made the principal optimistic that the current situation may change.

As part of a general reshaping of the company's image, the principal has also very recently hired a publicity company to create a new website, and has integrated the service and parts departments into one. The wide variety of services that the workshop offers, together with the speed of response due to the small size and simple organizational structure, are seen by customers as the workshop's core competences. Quick response and vehicle turnaround times must definitely be enhanced as well by the fact that an all-makes parts supplier is located literally next door.

The analysis continues with the connector-by-connector evidence.

Information exchange

Overall, the perception of the respondents about the level and quality of information exchange in the third case differs significantly to the previous cases. However, as when presenting the evidence for this construct in the ServCo E case, I begin with noting the similarities.

The communication with TrucksUK HQs is again multi-level and ad-hoc. Additionally, information exchange with certain departments (e.g. claims adjudicators, technical department) is deemed satisfactory in terms of frequency and openness, and the principal said it is easy to reach the high-rank TrucksUK managers when necessary. As in the previous cases however, concerns were expressed about the speed of response in instances, especially when the workshop is dealing directly with the German parent through specific web-based systems. For example:

"...he keeps having to update all the time and waiting for answers, and the answers don't come back quickly. They expect everything done quickly, and the vehicles to be on the road, but the systems that he has to go through, the response time is very, very poor and it's always backwards and forwards, backwards and forwards. Instead of a direct answer, yes." (ServCo S warranty and contracts manager)

These are the few impressions regarding information exchange which one could claim are common to the other case-relationships. In reality, the picture in this case deviates significantly. I begin with the web-based communication and information exchange.

Firstly, the respondents believe that there are far too many systems, which makes information exchange unnecessarily fragmented and complicated.

“...they've got a lot of different systems and websites and things to go into which is extreme. I think my desktop has probably got a dozen different like systems I've got to go into, and out of them I use seven or eight on a daily basis. So there's too much like that... too many different systems of doing... too many different departments you're dealing with.” (ServCo S service manager)

Also, the parts manager expressed his bafflement about not having access to specific information for certain parts that vehicles were already fitted with. According to him, if that information was readily available, the workshop would at instances be able to take action quickly, without referring back to TrucksUK.

“For instance, I'm looking up a vehicle now that's got a left axle fitted after it's been taken off the production line, I suppose. I've spoken to technical and they found the information on it, they've got a list on all of that, and I don't understand why we don't have that access. If we had a bit more like information, I suppose, we wouldn't need to contact them as much because it would be there for you. [...] there's not really anything to hide in it, it would just make things easier because if you've got to send an email to technical, and then by the time they've dealt with it, it might be thirty minutes or whatever for them to come back, then, yeah, something that could have been done in five minutes has taken a lot more.” (ServCo S parts manager)

These perceptions however seem to be a consequence of the small size of ServCo S. The small employee number means that two people (the service manager and parts manager) are responsible for a variety of tasks that in other workshops are undertaken by a number of different individuals. These range from communicating with customers and TrucksUK, to supervising the fitters and even repairing vehicles. This task overload seems to affect their perception of the complexity of the systems to be used to retrieve the relevant information, and consequently the level of information exchange:

“...everything that you'd apparently need is on there, but they just fire on so much information, that you don't have the time, or certainly we wouldn't because we've

only got a few members of staff, to be looking at everything that comes out. So if we have a problem with a vehicle and we phone up people, they'll say, well, haven't you checked this, or haven't you been here to look at that? Well, obviously, no.” (ServCo S warranty and contracts manager)

Similarly, regarding the area’s vehicle base, the principal said:

“...they know who has got TrucksUK vehicles. They can find this information which, I guess we could, but it would be so time-consuming that, with the amount of staff we’ve got we can’t afford to.” (ServCo S principal).

Apart from locating and receiving information through the utilization of the web-based systems, it may be the case that ServCo S has problems in transmitting information as well. The TrucksUK regional manager, without really wanting to point at ServCo S, indicated that some workshops are better than others in providing the necessary information to TrucksUK. For example, when a vehicle comes into the workshop with a defect, the individuals attending it are expected to record and transmit as much information as the predesigned forms require. This is in order to provide a full picture of the situation to TrucksUK. It turns out that many workshops do not provide sufficient information, while they think that they have actually done enough:

“...we will ask them for a service documentation from the vehicle, which could be a prerequisite for a diagnostic, so we need this, this, this and this, but we'll only get this and this, or you won't get the third this. So they think they've done enough; that's what you've asked me for. When, in fact, probably a very small percentage of what they've been asked for is what they've given.” (TrucksUK regional manager, customer & technical support South)

With essential information missing, TrucksUK cannot provide an informed answer. Hence, they have to ask and wait for supplementary information, which may instigate additional unnecessary communication, which eventually delays the completion of the job. In such instances, the workshop may blame the provider’s timeliness, while in actuality it had been the former’s fault initially. In the ServCo S case, these presumably unnecessary communication links seem to cause additional confusion to the workshop employees. For example:

“There's a lot of different contacts I suppose, for my purposes, just for the service department, there's a lot of different departments that I deal with, and each

department's got all their different internal people who're responsible for each thing, which I suppose you will get with a large company as that, but sometimes it can be a bit confusing.” (ServCo S service manager)

Furthermore, finalizing jobs becomes more difficult and time consuming when guidelines and instructions on the web-sites and from different TrucksUK individuals are inconsistent with each other:

“...but you'll get in warranty they'll tell you to do it one way, contract maintenance tell you to do it a different way for test procedures, and you know, do whatever. And it's getting the right balance... and then you've got another like engineer telling you to do something else.” (ServCo S service manager)

Although the point about the consistency of message has merit, and there is no contrary evidence in order to discard it, in short, ServCo S seem to be relatively less able to locate, receive and transmit information efficiently. After all, the TrucksUK regional engineers conducted a survey recently, which showed that seven out of ten issues for which any workshop employee calls the HQs should have never become an issue if the web-based systems had been used appropriately to transmit or locate the relevant information. This largely seems to be the case with ServCo S.

Secondly, the interpersonal communication with some of the key counter-parts can be characterized as poor. TrucksUK people (e.g. regional parts manager and regional engineer) make very scant visits to ServCo S. Especially the previous new-vehicles salesman *“was never down here”* according to the principal, and there were no formalized meetings. The principal is even unaware of whether the salesman was supposed to be home-based or constantly in the field. He also referred to a similar incident like the one mentioned by the principal of ServCo E. One day a good customer appeared with new vehicles without the principal ever having heard about it. He added:

“I think personally we should have a little meeting, if not every week at least once every couple of weeks, and just discuss what he's doing, who he's seeing and what we can do to help [...] we would only know who the salesman's dealing with, at the point he's made a sale. Sometimes that's too late.” (ServCo S principal)

As mentioned earlier, the old salesman has retired and a young new-vehicles salesman took over only five weeks before the interviews. The principal said that he seems more communicative but it is still early to tell. In addition, it was mentioned that the regional

parts manager has not been seen in the area in years. In the words of the service manager:

“We are a small workshop, we are forgotten about. If we were a big company in the middle of Birmingham it would be different.” (ServCo S service manager)

Finally, it is noteworthy that the principal has stopped feeding back proprietary information (basically the workshop’s monthly figures) to TrucksUK. Firstly, because it took him two days to compile it, and secondly, because the information provided by TrucksUK in response, referred to ‘the average dealer’. It was not individualized and:

“...that’s no good to me. I want to know how a small dealer does and how I compare to them. I am not interested in the average dealer’s turnover. It doesn’t say anything about my business.” (ServCo S principal)

Overall, it seems that ServCo S have problems in both transmitting and receiving information through the web-based systems and at times seem confused. Moreover, key TrucksUK counterparts who in the other cases appear to be communicative, are perceived to be uninterested in exchanging information with ServCo S people. Hence, information to a certain extent is lacking across both interpersonal and electronic communication.

Operational linkages

As in the other two cases, the analysis is structured around the two facets of the construct of operational linkages. Regarding the first facet (adherence to the roles and routines implicitly specified by the web-based systems), the analysis is closely intertwined with the construct of information exchange as will be shown shortly. Additionally, the influences of the two exogenous factors (workshop size and proportion of workshop revenues coming from TrucksUK fixed-cost contracts and warranty activity) start to become evident in this case.

ServCo S, like ServCo SW and ServCo E, operate their own IT platforms but use the TrucksUK systems for that part of the workshop’s business. As touched upon in the previous sub-section, common between all four interviewees is the perception that the systems are too many, fragmented and complicated, and it takes too long to undertake certain tasks. For example the parts manager said:

“...yeah, they're okay. Yeah, they're not too bad. It probably could be integrated a bit better, because we've got like the bill sheet system, but you have to get a part number off there and then go to another system to get a price and availability of stuff. Whereas, if they made it as one, if you had a part that you wanted and double clicked it, it would come up and it shows you how many they have stock and what price it is. It would just save going around different systems. [...] They could reduce the amount, they don't need that many, they could integrate a lot of them together.”
(ServCo S parts manager)

However, as already mentioned this perception is certainly affected by the small size of ServCo S, which means that fewer people are involved in using the interlinking IT systems. Moreover, those people seem to have too much work to do. For example, everybody apart from the principal repairs vehicles when required. This is in contrast to the previous two workshops which have dedicated administrative staff for certain roles and routines. The effect of small size on the familiarity with the roles and routines implicitly defined by the systems becomes evident through quotes like the following:

“...but obviously the information is there, but it's having the time and the manpower to source it. And it's not easily found either, like we've got a system, so if we had a fault with the turbo, there's meant to be service information out about the turbo, which there is. But all you can do is put in a name, i.e. turbo and then it'll come up lists and lists, as opposed to specifics.” (ServCo S contracts and warranty manager)

This lack of familiarity and expertise with the systems indicates that ServCo S are, in general, less competent in using them (which means less efficient receipt and transmission of information).

Moreover, the small vehicle base on fixed-cost contracts (compared to other workshops), means, according to the service manager, that the technicians at instances come up against previously unknown vehicle faults that for other workshops may be trivial. This makes it difficult to locate information available on the portals because of inexperience and ignorance regarding what to look for:

“...we don't have a large turnaround of vehicles. If we were like in middle Birmingham you'd have big dealership, you get a lot more experience, whereas we don't. You'd get to know all the faults sort of thing. It can be a very common fault,

we see it once and it's like a massive thing to us, but that takes a bit of time finding the information.” (ServCo S service manager)

This means that due to the relatively lower reliance on vehicles under service contracts and the workshop's small size, individuals from ServCo S are less familiar with the web-based interlinking systems, hence less competent with them. This makes adherence to the implicitly or explicitly specified roles more difficult, i.e. the transmission and reception of information is problematic. This fact logically contributes to the unsatisfactory levels and quality of information exchange in comparison to the previous two cases.

Moving on to the second facet of the construct, joint activities between ServCo S individuals and representatives from TrucksUK are absent. For example, the parts manager thinks that he has *“never seen”* the regional parts representative of TrucksUK. Additionally, the old new-vehicles salesman was never willing to get involved with ServCo S according to the principal, even though the latter claims to be well connected in the area and could potentially help with the sale of vehicles. No joint activities with the area used-vehicles salesman were identified either.

In short, it seems that the small size of the workshop and the low reliance on TrucksUK vehicles under service contracts, significantly affect this dimension. The familiarity with the interlinking systems is relatively low; hence the perception about the degree of operational integration is low as well. Also, it looks like the actual behaviour of TrucksUK is affected as no joint activities were identified. It may be the case that in instances, ServCo S is indeed treated as a small, *“forgotten about”* workshop.

Legal bonds

When it comes to the degree of formalization of the relationship, ServCo S respondents clearly feel that their working relationship with TrucksUK is overly and unnecessarily reliant on prescribed rules and procedures.

To start with, it is believed that there are too many redundant procedures and a lot of unnecessary documentation, which according to the contracts and warranty manager *“all they do is job creation”*. Additionally, new rules are constantly introduced and existing ones are modified. This excessive explicitness, in combination with the, at times, long TrucksUK response times, results in longer vehicle turnaround times:

“So they're covering their own backsides in every way, and we're the ones that actually will get hit from repairing a vehicle on time-wise and everything else.”
(ServCo S contracts and warranty manager)

To complement that, the principal claimed that it is unreasonable for the fitters or the breakdown van drivers to be forced to write down everything they do, because if they wanted to write they would not have chosen this job:

“... ‘I want to see him write down what he did to diagnose what the fault was, and then what he did to put it right’. Well hang on, these guys in this workshop are technicians. They’re fitters, basically. If they wanted to write lots of things down, they wouldn’t be over there. Some do it better than others; but there are some that you’ll never get to write it all down.” (ServCo S principal).

Referring specifically to the breakdown attendance technician, he said:

“...very, very good at his job. Never lets anybody down, and things get fixed on the side of the road, where they would normally get towed in and be done. So, excellent at his job, but absolutely useless at paperwork. Can’t have it both ways.” (ServCo S principal)

The contracts and warranty manager, upon being asked how TrucksUK could get better replied: *“...less stupid procedures and just let the people do their job”*. He also pleaded for some *“discretion”* and *“less red tape”*. He explained that when a trained mechanic decides that, for example, a part has to be replaced, the procedures *“written in black and white”* come second to the customer having his vehicle back on the road. In effect, he thinks that too much reliance on the explicit rules increases the time needed for the vehicles to be back on the road. Drawing from a specific decision about the replacement of a part, whereby TrucksUK complained because ServCo S did not work entirely along the set lines, he said:

“...otherwise, everything that goes on a vehicle, you'll be saying, well, not sure about that, they have new, they have new. Where does it stop? It'll cost TrucksUK money, it'll cost the customer money. There wasn't an intercooler available for that day, so the customer needed his truck back, the customer was losing hundreds or thousands of pounds a day. So, from our point of view, it's a no-brainer; the customer comes first, it's got to go.” (ServCo S contracts and warranty manager)

The principal, however, admitted that although at the beginning “*you throw your hands in despair*” when new procedures are introduced, with time their reason becomes evident. The contracts and warranty manager also confessed that procedures and rules must exist to ensure the proper operation of the workshop and the carrying out of activities. It is only that they are unnecessarily many, which for a workshop of such size, the result is slow reactions and delays in the completion of service and repair activities.

Secondly, the respondents do not seem to believe that TrucksUK are tolerant enough to deviations from what is prescribed by the rules. This is especially irritating when the procedures themselves seem unclear and the rules applied during audits inconsistent. The contracts and warranty manager is “*in no way, shape or form*” clear with what is expected from him, a consequence of the auditors applying a different set of rules every time. The principal added:

“I think you need a bit bigger window sometimes. Not necessarily to bypass them, but we need a little bit of scope [...] I’ve never had the same set of rules applied by the auditor yet [...] Now the last guy who came followed a completely different set of rules. He found 27% defects; but he was looking for something completely different, that we weren’t prepared for, because we were using the instructions that the first guy gave us.” (ServCo S principal)

This means that audits lead to ServCo S being debited for jobs for which monetary claims were originally accepted by the TrucksUK adjudicators. According to the respondents, this should not be ServCo S’s problem but TrucksUK’s. For example:

“They’ve audited our job and said, right, you didn’t do that, we’re going to debit you £1,500 off the job. Because we didn’t go through the full procedures that they said we should do; even though the vehicle is still going around with no problem at all. But my argument to that was, the vehicle is going, my claim has been audited by my adjudicator and he paid it. The fault should be going back to TrucksUK, saying your adjudicator should have stopped that as soon as my claim had gone on, but that’s not our fault if they didn’t pick it up either. You shouldn’t be picked up months down the line, and then debited for it.” (ServCo S contracts and warranty manager).

Apart from not being happy with the level of discretion and tolerance shown by TrucksUK, there was also no indication that the two parties can work with each other and resolve

issues in an informal manner. This is in contrast to ServCo SW – TrucksUK relationship and adds to the general perception of over-explicitness.

Cooperative norms

It would be harsh to claim that ServCo S individuals consider their workshop's relationship with TrucksUK to be an adversarial one. However, it should at least be stated and demonstrated that they have a number of serious complaints regarding the extent of TrucksUK's cooperative spirit in the relationship. As a result, this case-relationship appears to be the least cooperative amongst the three.

The perception that ServCo S and TrucksUK are working towards a common goal does not seem to be as strong as in the previous two cases. This is evidently reflected through the behaviour of the previous new-vehicles salesman. As shown earlier, the relationship between him and the workshop employees has not been ideal. According to the principal, the salesman did not put enough effort to make sales, which is why the proportion of business coming from fixed-cost contracts is so low. The former continued by saying that because he knows most of the operators in the area, he could have been helping TrucksUK improve their local market share, if only the salesman involved him in the process or agreed for a regular debriefing meeting. Attempts to establish the latter failed. Even when ServCo S informed the salesman about potential customers through the appropriate TrucksUK process, the salesman was too slow to act. There is the perception that he has been complacent, relying only on old sales and *"winding it down"* towards retirement. Moreover, after the principal complained to the HQs about the situation, the salesman started playing *"silly games"* which made the principal abandon any hope and action for improvement. The quote here is indicative:

"Well, I complained about him once. I said, 'Look, what's happening. Because I don't see him. He's never...'. 'Oh, I'll have a word'. Well for about three months I got ten phone calls a day. 'I've just pulled into the petrol station to get some fuel. I thought I'd let you know what I'm doing. I'm just going to stop for a cup of coffee, if that's alright'. It got silly. It died off after a while. He got fed up playing those games. So I didn't bother repeating it. What's the point in complaining?" (ServCo S principal)

However, since the retirement of the old and the introduction of a young new-vehicles salesman, the principal admits that *"it's looking a lot more hopeful than it was"*.

Regarding the way they are treated by TrucksUK in general, the prevailing perception in the workshop is that TrucksUK are not fair and that they discriminate against small and private capital workshops. *“Some outlets are closer to TrucksUK than others. In fact I do not think we are close to them at all”*, said the principal. It is felt that rules do not apply equally and consistently to everybody:

“...but because it's a TrucksUK wholly owned, they've been paid. If it were a small private capital dealer, like us, they'd say, well, why did you change that part, or why did you change this part? We're not paying for it. They're the differences I see, personally, which doesn't seem very fair.” (ServCo S contracts & warranty manager)

The contracts and warranty manager continued by expressing his suspicion that certain workshops are favoured against others. He specifically referred to ServCo SW:

“...we know from very good sources, things that go wrong there, things that would go against getting that status, but somehow they get it. And I speak to the warranty guys up there, I speak to the contract guys up there, because I know them. They tell me what rejections they have, they tell me what's missing, they tell me...How do they get a 'Dealer of the Year' when they've got so many mistakes as well?” (ServCo S contracts & warranty manager)

Also, there was particular reference to instances whereby TrucksUK reject certain ServCo S claims or ask for additional paperwork, while, to the knowledge of the interviewees, claims of the same detail and quality from wholly owned or large workshops are accepted:

“Some of the things that we put claims on and get rejected, we know for a fact that other dealers are getting them passed. We know that.” (ServCo S principal)

There is also the perception, expressed by the contracts and warranty manager that TrucksUK regularly *“try to bend the rules to suit themselves”* and get out of paying for repairs whenever they can. The principal also emphasized how many times he has felt embarrassed in front of customers after telling them that TrucksUK would not pay for certain repairs, only for TrucksUK to change their minds upon direct complaint from the customer:

“When you apply for a goodwill decision on something and it's rejected, they said, 'No.' Okay, you got back to the customer and say, 'Sorry, it's been rejected.' You invoice the customer. He's not very happy about it. He'll phone TrucksUK and kick off

at somebody about it. Next thing they'll come back and say, 'Oh, yes, we'll pay that now.' Makes you look bloody stupid, as though you haven't tried. That happens so many times you would not believe." (ServCo S principal).

An additional contingency intensifies this perception of unfair behaviour on the part of TrucksUK. ServCo S, being a small workshop, does not qualify for direct delivery of parts from the HQs. They are forced to buy them from the closest TrucksUK workshop which makes profit out of the sale. This means that, normally, ServCo S cannot make extra profit out of the parts, especially out of lines which are on seasonal promotion. Although the principal acknowledged that he is not sure whether a direct delivery would help profit-wise (as the workshop would have to carry more stock), he is disappointed that ServCo S cannot be free-standing in that sense. In addition, this contingency also seems to affect the extent of communication with the TrucksUK parts organization, as well as the way the latter treats the workshop. The parts manager said:

"...help is not brilliant. They will send you an e-mail and then you will have to sort it out." (ServCo S parts manager)

Considering all the above, the principal, with the recent rebranding of the enterprise, is trying to sell the image of an all-makes independent workshop which simply happens to have a TrucksUK franchise:

"What we're trying to sell ourselves is being an independent garage who does everything, that also has a TrucksUK dealership to support us, which is what they do." (ServCo S principal)

Obviously then, he does not consider his workshop's future closely intertwined with TrucksUK's.

However, it has to be noted that the TrucksUK regional manager when referring to ServCo S said that the latter regularly feel that they are *"messed around"*. This is common, he claims, when the small workshop is close to a big one, as is the case with ServCo S being very near to ServCo SW. In such cases, the small workshop, which naturally loses a tranche of its work to the bigger one, tends to believe that TrucksUK are letting this happen when in reality the latter are unaware of what really goes on. Although not very convincing as an explanation of all the negative views of the interviewees regarding the cooperative spirit of TrucksUK in the relationship, it can probably explain at least some complaints. It seems

that certain aspects of the negative perceptions expressed here have nothing to do with other workshops.

On the good side of it, at an individual level, the adjudicators from the contracts department, the technical helpdesk people and the field regional engineer are always helpful regarding day-to-day issues, and seem to care about ServCo S. According to the contracts and warranty manager, the former *“are always happy to help and they'll put us in the right direction”*. The service manager also shares the belief that most individuals that the workshop employees happen to speak to in the HQ try to help in the best possible manner. There is the perception that this is the case because TrucksUK understand that ServCo S are always honest (for example when making monetary claims) and never try to deceive TrucksUK. In effect, the interviewed individuals acknowledge the tendency for positive reciprocation by certain people in the relationship. Sensing that they always have the backing up of some of their counterparts in regular interaction is very important for ServCo S. While however there is the feeling that individually TrucksUK are mostly cooperative and caring, TrucksUK as a ‘faceless’ organization is not. And this last statement probably sums up the situation regarding the construct of cooperative norms.

Relationship-specific adaptations

Despite its small size, ServCo S has proceeded into extensive relationship-specific investments in recent years. About seven years ago the principal was told by TrucksUK that to continue being a member of the network, the workshop had to meet certain standards. From the list of the things he was given to do, some of them he considered unnecessary but did them anyway to show his willingness to stand up to TrucksUK’s increasingly high expectations:

“They just gave me a list of things to do, and we got on and did it. Some of the stuff we got we didn’t really need, but we did it anyway because, we wanted to do a proper job.” (ServCo S principal)

So first and foremost, in order to avoid investing in a rented property, he decided to purchase it from its previous landlord. In the last seven years this property has been modified to a great extent. It has been rewired, re-plugged and the old office walls have been brought down in order to form one bigger control office. Secondly, investment in equipment and machinery has also taken place. For example, tachograph, headlight tester

and pillar lifts. Additionally, ServCo S has extended their opening hours for TrucksUK and if the new salesman brings them enough work they will create a proper night shift:

“Obviously, we’ve had to extend into the evenings to get the hours in that they want us to do; but if all goes according to plan, we are hoping to extend it on to a full proper night shift. But you’ve got to get the work first to do it.” (ServCo S principal)

However, he admitted that this sort of investment would have to come anyway, and it was only quickened because of TrucksUK. His initial concerns about the need of certain types of investment soon disappeared:

“Yes. Yes it is [translating into superior performance]. I’ve got to say, sometimes you question it, but at the end of the day, yes it is. Because you wouldn’t be able to do the job without it.” (ServCo S principal)

Like in the previous two cases though, the benefits of the investment are also seen outside of the specific relationship. For example, the new tachograph testing equipment makes the workshop unique amongst the others in the area. The individual responsible for it works as *“a small business within a business”*, with his own contact details and customer base. This setting attracts vehicles of all makes whose operators may combine tachograph testing with other services or the purchase of parts. He also acknowledges the status that the workshop has gained because of being a TrucksUK franchise, which justifies premium charges for certain services:

“That’s why we can charge a little bit more than some. We don’t propose to be in the cheap end of the market. There’s people round here cheaper than us. Fine, let them carry on. They won’t be there long anyway. We do what we do properly.” (ServCo S principal)

In terms of training, even though for a workshop as small as ServCo S it is expensive and takes time away from profit making activities, the principal makes sure the essential number of hours is achieved every year. Its value is acknowledged. According to him, not only does it help finishing jobs more quickly, it also adds to the competence and status of the workshop as it allows a premium charge. However, the service manager pondered whether all of this training is actually necessary. That is because due to the small number of technicians, naturally there are knowledge spill-overs amongst them:

“And then we've got to do 25 days this year. Which is okay, I've got no problem with doing training if we need it, but with only four or five technicians, and we all talk to each other, so we're all learning off each other as well, it's not necessary maybe.”
(ServCo S service manager)

In summary, like for the previous two cases, the relationship specific adaptations have been extensive and have had positive side effects for ServCo S.

Summary

ServCo S is a small family business. Although almost half of the vehicles that the workshop services are TrucksUK, only 20% of the total revenues come from service contracts and warranty activity. In order to increase customer loyalty and create steady cash flows, the workshop has introduced a type of simple maintenance contracts. The principal sees all the TrucksUK specific relationship adaptations as necessary and worth it, however, he cannot proceed into additional ones (e.g. a proper nightshift) before the workload increases. TrucksUK new-vehicle sales in the area have suffered according to him, due to the incompetence and indifference of the previous salesman. The small size and scale of operations (only 11 employees), together with the low revenue reliance on TrucksUK have influenced the dimensions of the ServCo S – TrucksUK working relationship. The familiarity with the web-based systems seems to be low and their perceived complexity high, which makes the transmission and receipt of information problematic. Hence, the level and quality of information exchange through the web-sites is believed to be unsatisfactory. The relationship is also considered to be overly reliant on explicit rules and procedures, something which directly affects the capability of the workshop to quickly turn vehicles around. At the same time, it is believed that because they are such a small workshop, the expectations and behaviour of TrucksUK in the relationship are not ideal. At instances they feel left out and unfairly treated. The information shared by most direct contacts is poor, and at times non-existent, while joint activities are absent. Also, it is unanimously believed that TrucksUK are excessively intolerant to deviations from what is expected. The respondents confessed that they *“need a bigger window”*.

The section finishes with the connector-by-connector tabulated summary evidence for the 3rd case (Table 4-3). The three tables are combined into an aggregate, comparative table in the next section and helps structuring the first part of the cross-case analysis.

Table 4-3: Summary information by relationship connector for 3rd case-relationship

CONNECTORS	SUMMATIVE EVIDENCE
Information exchange	<ul style="list-style-type: none"> - ServCo S finding it difficult to locate information and perceiving that TrucksUK. Could be better in sharing information. - Very low information exchange with key counterparts. - Perception they are forgotten about. - Indications that they are not as good as other workshops in providing complete and adequate information.
Operational linkages	<ul style="list-style-type: none"> - Not very familiar with the use of the web-base systems. Lack of specialization in tasks due to small size. Lack of experience due to small vehicle base under TrucksUK contracts. - Absence of joint activities with TrucksUK employees.
Legal bonds	<ul style="list-style-type: none"> - Strong perception that the relationship is overly and unnecessarily reliant on explicit procedures. - Disappointed that TrucksUK are so intolerant to deviations from the prescribed. - Informal part of the working relationship does not seem to be as developed.
Cooperative norms	<ul style="list-style-type: none"> - ServCo S acknowledging that at a personal level TrucksUK is normally cooperative and helpful. Exceptions exist (e.g. old salesman). - When referring to TrucksUK as a whole ServCo S, feel discriminated against and messed about, at instances. - ServCo S considering a common future but more concerned about individual goals than common ones.
Relationship-specific adaptations	<ul style="list-style-type: none"> - Significant early investment in infrastructure to continue being a franchisee. - Extended opening hours. - Extensive training even though at times looks unnecessary.

The chapter continues with the cross-case analysis and the answer to the first research question.

4.3 Cross-case analysis

Having conducted the within-case analysis, the findings section continues with the cross-case analysis. Firstly, based on the evidence provided so far, a brief comparison between the three cases is made. The intention of this task is to identify whether any evident pattern emerges. It is established that the three relationships differ significantly in terms

of the five relationship dimensions and, more importantly, the more relational the relationship the better appears to be the performance of the workshop. To explain this, I continue with the answer to the first research question: *“In a servitized context how does the provider – partner relationship affect the service delivery performance of the partner?”* This takes place in section 4.3.2, where I also propose an inductive model. The role of the constructs in the model and links between them are demonstrated and justified with evidence.

4.3.1 Comparison of the three case-relationships

I begin the cross-case analysis with a connector by connector comparison of the three cases. This is largely based on the within-case analysis and Table 4.4. The latter is a compilation of the tabulated summated evidence from each case (Tables 4.1, 4.2, 4.3) and also includes a row containing some background information and a column with a very brief case comparison based on each connector. The intention of the comparison in this section is to assess the basic proposition that arises from the relevant literature (business triads and buyer – supplier relational influences on performance), that more ‘relational’ relationships are associated with higher performance of the service partner. Once this has been established, the analysis can continue with investigating how does the relationship (and specifically its different dimensions) affect service performance.

CASE:	TrucksUK - ServCo SW relationship	TrucksUK - ServCo E relationship	TrucksUK - ServCo S relationship	Comparison
Background	Traditionally exceptional performance. Over 50% of revenues come from TrucksUK service contracts. 54 employees. Sole franchise.	Good performance in 2010 which however decreased in 2011. Average performance since 2009 is the population mean. 19% of revenues coming from TrucksUK contracts. 34 employees. Triple franchise.	Worst performing workshop of the three but performance has been steadily growing in the last years. Around 20% of revenue reliance on fixed cost contracts. 11 employees and single franchise.	- ServCo SW consistently performing well. - ServCo E reached high levels of performance but did not sustained them in 2011 - ServCo S's performance levels are relatively worse than the other two, but have been getting better
Information exchange	- Frequent and open interpersonal communication. - ServCo SW considered to be one of the best in transmitting and receiving all sorts of information through the electronic means. - ServCo SW concerned at instances with timeliness and response times from certain TrucksUK departments only.	- ServCo E happy with information sharing through web-based systems and key counterparts, but not with seniors and the sales department as a whole. Considered (by TrucksUK) to be efficient in web-based info exchange. - ServCo E and TrucksUK HQs both reluctant at times to engage in exchange of information so issues tend to fest up.	- ServCo S finding it difficult to locate information and perceiving that TrucksUK. Could be better in sharing information. - Very low information exchange with key counterparts. - Perception they are forgotten about. - Indications that they are not as good as other workshops in providing complete and adequate information.	Information exchange is perceived to be great in the ServCo SW case (both through interpersonal communication and through the web-based systems), less good in the ServCo E case (interpersonal communication between certain individuals is problematic) and considerably worse in the ServCo S case (both through interpersonal communication and the web-based systems).
Operational linkages	- Great familiarity with the web-based systems and adherence to the implicit roles and routines due to increased exposure to TrucksUK vehicles under contract, task allocation and training. - Joint activities with the salesmen, parts rep and regional manager.	- Great familiarity with the web-based systems and adherence to the implicit roles and routines, mainly due to investment in training and recruitment of extra personnel. - Recent collaboration for expansion of parts business, joint customer visits for problem solving with regional engineer. No activities with the co-located salesman.	- Not very familiar with the use of the web-base systems. Lack of specialization in tasks due to small size. Lack of experience due to small vehicle base under TrucksUK contracts. - Absence of joint activities with TrucksUK employees.	ServCo SW and ServCo E show a very similar level of operational integration (apart from the absence of joint activities with the salesman in the ServCo E case). ServCo S has no joint activities with TrucksUK individuals and do not seem sufficiently familiar with the web-based systems which impairs the IT-enabled transmission and receipt of information between the workshop and TrucksUK.
Legal bonds	- Clear understanding of the general standards and rules that need to be followed in day-to-day operation. - Long-term personal relationships give the possibility to resolve issues informally decreasing the perceived degree of reliance on the explicit rules.	- Perception that relationship is overly reliant on explicit rules and procedures. - Perceived inflexibility and intolerance to deviations from the prescribed reflected through the reactions to recent fines imposed upon them by TrucksUK. - Informal part of the working relationship does not seem to be as developed.	- Strong perception that the relationship is overly and unnecessarily reliant on explicit procedures. - Disappointed that TrucksUK are so intolerant to deviations from the prescribed. - Informal part of the working relationship does not seem to be as developed.	Only ServCo SW looks comfortable with the degree of formalization of their relationship with TrucksUK. Probably due to the low revenue dependence on TrucksUK, the other two consider their relationships to be overly and unnecessarily reliant on the prescribed rules, while the informal part seems underdeveloped. Their perceived intolerance of TrucksUK to deviations from the explicit does not help the overall perception. They both however acknowledge the necessity of some set rules and terms.
Cooperative norms	- Unanimous belief that future is intertwined with TrucksUK's and success is dependent on joint effort to achieve individual or common goals - Positive reciprocity, apt norms and willingness to proceed to cooperative changes. - Cooperative spirit permeating all organizational levels and aspects of exchange	- ServCo E devoted to a common future with TrucksUK. Belief that they do their best to prove it but feeling let down by TrucksUK seniors and sales. TrucksUK seemingly operate based on a mistaken perception about ServCo E. - Cooperation and common goals with regional engineer and the after-sales organization but in overall team spirit is not always felt.	- ServCo S acknowledging that at a personal level TrucksUK is normally cooperative and helpful. Exceptions exist (e.g. old salesman). - When referring to TrucksUK as a whole ServCo S, feel discriminated against and messed about, at instances. - ServCo S considering a common future but more concerned about individual goals than common ones.	Only the ServCo SW case seems to be a genuinely cooperative relationship where norms such as mutuality, durability and flexibility permeate the exchange. The other two workshops, although being advocates of TrucksUK and the product, either feel let down and that their efforts are not recognized (ServCo E), or feel exploited and discriminated against (ServCo S). However, it is recognized that many of the key contacts are cooperative and care for the good of the workshops.
Relationship adaptations	- Commitment to extended opening hours and training. - Investment in infrastructure and in dedicated parts representative.	- Significant investment in infrastructure to change the bad reputation. Subcontracted two repairers to increase TrucksUK presence in the general area. - Extensive training even though some unnecessary, recruitment of new personnel.	- Significant early investment in infrastructure to continue being a franchisee. - Extended opening hours. - Extensive training even though at times looks unnecessary.	All workshops have proceeded to extensive relationship-specific adaptations, some of them being a genuine sign of commitment to TrucksUK. Even though to achieve the franchise status, investment is mandatory, relationship adaptations are ongoing, and on the whole seem to be necessary in this context. Most of it however brings benefits from outside of the relationship too.

Table 4-4: Summary of the findings from the within-case analysis

To start with, information exchange is perceived to be satisfactory in the ServCo SW case. Interpersonal communication during face-to-face interaction between ServCo SW and TrucksUK employees is regular, and information is shared openly. Moreover, both companies are generally happy with the amount and timeliness of information exchanged through the electronic means (the different web-based systems and portals). The only (mild) concerns raised by ServCo SW were about the non existence of an out-of-office hours communication link, and the long response times by certain departments (e.g. parts; due to seemingly being under-resourced). Such features were proven to be homogenous across the different provider – workshop relationships; no workshop can contact TrucksUK out of hours, while the response time of certain departments was criticized in all cases. In the ServCo E case, information exchange through the electronic means seems satisfactory. This is not the case however when it comes to interpersonal communication. ServCo E has serious complaints about the communicativeness of certain individuals, while the TrucksUK regional manager admitted that information exchange should be better. On the other hand, information exchange in the ServCo S case is lacking in both aspects. Transmission and receipt of information through the web-based systems is evidently not as efficient, while the perception of ServCo S employees that they are *“forgotten about”* sums up their belief about the state of interpersonal communication and human interaction. Consequently, intuitively one could rank the three cases in terms of the overall level and quality of information exchange. On a scale, the ServCo SW case could be assumed to score ‘high’, the ServCo E case would score ‘moderate’ and the ServCo S one would score ‘low’. Table 4-5 below illustrates this. For the convenience of the reader and in order to strengthen the decision on the relative ranking, the table is supplemented with the relevant evidence from the cross-case comparison (Table 4.4).

Table 4-5: Relative ranking of the cases in terms of information exchange

CASE:	ServCo SW – TrucksUK relationship	ServCo E – TrucksUK relationship	ServCo S – TrucksUK relationship
DIMENSION			
Information exchange (ranking)	<i>High</i>	<i>Moderate</i>	<i>Low</i>
Information exchange (supplementary evidence)	<ul style="list-style-type: none"> - Frequent and open interpersonal communication. - ServCo SW considered to be one of the best in transmitting and receiving all sorts of information through the electronic means. - ServCo SW concerned at instances with timeliness and response times from certain TrucksUK departments only. 	<ul style="list-style-type: none"> - ServCo E happy with information sharing through web-based systems and key counterparts, but not with seniors and the sales department as a whole. Considered (by TrucksUK) to be efficient in web-based info exchange. - ServCo E and TrucksUK HQs both reluctant at times to engage in exchange of information so issues tend to fest up. 	<ul style="list-style-type: none"> - ServCo S finding it difficult to locate information and perceiving that TrucksUK. Could be better in sharing information. - Very low information exchange with key counterparts. - Perception they are forgotten about. - Indications that they are not as good as other workshops in providing complete and adequate information.

The construct of operational linkages is reflected through the adherence of the workshops to the implicit roles and routines that come with the use of the interlinking web-based systems, and the existence of joint activities between employees of the workshops and TrucksUK individuals. The construct is manifested at similar levels in the first two cases. ServCo SW and ServCo E are very familiar and competent with the systems, which is translated into high adherence to the implied roles and routines. Additionally, they both have distinguishable joint activities with individuals from TrucksUK (e.g. co-located salesmen, regional engineer). The only difference is that in the ServCo E case there is no distinguishable activity with the co-located salesman, and the establishment of the other activities seems to lag temporally compared to ServCo SW. On the other hand, no joint activities were identified in the ServCo S case, while the relative unfamiliarity of the workshop employees with the use of the web-based systems implies lower adherence to roles and routines. Hence, on a scale, operational linkages would look as follows (Table 4-6):

Table 4-6: Relative ranking of the cases in terms of operational linkages

CASE:	ServCo SW – TrucksUK relationship	ServCo E – TrucksUK relationship	ServCo S – TrucksUK relationship
DIMENSION			
Operational linkages (ranking)	<i>High</i>	<i>Moderate/High</i>	<i>Low</i>
Operational linkages (supplementary evidence)	<ul style="list-style-type: none"> - Great familiarity with the web-based systems and adherence to the implicit roles and routines due to increased exposure to TrucksUK vehicles under contract, task allocation and training. - Joint activities with the salesmen, parts rep and regional manager. 	<ul style="list-style-type: none"> - Great familiarity with the web-based systems and adherence to the implicit roles and routines, mainly due to investment in training and recruitment of extra personnel. - Recent collaboration for expansion of parts business, joint customer visits for problem solving with regional engineer. No activities with the co-located salesman. 	<ul style="list-style-type: none"> - Not very familiar with the use of the web-base systems. Lack of specialization in tasks due to small size. Lack of experience due to small vehicle base under TrucksUK contracts. - Absence of joint activities with TrucksUK employees.

As a reminder, the construct of legal bonds signifies the perceived degree of formalization of the relationship (i.e. the reliance on the contractually prescribed, explicit rules and procedures). If the relationship is perceived to be overly explicit without the possibility of informal arrangements, and if TrucksUK are intolerant to deviations from what is prescribed, then the level of the construct is considered to be high. It turns out that only in the ServCo SW case the respondents are comfortable with how explicit the relationship is. This is mainly because issues can often be resolved informally as, due to longevity, there is unconditional trust in certain interpersonal relationships. Additionally, ServCo SW as a workshop always excels in audits, indicating a clear understanding of the terms and conditions of the contract. In the other two cases, the workshop respondents perceive their relationship to be unnecessarily explicit, and are occasionally annoyed and disappointed by TrucksUK’s intolerance to deviations from the prescribed behaviours and rules (e.g. after audits). Also, the possibility to reach agreements and resolve issues in an informal manner is not there. It has to be noted however, that the existence of written down rules and formalized procedures is considered necessary. This is for service processes to be undertaken correctly and according to customer preferences, and for the product and network to be protected legally. It is only that ServCo E and ServCo S perceive the number and detail of the procedures, forms and guidelines to be extreme. Hence, on a scale measuring the degree of reliance on explicit rules, the ServCo SW relationship should be considered ‘moderate’ while the other two can be regarded as ‘high’ (Table 4-7).

Table 4-7: Relative ranking of the cases in terms of legal bonds

CASE:	ServCo SW – TrucksUK relationship	ServCo E – TrucksUK relationship	ServCo S – TrucksUK relationship
DIMENSION			
Legal bonds (ranking)	<i>Moderate</i>	<i>High</i>	<i>High</i>
Legal bonds (supplementary evidence)	<ul style="list-style-type: none"> - Clear understanding of the general standards and rules that need to be followed in day-to-day operation. - Long-term personal relationships give the possibility to resolve issues informally decreasing the perceived degree of reliance on the explicit rules. 	<ul style="list-style-type: none"> - Perception that relationship is overly reliant on explicit rules and procedures. - Perceived inflexibility and intolerance to deviations from the prescribed reflected through the reactions to recent fines imposed upon them by TrucksUK. - Informal part of the working relationship does not seem to be as developed. 	<ul style="list-style-type: none"> - Strong perception that the relationship is overly and unnecessarily reliant on explicit procedures. - Disappointed that TrucksUK are so intolerant to deviations from the prescribed. - Informal part of the working relationship does not seem to be as developed.

In terms of the construct of cooperative norms, it turns out that only the ServCo SW case seems to be a genuinely cooperative relationship. Collaborative behaviours and apt norms were evident at all levels of the inter-firm relationship (e.g. co-located salesmen and workshop employees helping each other), and positive reciprocation seems to be prevalent. All respondents expressed their expectations of an intertwined future in a symbiotic manner. On the other hand, in the other two case-relationships, cooperation and teamwork do not seem to permeate all aspects of exchange and levels of the relationship. Firstly, ServCo E seem to constantly be fighting against an outdated and biased perception held by TrucksUK senior management, based on the workshop’s past. This perception was even criticized by the TrucksUK regional manager. As a consequence, ServCo E individuals often feel let down and that their efforts are not recognized. However, they remain loyal to TrucksUK and the product, and consider a common future with shared objectives. The good relationships maintained between ServCo E individuals and their first point of contact employees from the service department (e.g. TrucksUK regional manager) seem to contribute to this. Secondly, ServCo S, at instances, feel exploited and discriminated against, even though it is recognized that many of the key contacts are cooperative and care for the good of the workshop. It was admitted that for ServCo S, the continuation of the TrucksUK relationship serves primarily individual objectives (ability to charge higher, increased status) rather than joint goals. For this reason, I believe that on the scale the ServCo S relationship should score less than the ServCo E one (Table 4-8).

Table 4-8: Relative ranking of the cases in terms of cooperative norms

CASE:	ServCo SW – TrucksUK relationship	ServCo E – TrucksUK relationship	ServCo S – TrucksUK relationship
DIMENSION			
Cooperative norms (ranking)	<i>High</i>	<i>Moderate</i>	<i>Low/Moderate</i>
Cooperative norms (supplementary evidence)	<ul style="list-style-type: none"> - Unanimous belief that future is intertwined with TrucksUK’s and success is dependent on joint effort to achieve individual or common goals - Positive reciprocity, apt norms and willingness to proceed to cooperative changes. - Cooperative spirit permeating all organizational levels and aspects of exchange 	<ul style="list-style-type: none"> - ServCo E devoted to a common future with TrucksUK. Belief that they do their best to prove it but feeling let down by TrucksUK seniors and sales. TrucksUK seemingly operate based on a mistaken perception about ServCo E. - Cooperation and common goals with regional engineer and the after-sales organization but in overall team spirit is not always felt. 	<ul style="list-style-type: none"> - ServCo S acknowledging that at a personal level TrucksUK is normally cooperative and helpful. Exceptions exist (e.g. old salesman). - When referring to TrucksUK as a whole ServCo S, feel discriminated against and messed about, at instances. - ServCo S considering a common future but more concerned about individual goals than common ones.

Finally, all three workshops have proceeded to extensive relationship-specific adaptations, most of them being a genuine sign of commitment to TrucksUK. In reality, all of the investment brings benefits from outside of the specific relationship as well, however, that does not undermine the fact that it has taken place specifically for TrucksUK. For example, ServCo SW shows an extreme commitment to training, and maintained the costly nightshift during the recession predominantly for one TrucksUK customer. ServCo E invested heavily six years ago to turn things around and indicate their willingness to make it right for themselves and for TrucksUK, who has been traditionally underperforming in the area. This motivation lies behind the recent subcontracting of two independent repairers in the general area who, under ServCo E’s responsibility, service TrucksUK vehicles under contract or warranty. ServCo S’s initial investment was very high, probably beyond their means, and their commitment to training is remarkable considering the small size of the workshop. In a relative manner, it is safe to say that on a high – low scale all relationships would score ‘high’ in terms of relationship-specific adaptations (Table 4-9).

Table 4-9: Relative ranking of the cases in terms of relationship-specific adaptations

CASE:	ServCo SW – TrucksUK relationship	ServCo E – TrucksUK relationship	ServCo S – TrucksUK relationship
DIMENSION			
Adaptations (ranking)	<i>High</i>	<i>High</i>	<i>High</i>
Adaptations (supplementary evidence)	<ul style="list-style-type: none"> - Commitment to extended opening hours and training. - Investment in infrastructure and in dedicated parts representative. 	<ul style="list-style-type: none"> - Significant investment in infrastructure to change the bad reputation. Subcontracted two repairers to increase TrucksUK presence in the general area. - Extensive training even though some unnecessary, recruitment of new personnel. 	<ul style="list-style-type: none"> - Significant early investment in infrastructure to continue being a franchisee. - Extended opening hours. - Extensive training even though at times looks unnecessary.

Table 4-10 below presents the overall picture. One can see that the three relationships have significantly different profiles in terms of their scores in the five relationship dimensions. Additionally, even though the five dimensions do not seem to be perfectly correlated with each other, if one wanted to rank the three relationships based on their scores on a ‘relationalism’²⁹ scale that would encompass all five connectors, the following would be the case: the ServCo SW case would come on top with ServCo E following suit, while the ServCo S case would come last. As already discussed, based on the relative and objective overall performance measure constructed according to the TrucksUK KPIs, ServCo SW is performing exceptionally towards TrucksUK’s customers, ServCo E has been performing exactly averagely, and ServCo S has been performing relatively worse than average. Hence, a pattern seems to emerge. The ‘better’ (more relational) the relationship between the provider and the partner, the higher the service performance of the partner towards the customer base. This of course is by no means a surprise. As discussed in the literature review, triadic studies have shown that the state, or nature of the dyadic relationships (e.g. cooperative versus competitive) and the performance of the three parties in the triad are interdependent (see section 2.3.1.5). The specific literature stream of relational influences on performance also suggests that, one way or another, relationalism favours the performance of the relationship or the related parties (see section 2.3.3.2). Having established this interdependence, the cross-case analysis will continue by showing *how* the provider – partner relationship affects the service delivery performance of the partner. I argue, and will attempt to show, that the five dimensions

²⁹ As a reminder, relationalism would refer to the high-order construct that would encompass all five connectors (Cannon & Perreault 1999). In this case, high relationalism would be reflected through ‘high’ information exchange, operational linkages, cooperative norms and relationship-specific adaptations, and ‘low’ legal bonds.

affect one another temporally, and are also affected by exogenous variables. For example, the data suggest that the construct of operational linkages affects information exchange, and at the same time it is dependent on the size of the workshop. The effect of the relationship on the service delivery performance of the partner is a causally complex phenomenon due to the interplay between the different elements (relationship dimensions and exogenous, contextual factors).

Table 4-10: Comparison of the three cases

CASE: DIMENSION	ServCo SW – TrucksUK relationship Performance: Higher	ServCo E – TrucksUK relationship Performance: Average	ServCo S – TrucksUK relationship Performance: Lower	Brief comparison (evidence taken from Table 4.4)
Information exchange	<i>High</i>	<i>Moderate</i>	<i>Low</i>	Information exchange is perceived to be great in the ServCo SW case (both through interpersonal communication and through the web-based systems), less good in the ServCo E case (interpersonal communication between certain individuals is problematic) and considerably worse in the ServCo S case (both through interpersonal communication and the web-based systems).
Operational linkages	<i>High</i>	<i>Moderate /High</i>	<i>Low</i>	ServCo SW and ServCo E show a very similar level of operational integration (apart from the absence of joint activities with the salesman in the ServCo E case). ServCo S has no joint activities with TrucksUK individuals and do not seem sufficiently familiar with the web-based systems which impairs the IT-enabled transmission and receipt of information between the workshop and TrucksUK.
Legal bonds	<i>Moderate</i>	<i>High</i>	<i>High</i>	Only ServCo SW looks comfortable with the degree of formalization of their relationship with TrucksUK. Probably due to the low revenue dependence on TrucksUK, the other two consider their relationships to be overly and unnecessarily reliant on the prescribed rules, while the informal part seems underdeveloped. Their perceived intolerance of TrucksUK to deviations from the explicit does not help the overall perception. They both however acknowledge the necessity of some set rules and terms.
Cooperative norms	<i>High</i>	<i>Moderate</i>	<i>Low /Moderate</i>	Only the ServCo SW case seems to be a genuinely cooperative relationship where norms such as mutuality, durability and flexibility permeate the exchange. The other two workshops, although being advocates of TrucksUK and the product, either feel let down and that their efforts are not recognized (ServCo E), or feel exploited and discriminated against (ServCo S). However, it is recognized that many of the key contacts are cooperative and care for the good of the workshops.
Rel. specific adapt.	<i>High</i>	<i>High</i>	<i>High</i>	All workshops have proceeded to extensive relationship-specific adaptations, some of them being a genuine sign of commitment to TrucksUK. Even though to achieve the franchise status, investment is mandatory, relationship adaptations are ongoing, and on the whole seem to be necessary in this context. Most of it however brings benefits from outside of the relationship too.

The chapter continues with the model emerging from the cross-case analysis of the data. The existence of each link between the building blocks of the model is justified with evidence. As a whole, the next section comprises the answer to my first research question.

4.3.2 Towards answering RQ1: In a servitized context how does the provider – partner relationship affect the service delivery performance of the partner?

To answer the first research question I have tried to understand and demonstrate the complex interplay between the relationship dimensions and the two exogenous factors that emerged as important (presented herein). In this way, the role of each element when it comes to affecting the performance of the service partner is illustrated. The outcome of the analysis is a model that is presented at the end of the section. Each link between the building blocks of the model comprises an assertion expressing a relationship between them. The evidence that warrants the existence of the suggested links comes primarily from the case-studies but also from the initial interviews conducted in TrucksUK. This is because, as mentioned in the methodology chapter, two of the themes of those interviews were a) the development of the network of partners and b) how the relationships between the latter and TrucksUK are structured. Hence, there was relevant, useful information in those interviews. The evidence supporting the existence of the links is concisely tabulated in Table 4-11 below. The reader is advised to read each of the following sub-sections alongside the respective row of Table 4-11.

As already mentioned in the methodology section and indicated in the within-case analysis, there are two emergent contextual variables which play a role by affecting the perceptions and behaviours of individuals involved in the multi-level TrucksUK – workshop relationships. As a reminder, these are:

- 1) Scale of operation of the workshop (measured by the number of individuals employed).
- 2) Proportion of the workshop's revenues coming from fixed-cost contracts and warranty activity.

The two often came up in the interviews and suggested to me that I should explore their role in further interviews. During the process I captured their explanatory power in analytic memos that were integrated in the data analysis (see section 3.5.2.2). I begin by

introducing them and demonstrating their influence. Subsequently, every assertion/link is numbered and presented in turn.

The role of the two exogenous factors

Prior to demonstrating and justifying the influences of the two exogenous factors, a note on the proportion of the workshop's revenues coming from fixed-cost contracts and warranty is in order. Crucially, this variable signifies two things simultaneously:

- 1) The workshop's servitization intensity. Naturally, the higher the proportion, the more familiar the workshop is with the product-service offering (i.e. the alternative fixed-cost service contracts that TrucksUK offers), and the higher its employees' experience of dealing with TrucksUK customers and vehicles under contract.
- 2) The workshop's direct revenue dependence on TrucksUK. Any maintenance or repair activity undertaken on vehicles under contract (between TrucksUK and its customer) is paid directly by TrucksUK. Therefore, the higher the proportion, the more financially dependent on TrucksUK the service workshop is.

Its implications are discussed below. For the sake of brevity, from now on I refer to the proportion of the workshop's revenues coming from fixed-cost contract and warranty activity as 'product-service penetration'.

- Link 1: Product-Service penetration increases operational integration

As an exogenous, contextual variable, Product-Service penetration (PS penetration) has a clear and important role to play. Firstly, it affects operational linkages. ServCo SW, who deal on a daily basis with vehicles under contract, have accumulated a lot of experience and developed familiarity with the web-based systems that are necessary for the recording of activities, and for the location and transmission of electronic information. This is probably why, and as acknowledged by the TrucksUK respondents, ServCo SW is among the best in the network at following the roles and routines implicitly imposed for the efficient use of the systems. Also, due to the fact that big customer fleets operating at a national level are under fixed-cost contracts, ServCo SW individuals are often involved in review meetings with TrucksUK key account managers (from both sales and after-sales)

and the customer. In the same vein, joint local customer visits with the co-located salesmen are more likely to happen. This means that PS penetration increases both facets of operational linkages (adherence to the implicit roles and routines that come with the web-based systems and joint activities). The exact opposite seems to be the case in the ServCo S – TrucksUK relationship. ServCo S is located in a relatively rural area with predominantly small businesses, which means that relatively fewer vehicles are under fixed-cost contracts, and the workshop rarely deals with national fleets. As the service manager admitted, this means that the employees often come up against vehicle faults and issues of which they have very scant experience, and consequently have to use (functions of the) web-based systems that they are not familiar with. Their relatively less extensive experience of dealing with vehicles under contract seems to decrease their level of adherence to the roles and routines specified by the use of the web-based systems.

- Link 2: PS penetration reduces the perceived degree of formalization of the relationship

Secondly, product-service penetration affects legal bonds. ServCo SW's extensive experience of working with TrucksUK fixed cost contract customers has led to a clear and holistic understanding of the rules and procedures that need to be followed on a day-to-day basis. For example, the TrucksUK repair and maintenance manager stated that when making monetary claims, ServCo SW have a clear a priori understanding of what can be claimed and paid for. This is also indicated by the workshop's consistently excellent performance in related audits conducted by TrucksUK. It seems that because a lot is at stake (due to the fact that more than 50% of the workshop's revenue comes from product-service activity) there is no choice for ServCo SW other than strictly abiding by the book. In a sense, high reliance on the explicit rules and procedures is taken for granted, and this is why, in their accounts, the respondents neither complained nor conveyed an over-explicitness perception³⁰. The association becomes clearer when we consider the situation in the two other cases. Due to the low product-service penetration (around 20% in both instances), ServCo E and ServCo S are relatively less exposed to the rules and procedures necessary for dealing with contracted vehicles, and, seemingly, less clear about them. The ServCo S contracts and warranty manager actually admitted this. This idea is also evidenced through the recent fines that both workshops had to pay and about

³⁰ To which of course contributes the possibility of working and resolving issues in an informal manner, as will be discussed later.

which they were not happy at all. The respondents doubt whether such a small product-service penetration should imply so much explicitness and intolerance to deviations. An additional aspect may help to illuminate the relationship. The low product-service penetration means that the number of labour hours sold directly to TrucksUK is small. As mentioned in the methodology section, the monetary bonus tied around the incentives scheme is proportional to the number of hours sold. Consequently, workshops with low product-service penetration have relatively less bonus money to potentially earn. In a sense, following closely all the necessary and contractually predicted rules is too much effort for only a small benefit. The ServCo E workshop controller illustrated this by stating that the wage of the employee responsible for keeping in place all the prescribed procedures relevant to the scheme (e.g. documenting and keeping failed parts, filing hard or electronic copies of test procedure documents) exceeds the yearly monetary bonus. And on top of this, both ServCo E and ServCo S have to worry about the fines imposed on them due to TrucksUK's intolerance to deviations from the prescribed behaviours. In total, it may not be a surprise that a direct negative association between product-service penetration and the perceived degree of formalization emerges.

Having demonstrated the role of PS penetration, I continue with the influences exerted by the second exogenous factor: size of the workshop.

Table 4-11: Evidence in support of the relationships between the elements of the model

Link	Selected evidence
1) PS PENE → OP LI	<p>1) <i>"And this is the difference with ServCo SW. They have got into the routine, through experience, and there's a lot of guys that we deal with ServCo SW within TrucksUK. You've got the petroleum guys, the national fleets, so eventually they've obviously seen this and they've got everything onboard now. So straightforward they go [on the system]."</i> (TrucksUK regional manager, customer & technical support South)</p> <p>2) <i>"...we don't have a large turnaround of vehicles. If we were like in middle Birmingham you'd have big dealership, you get a lot more experience, whereas we don't. You'd get to know all the faults sort of thing. It can be a very common fault, we see it once and it's like a massive thing to us, but that takes a bit of time finding the information."</i> (ServCo S service manager).</p> <p>3) ServCo S are unfamiliar with the specific problem but also with how to use the systems to locate the information necessary for diagnosing the vehicle: <i>And it's not easily found either [the information], like if we had a fault with the turbo, there's meant to be service information out about the turbo, which there is. But all you can do is put in a name, i.e. turbo and then it'll come up lists and lists, as opposed to specifics."</i> (ServCo S contracts and warranty manager)</p>
2) PS PENE → LEG	<p>1) With 54% PS penetration there is a lot at stake if ServCo SW deviate from what is prescribed: <i>"...so we have to keep everything very rigid in place with those procedures to make sure that the work is done correctly and it is charged to the right place, so those are followed closely."</i> (ServCo SW service advisor)</p> <p>2) Both ServCo S and ServCo E seem uncomfortable with the extent to which their TrucksUK work is governed by explicit procedures and instructions. Both asked for some <i>"discretion"</i>, <i>"goodwill"</i> and <i>"less red tape"</i>. The ServCo S contracts & warranty manager effectively admitted he is not clear at all about some of the rules and TrucksUK do not help by being inconsistent in their audits (a perception held by everybody in the workshop) and very intolerant to deviations.</p>
3) SIZE → OP LI	<p>1) <i>"...everything that you'd apparently need is on there, but they just fire on so much information, that you don't have the time, or certainly we wouldn't because we've only got a few members of staff, to be looking at everything that comes out."</i> (ServCo S warranty and contracts manager).</p> <p>2) <i>"...but obviously the information is there, but it's having the time and the manpower to source it."</i> (ServCo S warranty and contracts manager).</p>
4) SIZE → COOP	<p>1) ServCo S, being a small workshop, does not qualify for direct delivery of parts from the HQs. They are forced to buy them from the closest TrucksUK workshop which makes profit out of the sale. This means that, normally, ServCo S cannot make a profit out of the parts, especially out of lines on seasonal promotion.</p> <p>2) ServCo S feeling that ServCo SW is favoured by TrucksUK. <i>"...we know from very good sources, things that go wrong there, things that would go against getting that status, but somehow they get it. And I speak to the warranty guys up there, I speak to the contract guys up there, because I know them. They tell me what rejections they have, they tell me what's missing, they tell me...How do they get a 'Dealer of the Year' when they've got so many mistakes as well?"</i> (ServCo S contracts and warranty manager).</p> <p>3) <i>"...but because it's a TrucksUK wholly owned, they've been paid. If it were a small private capital dealer, like us, they'd say, well, why did you change that part, or why did you change this part? We're not paying for it."</i> (ServCo S contracts & warranty manager)</p> <p>4) The CEO of TrucksUK is wondering whether there is any common future with the small partners who are simply <i>"garages"</i>: <i>"Whether that's fewer partners, or larger partners, who buy into the whole concept, I'm really not sure. But that is an area I have concerns with. We have some who are very, very good. They work very hard, they do their own customer satisfaction rating surveys, they do their own breakdown callouts. They engage HR people in their own right for a much smaller organisation. And there are others that are just garages. And garages isn't what we're looking for."</i> (TrucksUK CEO).</p>

Table 4-11 (continued)

Link	Selected evidence
5) INFO → PERF	<p>1) "...and it does give you sometimes problems where you're talking directly to the customer, you want a quick answer and you can't get a quick answer and that, in fact, lowers your service level to the customer." (ServCo SW general manager)</p> <p>2) "...he keeps having to update all the time and waiting for answers, and the answers don't come back quickly. They expect everything done quickly, and the vehicles to be on the road, but the systems that he has to go through, the response time is very, very poor and it's always backwards and forwards, backwards and forwards." (ServCo S warranty and contracts manager)</p> <p>3) "...if we had a bit more information, I suppose, we wouldn't need to contact them as much because it would be there for you. [...] there's not really anything to hide in it, it would just make things easier because if you've got to send an email to technical, and then by the time they've dealt with it, it might be thirty minutes or whatever for them to come back, then, yeah, something that could have been done in five minutes has taken a lot more." (ServCo S parts manager)</p> <p>4) When information sharing is not shifty and complete, the performance of the workshop is impaired. "Yeah, it will have a knock-on effect on it [performance measure]; the length of the time the vehicle's off the road. The longer it takes for them to diagnose the vehicle and send the information, obviously the more negative the response and the customer's perception of what's going on. Because, unfortunately, quite often you'll get a workshop and because of their own failings will point the finger at TrucksUK, you know, we're waiting for TrucksUK to contact us. While in reality as TrucksUK we are missing pieces of information." (TrucksUK regional manager, customer & technical support South)</p>
6) OPS → INFO	<p>1) Familiarity with the systems facilitates the retrieval of information. "To my knowledge, all of the guys down there are competent in using that, they can pull every piece of information that they need to." (TrucksUK regional manager, customer & technical support South)</p> <p>2) Inadequate usage of the systems to transfer information affects the overall perception about information exchange. "If it [a process on one of the web-based systems] is done properly it will come back the following day. Where they're not done correctly, i.e. insufficient information from the dealership, there's nothing we can do to speed that up. So they think they've done enough; that's what you've asked me for. When, in fact, probably a very small percentage of what they've been asked for is what they're given through the system." (TrucksUK regional manager, customer & technical support South)</p> <p>3) To use the information and satisfy the customer, knowing how to operate the systems is important. "...they'll tell you if a customer's specific need, even if it's not my regular customer, or a customer I may see at some point like big hauliers, they have their own specific needs. That's all on the website, you can view that, type [big customer name] they'll tell you what their need is... something special on a service, it's all on the website. It's very good. You just need to know how to use these." (ServCo E workshop controller)</p> <p>4) "Seven out of the ten questions that were asked of the HQs, could and should have been rectified at the workshop. Just by them using internet access and going into [a specific portal] if it's parts. So the information was there it was just either people's reluctance to use it, or the fact that they couldn't use it because there were other factors within the dealership preventing them using it." (TrucksUK regional manager, customer & technical support South)</p> <p>5) Joint activities foster open information exchange. "We have [TrucksUK] salesmen on site here who don't work for us, and we on a Monday morning we will generally always have a meeting with them every Monday morning just to see who are they dealing with and then we'll tell them who we're dealing with, if we can give them any leads or they can give us any leads for service work, so we try and work together with them." (ServCo SW service, marketing & business development manager)</p>

Table 4-11 (continued)

Link	Selected evidence
7) COOP → INFO	<p>1) <i>"We have to work as a team - all of us - partners, us, parts, after-sales service. Without any one individual in the chain [working as a team], communication will fall over and, to my mind, communication is the biggest link in that chain."</i> (TrucksUK regional manager, customer & technical support South)</p> <p>2) Perceiving the common goal of satisfying the customer, ServCo SW proactively communicate with the TrucksUK regional engineer to ask for help. The job gets done and the customer is happy: <i>"Likewise, there are other areas where they'll phone me and they need a part for a vehicle, because the customer is going to meet a ferry. Can I help? Well, what do you want? Well, can we courier a part down, will it get them on the boat? Yeah, fine, courier your part and I'll pay for it. But, again, it's a joint effort."</i> (TrucksUK regional manager, customer & technical support South)</p> <p>3) <i>"We would call for their support and that's when we would assume that they would help us out with the information because it's to help them in the long run with the relationship with their customers as well."</i> (ServCo SW service, marketing & business development manager)</p> <p>4) The TrucksUK regional manager East attributing the decrease in communication between his company and ServCo E on the recent incident which impaired the spirit of cooperation and teamwork in the relationship.</p>
8) REL AD → PERF	<p>1) Training is absolutely necessary for the appropriate and quick servicing of vehicles: <i>"We need to make sure that we are, if you like, fully ready to support that product by investment in staff and training and knowledge."</i> (ServCo SW general manager)</p> <p>2) All-around training is necessary, else diagnosis and eventually servicing of the vehicle can take too long: <i>"Quite often they will put inappropriately trained staff on a problem that you know that they're never going to diagnose without help. So, again, it's them being able to identify the skills of their individuals and have sufficient skills base across the whole workforce. We tend to find that in a lot of the dealerships you'll have one guy who's the electrician, one guy's the EBS specialist, one guy's the fuel specialist. If one of those goes off, he's on holiday, on sick, or he's on the wrong shift, you know you're on a hiding for nothing. ServCo SW are relatively good in terms of level of experience across the board, they tend to have two or three guys who are pretty good on electricians."</i> (TrucksUK regional manager, customer & technical support South)</p> <p>3) Evidently, the longer the opening hours the prompter the turnaround of vehicles, and the more likely the workshop are to attend a breakdown in time. <i>"To [large TrucksUK customer] I think it's our opening hours would be a definite, they expect their vehicles to come in during the night and be ready for the morning, if we didn't operate 24 hours we wouldn't be able to offer those services."</i> (ServCo SW service operations manager)</p> <p>4) Investment in infrastructure (e.g. machines and IT systems) is necessary to do the job: <i>"Yes. Yes it is [translating into superior performance]. I've got to say, sometimes you question it, but at the end of the day, yes it is. Because you wouldn't be able to do the job without it."</i> (ServCo S principal)</p> <p>5) When the ServCo E principal got the job, the workshop was small and dirty, with old technology and not enough right people with right training. Changing all these has objectively increased service delivery performance. Vehicles are serviced in the right facilities, equipped with state-of-art technology and highly trained technicians.</p>
9) REL AD → OPS	<p>1) <i>"They have to have somebody who they deem to be the UTP champion who has to input all this data on to the system to enable us to get the information out and to be able to draw the reports off it. So it has probably cost them some money with regards to employing staff and stuff like this."</i> (After-market national accounts manager)</p> <p>2) The repair and maintenance manager implying that to correctly use the relevant systems for monetary claims, training is beneficial: <i>"So if there's a particular problem with the quality of the claims they're submitting, which has happened in some cases. I wouldn't say that's the case with ServCo SW because their claim quality generally, is quite good. But there are dealers which is just the they lack the understanding so we'll see them quite frequently coming in. Actually some ask for it proactively more than others."</i> (TrucksUK repair & maintenance manager)</p> <p>3) ServCo E has recruited additional people to help the workshop controller with the fulfilment of roles and routines that come with the interlinking systems.</p> <p>4) According to the TrucksUK regional manager, ServCo SW have put in place the right structure in the workshop in order to clearly allocate administrative tasks. This means that the routines and roles dictated by the interlinking systems are followed closely.</p>

Table 4-11 (continued)

Link	Selected evidence
10) COOP → LEG	<p>1) The regional engineer implying that when cooperativeness reduces TrucksUK may turn a relationship based on trust into one based entirely on the explicit rules and roles. This deems arrangements in an informal manner impossible, hence increases the degree of formalization: <i>“Because of the good relationship that we have with the dealers, that you build a trust relationship with a dealer and they know that if they step outside of that, then we’ll just revert back and go fine, okay. We’ll go back and it’ll just be a black and white relationship, which is not going to be any good for either of us.”</i> (TrucksUK regional manager technical & customer support South)</p> <p>2) Referring to an emergent incident that required informal resolution, the regional engineer implied that cooperativeness and devotion to the common cause is a pre-requisite: <i>“Oh, we can’t do that because we’ll lose, it will cost us they [the workshop] will say. You say will it help the customer? Yeah, but it’s costing us money they say. Right, well, I’ll make up the 10% through...I’ll get the parts guys to make the 10% up; they’ve got the facility to do that. Just get the part, the most important thing is get the part, the rest of it is trivial we can sort that out afterwards. And it’s getting that communication going from a personal point of view that the guy will trust you when you said, leave it we’ll sort it, just get it done.”</i> (TrucksUK regional manager technical & customer support East)</p> <p>3) <i>“I’ve known [...] for 16 years so we have a relationship anyway, we know and respect each other for what we’ve done and when there is a conflict I think there’s a lot of trust there and we resolve issues in an informal manner.”</i> (ServCo SW general manager)</p>
11) LEG → PERF	<p>1) Abiding by the explicit rules becoming an end in itself. <i>“[...] if we do forget something, you know we’re not machines, and they cannot continually keep putting out procedures upon us. Procedures are now running the whole my life at work. I’m always thinking is there a procedure for this, is there a procedure for that, rather than concentrating 100% on getting the vehicle out of the workshop.”</i> (ServCo E workshop controller)</p> <p>2) <i>“So they’re covering their own backsides in every way, and we’re the ones that actually will get hit from repairing a vehicle on time-wise and everything else.”</i> (ServCo S contracts and warranty manager)</p> <p>3) The ServCo S contracts and warranty manager said that a trained mechanic must have some discretion to take decisions on the spot without always referring to the prescribed procedures. He also added: <i>“...otherwise, everything that goes on a vehicle, you’ll be saying, well, not sure about that, they have new, they have new. Where does it stop? It’ll cost TrucksUK money, it’ll cost the customer money. There wasn’t an intercooler available for that day, so the customer needed his truck back, the customer was losing hundreds or thousands of pounds a day. So, from our point of view, it’s a no-brainer; the customer comes first, it’s got to go.”</i> (ServCo S contracts and warranty manager)</p> <p>4) The possibility of resolving issues in an informal, non-explicit manner facilitates job completion: <i>“Because normally all the jobs tend to be done in a quicker way, if it’s not only in the black and white. I mean, if I can phone like I can phone ServCo SW, it will be just as quick, never mind that, do the job and we’ll sort it out on Monday. And you know that you can do that with a lot of the dealers.”</i> (TrucksUK regional manager technical and customer support South)</p>

- Link 3: Workshop size increases operational integration

As discussed in the within-case analysis, workshop size clearly affects the construct of operational linkages. In what follows, I concisely explain why. ServCo SW and ServCo E have enough back-office personnel to afford task allocation. Different people are responsible for different things and it looks like they have developed some sort of expertise in the different web-based systems, hence the roles and routines that the latter specify are followed closely. This is as opposed to ServCo S who cannot afford role allocation and three people are responsible for a wide range of tasks. Also, there are no dedicated administrative personnel. Everyone, apart from the principal, often has to go to the shop floor and service vehicles. Thus, the employees are not as able to follow the implicit roles and routines; so for example, they have trouble locating and transmitting information. The small size seems to be one of the reasons behind the non-existence of joint activities with TrucksUK individuals as well. The scale of operation does not justify a visit from the parts representative for joint campaigns, while the new-vehicles salesman preferred to spend his time elsewhere. The contrast between the ServCo S and the other two cases in that respect is quite distinct. In effect, the smaller the size of the workshop the lower seems to be the likelihood for high operational integration.

- Link 4: Workshop size increases cooperative norms

Workshop size also seems to affect the construct of cooperative norms. However, this link should not be considered a salient one at this stage, simply because evidence comes only from the ServCo S case. The other two cases do not provide supporting evidence for the link, but neither do they refute it. Henceforth, I present the supporting evidence. The ServCo S interviewees regularly feel that they are discriminated against, because they are such a small workshop with a small scale of operations. They claim that they “*know for a fact*” that other workshops get paid for jobs for which ServCo S are not paid, and get monetary claims approved for which ServCo S need to provide additional evidence. Furthermore, the fact that the workshop does not qualify for direct parts delivery (so they have to buy TrucksUK parts from another network member that makes a profit out of the sale) is perceived as unfair. It shows them that TrucksUK as an organization does not care enough about their business and future. The uncooperative behaviours of the field salesman and the parts department are also linked to the small size of ServCo S. At the same time, the regional

engineer indicated that all this complaining is because ServCo S often feel “*messed about*” because the nearest workshop (ServCo SW) ‘steals’ some of its work simply due to being larger and more professional. He continued by saying that small workshops usually feel disgruntled because they think that TrucksUK allow this unfairness to take place while in fact they are not aware of it. This, obviously, is contradictory as a statement and may as well be an excuse. It also has to be added here that during the initial phase interviews in TrucksUK, both the CEO and the after-sales director said that the plan is to eventually end up with 10-12 professional service partners with multiple sites. This will reduce the number of contacts to a few principals and general managers who will run their branches centrally. So, it may be the case that indeed TrucksUK do not consider their future to be intertwined with the small family-owned workshops like ServCo S, and consequently do not show a cooperative attitude at all levels of the relationship. There is some evidence for this, but as said, the positive association between size and cooperative norms should not be taken for granted at this stage. In any case, as the ServCo S principal said, as a result of these attitudes he is trying to sell the image of an independent garage that happens to have a TrucksUK franchise. In conclusion, it could be said that there is mild evidence in favour of a positive association between size and cooperative norms.

After explicating the role of the two exogenous variables, in the remaining of this section I present the associations between the relationship connectors and service performance. Supplementary evidence for each link is included in Table 4-11.

The interplay between the relationship connectors and service performance

- Link 5: Higher levels and quality of information exchange enhance the performance of the partner.

The analysis indicates that there is a direct link between the construct of information exchange and the partner’s service delivery performance. There is much evidence justifying this. Firstly, ServCo SW, who are the happiest with the levels and quality of information sharing with TrucksUK, also show the highest performance throughout the years. The frequent interpersonal communication with TrucksUK individuals (e.g. salesmen, regional service engineer) during which rich and relevant information is shared, together with the exchange of timely and complete information through the interlinking web-based systems, seem to increase the workshop’s service delivery

performance towards the provider's customer base. The effective and efficient exchange and use of fine-grained information helps ServCo SW undertake tasks quickly and correctly so vehicles are turned around faster, having been serviced properly. Interestingly, the workshop respondents also referred to the direct detrimental implications of long response times (e.g. from the parts department) and the absence of an out-of-hours communication link, on job completion and vehicle turnaround times. The ServCo E principal also confirmed the existence of this link, when referring to the difference that it makes when his personnel access and appropriately utilize the information disseminated through the TrucksUK websites. Similarly, the ServCo E workshop controller and almost everybody at ServCo S talked about how unavailability of certain information can be translated to longer turnaround times because the vehicles remain stranded while waiting for a TrucksUK answer.

Secondly, the poor communication between ServCo S and ServCo E employees on the one hand, and the TrucksUK sales department on the other, means that vehicles under contract arrive for service unexpectedly and the workshop may not be prepared to undertake certain jobs. Such surprises to which the two workshop principals alluded to, do not seem to occur in the ServCo SW case due to regular information sharing.

Thirdly, the existence of the link is clearly evident in the ServCo S case. Their relative inefficiency in recording, exchanging and identifying information through the web-based systems means that: a) it takes them longer to finish the diagnosis of a vehicle and b) they need to contact TrucksUK HQs for help. The latter is effectively an 'unnecessary' communication link, while the answer to the question, as mentioned earlier, may not come fast enough. These facts lead to delays in servicing and turning vehicles around, hence affecting the service delivery performance of the workshop.

Overall, the analysis suggests a clear, direct and positive relationship between information exchange and service delivery performance.

- Link 6: Operational integration facilitates the exchange of complete and timely information.

The existence of this link should have become evident by now. Firstly, for relevant and complete information to flow freely and quickly between the workshop and TrucksUK, adherence to the implicit roles and routines implicitly defined by the web-base systems is necessary. The workshop employees, in several instances, have to record and transmit information (e.g. when diagnosing a vehicle) to the TrucksUK HQ or the

German parent company. This information has to be provided accurately, completely and in a standardized format, which may not be the case if the person is not familiar enough with the respective systems and portals. As the regional engineers said, the delayed response by TrucksUK, or its persistence in asking for additional things, may be perceived by the workshops as poor response times. However, this is only a consequence of the workshop's incompetence, as some routine for inputting the information has not been adhered to. This seems often to be the case in the ServCo S relationship, but not in the other two. Additionally, apart from transmitting information, ServCo E and ServCo SW are admittedly much more able to locate and receive information. This is entirely because they are more comfortable than ServCo S with the web-based systems. For example, the ServCo S contracts and warranty manager as well as the service manager, conceded that they face difficulties in finding information on the web-based systems at times. The TrucksUK regional engineer also confirmed the existence of this link by saying that seven out of ten phone calls from the workshops (which delay the process of turning vehicles over) are about information readily available on the websites, which the workshop employees have been either reluctant or unable to find. This again means that routines implied by the interlinking systems for the efficient gathering of information have not been followed for some reason. The TrucksUK account managers provided an additional general feature that can justify this link. It is often the case at workshops that there is no computer station at the shop-floor for the foremen and fitters to use when the managers have finished their day. This, obviously, does not allow them to access and transmit information, which means that certain jobs have to wait for the next morning. Also, some other service partners may have computer workstations on the shop floor, but due to their negligence, the computers have not been loaded with the most up-to-date features. In short, inefficiency in using the operational linkages reduces information exchange, which in turn reduces service levels.

Secondly, it is clear that joint, routinized activities (the second facet of the operational linkages construct) affect information exchange. ServCo E and especially ServCo SW have identifiable joint activities (e.g. meetings, customer visits) with TrucksUK individuals, where relevant information is shared regularly in an intimate and informal manner. The absence of such activities in the ServCo S case affects negatively the overall perception of the respondents about information exchange, and means that workshop employees feel neglected.

- Link 7: Cooperative norms increase the propensity for extensive and open information exchange.

In the ServCo SW case, the expectation of a long-term, intertwined future clearly increases the tendency of individuals from both parties to interact interpersonally. Furthermore, the sense of cooperation and the perception of common goals act as facilitating mechanisms in the established communication links, encouraging the open exchange of meaningful and relevant information (e.g. between the workshop and the salesmen). This was also observed in the other two case-relationships, but particularly in those interpersonal links of the overall inter-firm relationship that are permeated by a cooperative spirit (e.g. ServCo E principal and regional engineer). However, information exchange in these two cases has been impaired in a way, because as shown in the within-case analysis, the two workshops have issues with certain departments (the ServCo E case) or the overall organization (the ServCo S case). Most illustrative is the recent incident in the ServCo E case, which was handled in a perceived ruthless manner by TrucksUK. The regional engineer indicated that due to the subsequent decrease in cooperativeness, communication in the relationship has reduced (leading to a drop in service delivery performance). As he said, people from the TrucksUK HQ and ServCo E often “*do not bother*” to talk to one another, which means that certain problems that emerge could have been avoided. Hence, lesser cooperation decreases information exchange, reinforcing the claim for the existence of the link between the two constructs.

- Link 8: Relationship-specific adaptations directly increase service performance

As discussed in section 4.3.1, relationship-specific adaptations seem to be a necessary condition in this context. More than anything, they seem to be ‘imposed’ by the nature of the integrated product-service offering under study. It is true though, that in all cases some of the adaptations have lost their specificity, as for example the investment in facilities and machinery. Even investment for employee training to service TrucksUK vehicles brings benefits outside of the relationship, as the workshop can acquire expertises for which it can charge customers extra. However, all such investments have originally been made for TrucksUK, and according to TrucksUK’s demands, and this is the reason they are treated as relationship-specific.

The analysis indicates that there is a direct causal link between adaptations and service delivery performance. Several points from all cases can be used as evidence. Firstly, the ServCo S principal admitted that it would be impossible to do the job properly

without investment in the right machines and training, and even though training is expensive for his limited means, he acknowledged the necessity of it. Secondly, the accounts of the ServCo E principal and workshop controller attribute much of the performance improvements to the extensive relationship adaptations that took place when the principal took over. The investment in technology and training has clearly enabled the employees to service vehicles quickly and in an optimal manner. Thirdly, the ServCo SW case adds to these indicators the significance of longer opening hours. Reasonably, due to this arrangement, which has been implemented for TrucksUK and its customers, the workshop can admit vehicles almost at any time during the week, and return them to the road as soon as possible. In short, there is little doubt that a direct, positive association between the constructs of relationship-specific adaptations and performance exists. However, because the levels of adaptations are similar across the three cases, while performance differs significantly, it can be logically inferred that relationship-specific adaptations do not constitute a sufficient condition for high performance.

- Link 9: Relationship-specific adaptations increase operational integration

Relationship specific-adaptations in the form of investment in recruitment, IT infrastructure and personnel training increase the level of operational linkages. Both ServCo SW and ServCo E recruited additional people and assigned them with specific roles and routines necessary for their efficient use of the web-based systems. Investment in training is also beneficial, which seems particularly the case for ServCo E. The workshop does not have a big product-service penetration which is, as explained earlier, expected to be associated with relatively lower familiarity with the operational linkages (see Link1). However, extensive training on the use of the web-based systems (confirmed by the regional engineer East) compensates for that. Technical training for service and repair processes also contributes to the efficient usage of the systems, because the technicians become more accustomed to capturing and recording the information needed by TrucksUK. Additionally, as the TrucksUK regional engineer South indicated, unlike ServCo SW some workshops have not invested in computers for the shop-floor, hence when the managers finish their day, the foremen cannot access the websites to receive or transmit essential information. On the whole, there appears to be a direct causal link between the constructs of relationship-specific adaptations and operational linkages.

- Link 10: The perceived over-reliance on explicit rules and procedures impedes service performance

The third and final direct influence on service delivery performance comes from the construct of legal bonds. The data point to the direction that the performance of ServCo E and ServCo S is thought to be impeded because their working relationships with TrucksUK are overly reliant on the explicit rules and procedures (over-formalized). As one can see in the quotes in Table 4-11, a number of respondents believe that this 'obsession' of TrucksUK with explicit rules, and its intolerance to deviations from prescribed behaviours, prevent them from focussing on servicing vehicles. This results in longer vehicle turnaround times. On the other hand, as already mentioned, there were no complaints with regard to the degree of explicitness of the relationship in the ServCo SW case. As shown, this is partly because of the high product-service penetration of ServCo SW. Furthermore, it is also because there exists the possibility of resolving issues and getting things done in an informal manner. The latter seems to be absent in the other two cases. Informal issue resolution helps bypass the barriers often raised by the rigid, prescribed rules and leads to superior service delivery performance.

- Link 11: Cooperative norms decrease the perceived level of formalization of the relationship

As discussed earlier (see Link 2), the level of the perceived formalization of the relationship is partly determined by the level of product-service penetration. The other determinant of the construct is cooperative norms. ServCo SW clearly perceive that they have common goals and objectives with TrucksUK, which to achieve they have to work together. The high tendency and spirit of cooperation permeating all levels of the relationship create the possibility of resolving issues in a trustful and informal manner, bypassing the rigidities posed by aspects of prescribed rules and obligations. This is also facilitated by long-term cooperative interpersonal relationships such as the one between the ServCo SW principal and the TrucksUK repair and maintenance manager. The two men have known each other for years, and trust that every decision taken by both parties is for common benefit. As the principal says, this helps in resolving issues informally. The overall expectation of a prolonged, cooperative relationship which is evidently shown by TrucksUK individuals also seems to ease the everyday effects of over-explicitness felt by ServCo SW. On the other hand, the discriminative and dictatorial behaviours felt at times by ServCo E and ServCo S affect their perception of the degree of TrucksUK intolerance to deviations. In the same vein, informal arrangements are more difficult to develop. The quotes from the interviews with the

regional engineers in the relevant row of Table 4-11, also imply a direct link between cooperation and trust, and the possibility of working in a non-prescribed manner.

The links implied by the preceding analysis can be captured in the model presented below (Figure 4-1). The numbering of the links follows the sequence in which each link has been discussed above. It has to be noted that the model is not a Structural Equation Model. Its intention is not to be tested. Rather, it provides a nuanced, context-specific picture to help understand the complexity of the phenomenon, namely, how the provider – partner relationship affects the service delivery performance of the partner. It fulfils this by showcasing the specific role of each relationship dimension. Its implications are discussed in the next section 4.3.3, after a brief comment on the non-existence of some intuitive links.

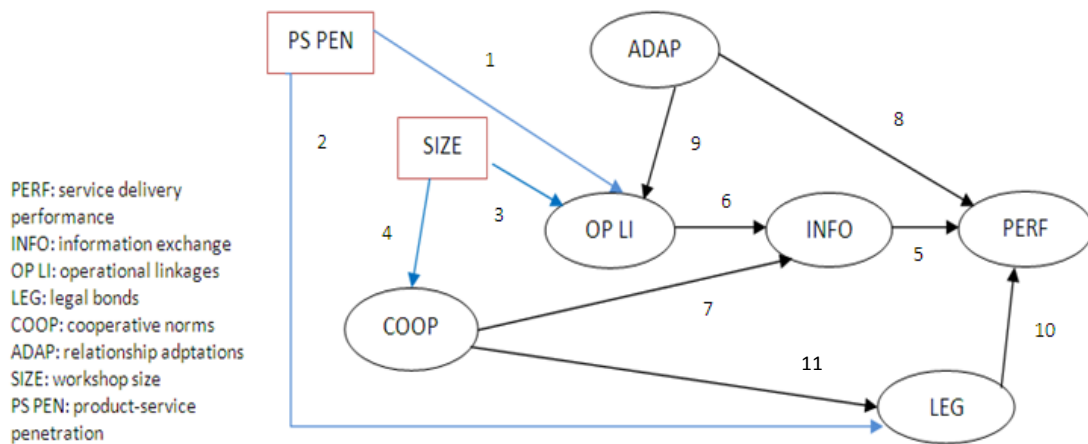


Figure 4-1: The model of provider – partner relational influences on the service performance of the partner

On the non-existence of some links

In this sub-section I discuss the fact that the existence of a number of intuitive links between the elements of the model does not seem to be supported by the analysis. Firstly, one would expect that cooperative norms affected operational linkages. Indeed, for joint, routinized activities to develop there needs to be some cooperative predisposition and the perception of common goals. For example, surely ServCo SW respondents perceive their future to be intertwined with TrucksUK’s and the relationship to be framed around a common purpose. That is why the ServCo SW principal went for customer visits a couple of times with the new TrucksUK co-located salesman. The indifference and absence of team spirit exhibited by the old new-

vehicles salesman in the ServCo S case may also explain why joint activities never developed. After all, the ServCo S principal said that his workshop does not feel close at all to TrucksUK anymore. Therefore, one could draw a connection between cooperative norms and operational linkages. I argue however that this is not the most salient conclusion based on my data. As I demonstrated above, the analysis suggests that there is one exogenous variable, workshop size, which affects both cooperative norms and operational linkages. This means that a positive association between the two constructs is because of the existence of another variable. As explicated earlier, the relationships between the large workshops and TrucksUK seems to be more cooperative due to 'preferential' treatment by TrucksUK. It is also quite clear that operational integration is more likely when the workshop has enough personnel to afford adequate allocation of tasks and responsibilities. Hence, workshop size increases the levels of both constructs, which may explain an intuitive, positive association between the two. This again signifies the importance of contextual variables as causal conditions for the outcome of interest, i.e. the partner's service delivery performance.

Secondly, I believe that another intuitive relationship, that between the constructs of legal bonds and operational linkages is explained by the second exogenous variable (product-service penetration). One may have expected that the clearer and more familiar the workshop is with the roles specified by the use of the interlinking web-based systems, and the more the joint activities between the individuals from both parties, the lower would be the perceived formalization. It has however been suggested in the relevant section that it is the objective degree of product-service penetration responsible for this. The higher it is, the higher the degree of operational integration and the lower the perceived level of overall explicitness of the relationship. That I believe explains a potential negative association between the two relationship connectors (operational linkages and legal bonds), in exactly the same manner as in the previous instance (i.e. an exogenous variable affecting both constructs).

Finally, it was initially felt that ServCo SW have invested so heavily in their TrucksUK relationship because most of their revenues comes from dealing with vehicles under fixed-cost contracts and warranty (54% PS penetration). Hence, a direct link between adaptations and PS penetration was implicitly proposed in the within-case analysis. However, with the added insight offered by the second and third case, the existence of this link was rejected. This is because both ServCo E and ServCo S have invested heavily, even though their PS penetration is much lower. As suggested in previous subsections, relationship-specific adaptations appear to be a necessary condition in this context. This is probably because of the nature of the integrated product-service offering. Other works in the servitization literature also suggest that adaptations by

the involved parties should be expected in servitized settings (Bastl et al. 2012; Lockett et al. 2011). It may also be an entirely specific feature of the research setting. As mentioned in the methodology section, to be deemed fit to be a TrucksUK network member, the workshop has to reach certain standards. These standards often require significant investment in infrastructure, which is considered a relationship-specific adaptation.

4.3.3 Implications of the model; alternative routes to high service performance

To summarize, the emergent model suggests that information exchange, legal bonds and relationship-specific adaptations directly affect service performance of the partner in the TrucksUK – partner – customer triad. Information exchange and relationship-specific adaptations increase performance, while the construct of legal bonds (defined as the degree of explicitness of the relationship) seems to decrease it. At the same time, relationship-specific adaptations positively affect operational linkages, which in their turn enhance information exchange. Like operational linkages, cooperative norms do not seem to directly affect performance; instead, they do it indirectly through reducing the degree of formalization of the relationship and increasing the propensity for exchange of information. Moreover, the model demonstrates the role of the two exogenous factors. Firstly, workshop size has a positive association with the constructs of cooperative norms and operational linkages; while secondly, PS penetration is positively associated with operational linkages and negatively with legal bonds.

Therefore, this section provided a holistic and nuanced account of how the provider – partner relationship affects the service performance of the partner. This was due to employing a specific framework of relationship characteristics (the Cannon & Perreault 1999 framework of relationship connectors) and exploring the interplay between them. In this way the distinctive role of each connector within the complex interplay was discerned. Hence, as each connector captures unique and differentiated information about the manner in which day-to-day commercial exchange is conducted, the effect of the relationship as a whole on the partner's everyday service performance is more strongly demonstrated. Moreover, the importance of context is emphasized, as the effects of two particular emergent contextual variables on certain relationship connectors are clearly defined. Understanding the role of each connector, especially when considering the context of each relationship, provides the potential for targeted managerial intervention (discussed in a subsequent section).

Moreover, the model suggests that alternative causal paths to high performance are possible. Clearly, as long as there are three constructs that directly influence the outcome variable (legal bonds, information exchange and adaptations), high partner service performance may be a direct product of one or more of these constructs. Additionally, as the case analysis showed, in the context of a specific case, the states of one or two of these constructs may positively affect performance while the rest may affect it negatively. For example, in the ServCo S relationship the level of relationship-specific adaptations increases the workshop's service performance towards the customer base of TrucksUK, while the levels of information exchange and legal bonds affect it negatively. On the other hand, the performance of ServCo SW seems to be enhanced by the current levels of all three constructs. To add to the complexity, the three constructs that directly affect service performance depend themselves on the four remaining factors positioned further back in the causal ordering (PS penetration, size, cooperative norms and operational linkages). This in short means that the outcome of interest, i.e. high partner performance, is a function of all seven causal conditions who interplay in a complex manner. In other words, the emergent model indirectly supports the conclusion drawn after the relevant literature review. Namely, that the overarching phenomenon of interest (relational influences on firm performance) is causally complex and contextually determined (section 2.3.3.2). This, as discussed in the literature review and methodology sections, justifies the use of a configurational approach (section 2.3.3.4). With the conduct of a survey study and the subsequent deployment of fsQCA for the data analysis, in the next section I deal with the answer to the second research question (*'What configurations of dimensions of the provider – partner relationship ('relationship connectors') and contextual factors elicit superior service performance?'*). This will insightfully complement the results from the case-studies, increase the generalizability of the findings to the population of TrucksUK service partners, and provide methodological triangulation (see methodology chapter). Therefore, the thesis continues with the configurational analysis before going into the discussion of the findings in connection to the literature.

4.4 Configurational analysis

This part of the chapter presents the findings from the configurational analysis. The idea that there are alternative routes (causal recipes) to superior service performance of the workshop serves as the foundation for the construction of four basic hypotheses. Testing the hypotheses is not an end in itself; rather, it guides the analysis for the answer to the second research question: *"What configurations of the provider – partner relationship dimensions ('relationship connectors') and contextual factors elicit*

superior service performance?” The main part of the section deals with this. Section 4.4.3.1 reports the reliability analysis of the relationship connector scales and justifies the omission of particular items. Section 4.4.3.2 continues with the first major step of any fsQCA exercise: measure calibration. All decisions are explicitly detailed and justified based on the substantive knowledge gained from the qualitative work. Section 4.4.3.3 presents the results of the fsQCA and in the process details all necessary procedures undertaken to derive the solutions. It turns out that there are four configurations of relationship dimensions and exogenous factors that enhance the service performance of the workshop towards the customer base of TrucksUK. The results are subsequently discussed and presented in the table format suggested by Ragin (2008) and Fiss (2011). In light of this, the four hypotheses are assessed.

4.4.1 Recap

The emergent model that captured the interplay between the relationship connectors and exogenous factors, and their influences on the service performance of the partner (Figure 4-1) suggests that different causal paths to high performance are possible. This means that the phenomenon in itself is causally complex (Ragin 1987). To understand and disentangle causal complexity one can apply configurational logic and methods for data analysis (Ragin 2006; Ragin 2008). This fundamentally switches the orientation of the inquiry from variable-centred to case-centred. This is as opposed to correlational thinking. According to the latter, each case is implicitly decomposed to values across a number of variables, and the resulting associations between those variables are based on sample properties such as mean and variance. Hence, the integrity of each case is sacrificed and their uniqueness ignored. On the other hand, case-oriented, configurational methods such as fsQCA keep the integrity of each case intact (Ragin 2008). fsQCA, by employing fuzzy set algebra, can systematically identify combinations of conditions (or *causal recipes*) that lead to an outcome. In this way the combinatorial effects of these conditions can be understood³¹. This idea permeates the development of the hypotheses in the following section.

4.4.2 Hypotheses

The intention of the quantitative phase as a whole is to provide further insight into the phenomenon, and as part of this to answer the second research question. For this

³¹ As a reminder, details on fsQCA can be found in section 3.6.3.1, Ragin (2008) and Fiss (2011).

reason, the process as a whole, as well as specific, integral steps of the fsQCA technique are directly informed from the qualitative case-analysis and preceding discussion (see section 4.3.3). To start with, the results of the qualitative phase inform the formulation of four hypotheses. However, before presenting these hypotheses, a comment on their nature is in order.

It is noteworthy that my hypotheses do not strictly postulate relationships between variables, as Bacharach (1989) claims³². At the same time, they are not statistical hypotheses, in the sense that I do not specify a null hypothesis to reject with the use of statistical techniques. In reality they are expectations that I formed, based on the results of the qualitative phase. I intentionally use the term hypothesis here, simply to denote that these expectations are testable, i.e. they can and will be confirmed or falsified. As will be shown herein, the insight that will be gained through testing these hypotheses will comprise a necessary part of the 'story' that answers the second research question, and consequently, an integral element of the findings of the study as a whole. The formulation of the hypotheses and the presentation of the ideas that inform them follow.

First and foremost, because of the complex causal interrelationships between the seven conditions (see sections 4.3.2, 4.3.3), one could expect a number of alternative combinations of these conditions to produce the outcome of interest (high partner performance). This means that I hypothesize the existence of various *equifinal*³³ configurations:

H1: There will be more than one different configurations of causal conditions (relationship connectors plus context variables) that lead to high performance.

Additionally, one major insight drawn from answering the first research question was that even though the five connectors should not necessarily be expected to covary (like Cannon & Perreault 1999 suggested and proved), more relational relationships between TrucksUK and the workshops tend to enhance the performance of the latter towards TrucksUK's customer base. A pretty clear ranking of the three case-relationships in terms of their relationality emerged, which corresponds to the ranking of the workshops according to their performance. As a reminder, a more relational relationship in this setting would be one with relatively high levels of information exchange, adaptations, operational linkages and cooperativeness, and relatively low

³² Bacharach essentially says that hypotheses state relationships between variables, and are normally derived from propositions that postulate relationships between constructs.

³³ Equifinality refers to the idea that "a system can reach the same final state from different initial conditions and by a variety of different paths" (Katz & Kahn 1978, p.30).

formalization. Thus, according to what the qualitative results imply, it can be generally hypothesized that:

H2: The resultant configurations of causal conditions leading to high performance will resemble relational relationships rather than transactional ones.

In simple words, we would expect workshops whose relationships with TrucksUK are more like the ServCo SW case to perform better than those whose relationships resemble the ServCo S one.

The analysis so far indicated the important effect of the two emergent exogenous factors (workshop size and PS penetration) that tap the unique micro-level context of each case-relationship. According to the model, these two factors directly determine the levels of legal bonds, cooperative norms and operational linkages. Moreover, their (indirect) relationship with service performance is positive. Hence, one would expect them to appear as constituent elements of the resultant configurations that enhance the service performance of the partner. Formally:

H3: The results of the configurational analysis will suggest that PS penetration and size enhance the service performance of the partner.

The three aforementioned hypotheses are intended to directly test the insights gained from the qualitative phase. I would like though to include a fourth one which is of an 'exploratory' nature and takes advantage of the asymmetry property of set theoretical relations. This in short means that if configurations exhibiting certain characteristics at high levels are found to enhance performance, the reverse need not be true. Namely, the configurations exhibiting the same characteristics at low levels (i.e. in Boolean algebra: set negation) should not necessarily be expected to detriment performance. This is a property which distinguishes set theoretical from correlational thinking. In correlational logic and methods (e.g. multiple regression analysis) it is implicitly assumed that if, for example, information exchange is statistically positively associated with performance, it follows that low levels of information exchange will be associated with low performance. In set-theoretical, configurational language, this would mean that cases with high information exchange (full set membership) will be associated with high levels of performance, while cases with low levels (non-membership or set negation) will be associated with low performance. Only that this does not need to hold. Set relations are asymmetric and because of the effects of other causal conditions, cases with low information exchange may also show high performance. Similarly, low performance (full set non-membership) may be the outcome of

configurations completely different and not symmetrically opposite to those leading to high performance. Hence the exploratory hypothesis:

H4: The configurations of conditions leading to low service performance will not necessarily constitute symmetric opposites of those configurations leading to high service performance.

Having constructed the hypotheses, the thesis continues with the analysis of the survey data and the answer to the second research question.

4.4.3 Towards Answering RQ2: ‘What configurations of characteristics of the provider – partner relationship (‘relationship connectors’) and contextual factors elicit superior service performance?’

This section answers the second research question. As already discussed, fsQCA is employed for the analysis of the survey data. FsQCA is appropriate for small and medium sized samples, and by utilizing set-theory and fuzzy algebra can identify configurations of causal conditions associated with an outcome. As mentioned in the methodology section, an important stage of the process is the calibration of measures. This takes place before the fuzzy-set analysis. Prior to this I also discuss and undertake a reliability analysis of the used scales. These stages, together with the results, are detailed in what follows.

4.4.3.1 Reliability analysis

There are no explicit guidelines in the QCA methodological literature for when the researcher uses the technique to analyze survey data. This is probably because scholars from the fields from which the method originated and is more commonly used (political sciences, comparative sociology) rarely collect data through self-reported questionnaires. As mentioned, they normally deal with small and medium sized samples (e.g. countries, states), where QCA has a comparative advantage over the commonly used correlational, parametric methods. Hence, it is not a surprise that explicit guidelines for dealing with survey data are absent from the QCA literature. Thus, I reviewed what was done in the other papers from the business and management literature that analyzed survey data with QCA.

Fiss (2011) and Ordanini and Maglio (2009) only conducted a reliability analysis (Cronbach's alpha) for their reflective scales. Meuer (2011), in his PhD dissertation, and Kent and Argouslidis (2005) did not report any action for evaluating the reliability and validity of their reflective scales. Finally, Kogut et al. (2004) conceptualized their scales as formative, so no reliability analysis was required. Although formal confirmatory factor analysis (CFA) does not seem to have been conducted anywhere, I believe that, intuitively, there is no reason why it should not. A researcher would always want to ensure that the collected data tap the intended constructs reliably and validly. The only restrictive factor for conducting a CFA seems to be the sample size. The studies of Meuer (2011) and Ordanini and Maglio (2009) deal with small samples which are essentially forbidding for a proper factor analysis. This is the case in my work as well. The absolute number of returned questionnaires does not exceed fifty (the absolute minimum for a factor analysis according to Hair et al. 2010), while the case-to-variable ratio is also smaller than the minimum thresholds found in the literature and reported by Field (2009)³⁴. In reality, initially I do not even have two respondents for each variable (34 items/variables and 47 responses). One could claim that by omitting several items and keeping one or two for each construct I would be able to reach the thresholds. However, I believe that this would be a misinformed practice because it would prevent me from adequately capturing the conceptual definitions and multiple facets of the constructs. As demonstrated in the qualitative phase, differences between the three cases can be found across a number of aspects of each connector. Reducing the number of items to only one or two per construct would sacrifice this relevant detail in the name of rigour, and in my opinion, would turn the fsQCA phase into a valueless task. Hence, I do not omit items to make my sample large enough for the conduct of a factor analysis.

However, since five of the the candidate causal conditions (the relationship connectors) are measured based on perceptual, self-reported answers to a questionnaire, I believe that I should try to increase the likelihood that the scales have indeed captured the real perceptions of the individuals. Hence, like Fiss (2011) and Ordanini and Maglio (2009) I undertake a reliability analysis for each construct. I use SPSS for this, which reports the Cronbach alpha for each construct, together with the potential alphas if any one item that measures a particular construct is omitted from the set. It also provides item-to-total correlations which can help decide whether to keep or omit problematic items. I report the reliability analysis underneath and the justification for each decision taken. For each construct (relationship connector) I provide a table that presents the initial items, their respective initial item-to-total

³⁴ For example, Nunnally (1978) recommended having 10 times as many observations as variables, while Kass and Tinsley (1979) suggested that 5 times as many may be enough.

correlation, whether they were deleted, and the overall coefficient alpha after deletion of the problematic ones.

Information exchange scale:

The Cronbach alpha coefficient when all eleven items are included is 0.89. The high alpha is not a surprise considering the large number of items (Cortina 1993). Therefore, the item-to-total correlation coefficients should be examined as well. Field (2009) suggests that these coefficients should exceed 0.3. This is not the case for the item: 'We share our workshop's sensitive information with TrucksUK (e.g. financial data, information about competition...)' [item-to-total correlation: 0.28]. Omitting this gives an alpha of 0.906 but at the same time an additional item's item-to-total correlation decreases significantly below the 0.3 threshold ('TrucksUK are provided with any information that might help them' gets a coefficient of 0.216). Omitting this gives an alpha of 0.916 and item-to-total correlations for all items that exceed 0.6. Hence the set of nine items shows great reliability and I continue with this.

Intuitively, there seems to be a reason why the two omitted items reduce reliability and distort the 'true' picture, hence should be deleted. Both items refer to what the workshop does in the relationship (i.e. its own information exchange behaviour). The rest of the items on the other hand refer to mutual behaviour (and one to the behaviour of TrucksUK). Hence, some respondents seem to have praised their own behaviour, and penalized the behaviour of TrucksUK (by rating low the items referring to mutual behaviour). This bias I believe should be eliminated and the decision to delete the two items is a correct one. Table 4-12 contains the corrected item-total correlation for each item and the resultant Cronbach alpha after deletion of the two problematic ones. The latter are in bold and italicized.

Table 4-12: Reliability analysis for information exchange

Item	Corrected item-total correlation
<i>We share our workshop's sensitive information with TrucksUK (e.g. financial data, information about competition...).</i>	.286
<i>TrucksUK are provided with any information that might help them.</i>	.316
Exchange of information between TrucksUK and this workshop takes place frequently, informally and/or in a timely manner.	.661
We are provided with any information that might help us (e.g. regarding new vehicles sales, new vehicles coming in, customer specific information...).	.609
We have frequent face-to-face planning/communication with our TrucksUK counterparts (e.g. with the co - located salesmen, customer reviews, business development...).	.691
We keep each other informed about events or changes that may affect the other party.	.742
Information exchange between TrucksUK and this workshop is timely.	.694
Information exchange between TrucksUK and this workshop is accurate.	.592
Information exchange between TrucksUK and this workshop is complete.	.801
Information exchange between TrucksUK and this workshop is adequate.	.840
Information exchange between TrucksUK and this workshop is reliable.	.705
Resultant Cronbach's alpha	.916

Operational linkages scale:

The five items of the scale show an alpha of 0.587, which is substantially below the cut-off point of 0.7 (Kline 1999). This is mainly because of the low item-total correlation of the item 'We have got closely linked business activities with individuals from TrucksUK (e.g. joint marketing, campaigns, visiting customers with the salesmen...)' [item-total correlation: 0.243]³⁵. However, this is the only item which measures the second facet of the construct (joint routinized activities), hence, omitting it will mean that the scale does not capture adequately the construct's conceptual definition. In hindsight, one could claim that the items for this scale could have been worded in a better way. I acknowledge this and consider it as a limitation, but for the sake of the analysis I include all five items for calculating the summated score. Table 4-13 below contains the corrected item-total correlation for each item and the Cronbach alpha coefficient.

³⁵ Omission of this item would give an alpha of 0.687.

Table 4-13: Reliability analysis for operational linkages

Item	Corrected item-total correlation
We have got closely linked business activities with individuals from TrucksUK (e.g. joint marketing, campaigns, visiting customers with the salesmen...).	.243
The efficient usage of the web-based systems of TrucksUK is essential to the workshop's operations.	.347
Our workshop's operations are closely connected with the operations of TrucksUK.	.503
In this workshop we adhere very closely to the procedures specified by the TrucksUK web-based systems.	.405
In this workshop we are very comfortable using the TrucksUK web-based systems.	.479
Resultant Cronbach's alpha	.587

Cooperative norms scale:

The seven items of the scale show an adequate level of reliability (alpha = 0.797). A closer look however reveals that the item-total correlation coefficients of two items is unacceptable. The items 'TrucksUK and us must work together to achieve our mutual goals' and 'We support TrucksUK as much as we can' have item-total correlations of 0.261 and 0.280 respectively. A look at the dataset indicates the reason for this. All respondents have scored the two items with a '6' or '7' on the 7-point Likert scale. This is why they do not correlate with the other five items, which show considerable variation. It seems that the first item is more or less common sense for the respondents³⁶, while the high scores of the second item is probably an attempt to emphasize the effort of their workshops. The two items do not capture any variation then, so their inclusion is unnecessary and would only add noise. Therefore I omit them. The remaining five items have coefficient alpha of 0.831 and item-total correlations that exceed 0.5. Table 4-14 below contains the corrected item-total correlation for each item and the resultant Cronbach alpha after deletion of the two problematic ones. The latter are in bold and italicized.

³⁶ Which is an interesting insight in itself. All respondents at the workshops perceive that to achieve the common goals joint effort is necessary. The item however does not capture to which extent the respondents perceive the existence of common goals which, in hindsight, would be more important to assess mutuality.

Table 4-14: Reliability analysis for cooperative norms

Item	Corrected item-total correlation
Both sides are concerned about the other's success and profitability.	.615
TrucksUK will not take advantage of a strong bargaining position against this workshop.	.476
<i>TrucksUK and us must work together to achieve our mutual goals.</i>	.260
Our relationship with TrucksUK is better described as a cooperative effort rather than an uncooperative one.	.741
When we have a problem (e.g. with one of TrucksUK customers), TrucksUK help us solve it.	.663
When we are solving problems jointly, TrucksUK are very cooperative in resolving them.	.678
<i>We support TrucksUK as much as we can.</i>	.281
Resultant Cronbach's alpha	.831

Legal bonds scale:

The five items measuring legal bonds have an alpha of 0.625. However, the reverse phrased one ('Over time, in our interaction with TrucksUK we have developed ways of doing things that never need to be expressed formally') shows an item-total correlation of 0.062, which means simply that the subjects got confused with the wording of the sentence³⁷. Excluding it increases the reliability of the scale to 0.714 with all item-to-total correlations exceeding 0.42. Consequently, the problematic item is omitted from the scale. Table 4-15 below contains the corrected item-total correlation for each item and the resultant Cronbach alpha after deletion of the problematic one. The latter is in bold and italicized.

Table 4-15: Reliability analysis for legal bonds

Item	Corrected item-total correlation
In our relationship with TrucksUK whatever is specified in the legal contracts is followed very closely.	.312
The only way we seem to communicate effectively with TrucksUK is when everything is spelled out in detail.	.521
<i>Over time, in our interaction with TrucksUK we have developed ways of doing things that never need to be expressed formally.</i>	.062
In this workshop we adhere very closely to the terms and obligations specified in the legal contracts between us and TrucksUK.	.435
TrucksUK are keeping their relationship with this workshop very rigid and formal.	.639
Resultant Cronbach's alpha	.714

³⁷ Of course the item has been reverse scored before the reliability analysis to have a positive covariance with the rest.

Relationship-specific adaptations scale

Initially, the six-item scale alpha coefficient is 0.662. However, two items have very low item-total correlations. ‘We have made substantial commitments in time and money for employee training to be able to deal with TrucksUK’ and ‘If we switched to another commercial vehicles franchisor, we would lose a lot of investments made in the relationship with TrucksUK in this workshop’ show item-to-total correlations of 0.218 and 0.227 respectively. The first is because all respondents have given a score of ‘6’ or ‘7’ to the item, indicating their belief that they invest a lot in training. This means that no variation is offered by including the item, hence I omit it. With regard to the second item, the perceptions may be distorted because some of the workshops are already double or triple franchises. In hindsight, this item should have been worded more carefully. Therefore, I delete it as well. The remaining four items have an alpha value of 0.713 and item-total correlations that exceed 0.39. Table 4-16 below contains the corrected item-total correlation for each item and the resultant Cronbach alpha after deletion of the problematic ones. The latter are in bold and italicized.

Table 4-16: Reliability analysis for relationship-specific adaptations

Item	Corrected item-total correlation
We have made significant investments in tools and machines dedicated specifically to the relationship with TrucksUK.	.477
<i>We have made substantial commitments in time and money for employee training to be able to deal with TrucksUK.</i>	.218
Just for TrucksUK we have changed the workshop’s opening hours.	.414
Just for TrucksUK we have changed our marketing strategy.	.628
Just for TrucksUK we have changed the workshop’s information systems.	.504
<i>If we switched to another commercial vehicles franchisor, we would lose a lot of investments made in the relationship with TrucksUK in this workshop.</i>	.227
Resultant Cronbach’s alpha	.713

Table 4-17 includes descriptive statistics for each of the five connectors and the two exogenous conditions, after:

1. Having deleted the unreliable items, and;
2. For the seven workshops that provided more than one completed questionnaire, having retained the answers of the most senior individual. For example, in ServCo S both the Principal and the Service Manager replied but only the answers of the Principal are considered.

The distributional properties of the measures are advised during calibration and are discussed in turn in the next section. It has to be stated though that issues such as normality and outliers do not constitute problems for fsQCA (Ragin 2008). This is because the method is non-parametric in nature, and is based on set relations rather than correlations. Nevertheless, one could spot the high means of all relationship connectors. Apart from legal bonds, whose high mean shows that the relationships on average are highly formalized, the high means of the other connectors indicate that in this context the provider – partner relationships tend to be relational.

Table 4-17: Descriptive statistics

Construct	Mean	Standard Deviation	Minimum	Maximum
Size (in employees)	27.5	17.4	8	98
PS penetration (%)	35.1	16.1	5	67
Information exchange (7-point Likert scale)	5	1.1	1.7	6.7
Operational linkages (7-point Likert scale)	5.7	0.78	4.2	7
Cooperative norms (7-point Likert scale)	5.1	1.03	2.2	6.6
Legal bonds (7-point Likert scale)	5.5	0.7	4	7
Adaptations (7-point Likert scale)	5.6	0.78	3.75	7
Performance (based on composite consistent measure ranging from 1 to 5)	3.68	0.8	1.5	5

Additionally, Table 4-18 includes the correlations between the relationship dimensions, exogenous factors and service performance. Interestingly, the only factor that is correlated significantly with service performance is workshop size. Additionally, information exchange, cooperative norms and operational linkages are correlated with each other. Finally, the correlation coefficient between PS penetration and legal bonds is negative and significant. These points however do not have any implications for the conduct of the configurational analysis. As mentioned, configurational logic and fsQCA fundamentally switch the orientation of the inquiry from variable-centred to case-centred. In this way, and by utilizing fuzzy-set algebra, the integrity of each case is kept intact. Crucially then, correlation between variables does not necessarily imply set relation between sets of cases (Ragin 2008). This is further illustrated later when I present the results of the analysis.

Table 4-18: Pearson correlation coefficients (N=38)

	Size	PS penetration	Info exchange	Operational linkages	Cooperative norms	Legal bonds	Adaptations
Size	1						
PS penetration	0.037	1					
Info exchange	0.1869	- 0.014	1				
Operational linkages	0.0821	0.135	0.798***	1			
Cooperative norms	0.2354	- 0.0622	0.79***	0.683***	1		
Legal bonds	- 0.1381	- 0.381**	0.0527	0.0099	0.122	1	
Adaptations	- 0.0354	- 0.0552	0.2929*	0.2486	0.1762	0.1286	1
Service performance	0.42***	0.0961	0.1829	0.1707	0.0691	- 0.1964	0.2522
***: p < 0.01, **: p < 0.05, *: p < 0.1							

4.4.3.2 Measure calibration phase

The purpose of calibration is to assign to each observation a value signifying degree of membership in the fuzzy sets representing the conditions and the outcome. More on the concept and procedures of calibration can be found in the methodology section and in Ragin (2006; 2008) and Fiss (2011). Before proceeding, a few comments on the measures of the conditions (and the outcome) to be calibrated are in order. Firstly, for each of the five relationship connectors I use the summated scale scores. Secondly, for PS penetration and workshop size, I calibrate the objective figures (% of revenues coming from TrucksUK service contracts and number of employees, respectively) retrieved from TrucksUK and the workshops. Finally, as service performance I use the unweighted average of the quarterly composite score for each workshop since 2010³⁸.

Ragin (2008) posits that calibration should be based on theoretical and substantive knowledge or like in physical sciences, external and dependably known standards (e.g. the point the water starts boiling). Ideally, it should not entirely rely on the distributional properties of the data or on crude, intuitive anchors (such as calibrating a 7-point Likert scale by declaring 7 as full set membership and 1 as full non-membership). In my case, I have the advantage of having conducted three case-studies and several exploratory interviews at TrucksUK. Hence, the level of my external substantive knowledge for calibration purposes is adequate and outweighs my relative unfamiliarity with the remaining 35 case-relationships. By utilizing this knowledge and

³⁸ Instead of the average score since 2009 that was used for sampling workshops. I justify the decision in the relevant sub-section (calibration of performance).

the distributional properties of the measures, I proceed to the calibration phase³⁹. I start with the causal conditions and finish with the calibration of the outcome (service performance). Each respective sub-section begins with the frequency distribution of the measure. For workshop size; number of employees, for workshop PS penetration; percentage of revenues coming from service activity, for workshop performance; the average quarterly performance from the 1st quarter of 2010⁴⁰, for the relationship dimensions; the summated scores of each respective scale. In every figure, the x axis represents the value of the measure, and the y axis the number of cases. For the convenience of the reader, the position in the distribution of the three case-relationships is also noted. First measure to be calibrated is workshop size.

The set of large workshops

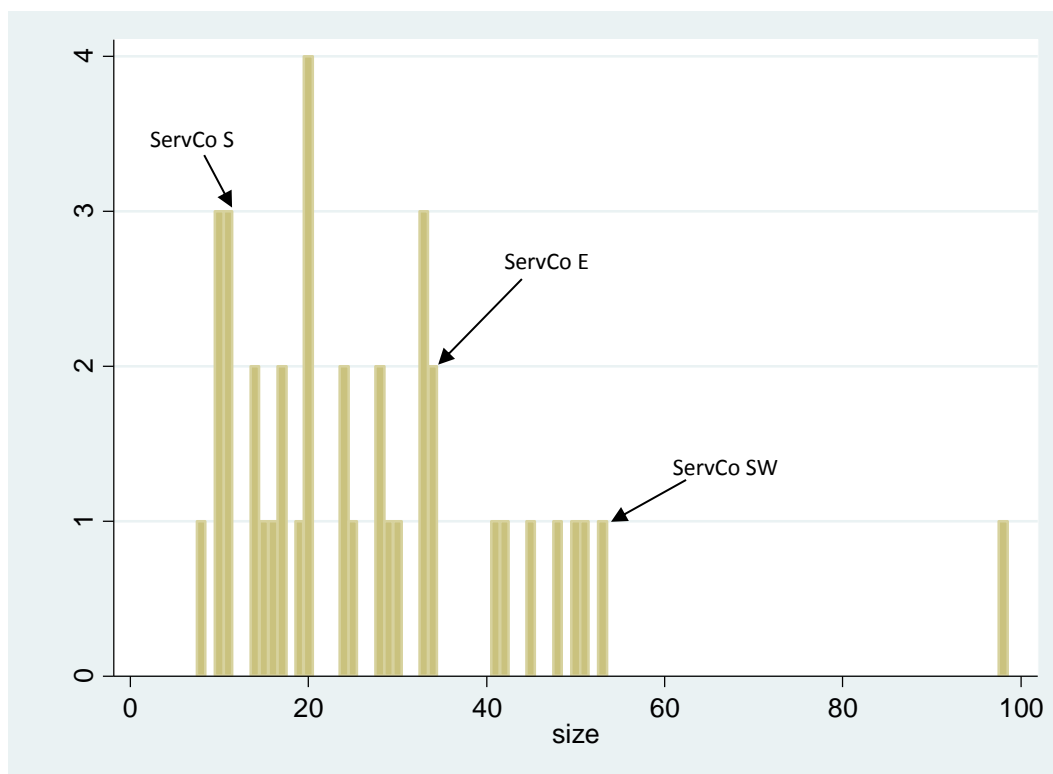


Figure 4-2: Distribution of workshop size

³⁹ All papers mentioned earlier use a mix of criteria to calibrate their measures. For example, Fiss (2011) calibrates his outcome variable (firm performance) based on theoretical knowledge. For the causal conditions measured on 7-point Likert scales though, he uses the points '1', '4' and '7' as 'qualitative' anchors signifying full non-membership, maximum ambiguity and full set membership respectively.

⁴⁰ As a reminder, this takes values from 0 to 5 (see section 3.5.1.1).

The fact that there is one workshop significantly bigger than the rest (it sells almost twice as many labour hours as any other workshop to TrucksUK) skews the distribution and would create problems if it were included in a regression (see Figure 4-2). For QCA this does not present a problem. This is because through my qualitative work I know that this extreme deviation from the sample mean is not relevant. As the TrucksUK CEO said, TrucksUK have small, medium and large sized workshops, and when the Head of Service was asked about large, high performing workshops, ServCo SW was amongst them. ServCo SW then is qualitatively 'large', and with its 53 employees it should have full membership to the set of large workshops. Similarly, ServCo S with its 11 employees and its family enterprise organizational structure should undoubtedly be fully out of this set. Because of the shape of the distribution of workshop size, I use the indirect method of calibration (Ragin 2008). As some cut-off points are obvious due to gaps in the distribution (e.g. there is no workshop with 12 or 13 employees), it seems intuitive to assign qualitative categories manually and subsequently estimate fuzzy degree of membership of each subject in the set of large workshops. So I assign values of:

- 0.00 ('out of the target set') to workshops with up to 11 employees;
- 0.20 ('mostly but not fully out of the set') to workshops with 14 to 17 employees;
- 0.40 ('more out than in') to workshops with 19 to 25 employees;
- 0.60 ('more in than out') to those with 28 to 34 employees;⁴¹
- 0.80 ('mostly but not fully in the set') to those with 41 to 48 employees, and finally;
- 1.00 ('in the target set') to those with 50 or more employees.

To estimate the degree of membership of each workshop to the set of 'large workshops' I use the STATA procedure suggested by Ragin (2008). It is based on a fractional logit model estimation, whose outcome is a fuzzy set score for each case, taking into consideration the manually assigned qualitative values and the real values of the continuous variable (in this case employee number). The membership scores for each workshop, together with number of employees and the manually assigned qualitative calibration score can be found in Table 4-19.

⁴¹ ServCo E has 34 employees and judging from the qualitative phase it is closer to ServCo SW than to ServCo S, hence, 'more in than out' of the set of large workshops.

Table 4-19: Calibration of workshop size

Workshop id	Employees	Calibration score	Fuzzy-set score
id_31	8	0	0.0009198
id_13	10	0	0.0130817
id_17	10	0	0.0130817
id_34	10	0	0.0130817
id_7	11	0	0.0293933
ServCo S	11	0	0.0293933
id_26	11	0	0.0293933
id_12	14	0.2	0.1216719
id_16	14	0.2	0.1216719
id_21	15	0.2	0.1605293
id_22	16	0.2	0.1999421
id_4	17	0.2	0.238524
id_35	17	0.2	0.238524
id_19	19	0.4	0.3102992
id_6	20	0.4	0.3429868
id_30	20	0.4	0.3429868
id_32	20	0.4	0.3429868
id_33	20	0.4	0.3429868
id_9	24	0.4	0.4547678
id_29	24	0.4	0.4547678
id_24	25	0.4	0.4790556
id_18	28	0.6	0.5464718
id_20	28	0.6	0.5464718
id_23	29	0.6	0.5676599
id_15	30	0.6	0.5884092
id_1	33	0.6	0.6487766
id_14	33	0.6	0.6487766
id_28	33	0.6	0.6487766
ServCo E	34	0.6	0.6684172
id_25	34	0.6	0.6684172
id_11	41	0.8	0.7983482
id_2	42	0.8	0.8152833
id_8	45	0.8	0.8622461
id_5	48	0.8	0.9022138
id_3	50	1	0.9244496
id_10	51	1	0.9342033
ServCo SW	53	1	0.9510339
id_27	98	1	1

The set of workshops with high PS penetration

Second to be calibrated is the Product-Service penetration. The distribution of the measure is presented in Figure 4-3.

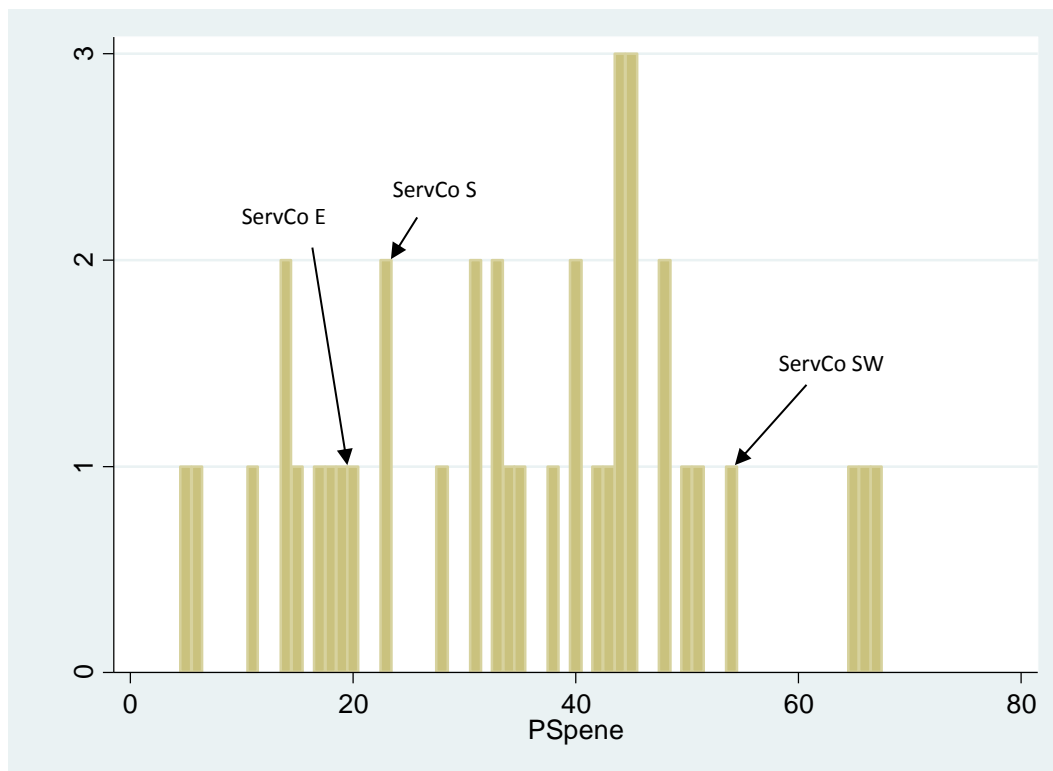


Figure 4-3: Distribution of PS penetration

I follow the indirect calibration method for determining the degree of membership in the set of 'workshops with high PS penetration'. TrucksUK consider any workshop with over 50% of its revenue coming directly from TrucksUK fixed-cost contracts and warranty to be significantly dependent on them. Additionally, they consider a 30% to 40% of PS penetration to be the average for their service partners' workshops. This is a good estimate and is reflected by the distribution of my sample (Figure 4-3), which has a mean of 35% and a median of 36.5%. In the first qualitative case, ServCo SW indicated how significant is the TrucksUK part of the business to them (54.1% in 2011), and emphasized how they strive to do well with the large contract and warranty workload to maximize their monetary bonus. The distribution however shows that three workshops have PS penetration that exceeds 60%, which indicates a clear cut-off point. Hence, I code ServCo SW as 'mostly but not fully in' the set instead of entirely in. The situation with ServCo E and ServCo S is quite similar. The respondents perceived

that their contract business is small (ServCo E: 19.3%, ServCo S: 23%) and there were even some individuals contemplating whether it is worth all the investment in time and money. Nevertheless, the distribution shows that PS penetration is actually considerably lower for other workshops. Hence, it makes more sense to categorize ServCo S and ServCo E as more out than in the set rather than entirely out. More specifically, and considering the cut-off points in the distribution, I proceed to the following coding scheme:

- 0.00 ('out of the target set') to workshops whose PS penetration was lower than 7%;
- 0.20 ('mostly but not fully out of the set') to workshops with 11% to 21% PS penetration (which includes ServCo E);
- 0.40 ('more out than in') to workshops with 23% to 34.1% PS penetration (which includes ServCo S);
- 0.60 ('more in than out') to those with 35% to 43% PS penetration;
- 0.80 ('mostly but not fully in the set') to those with 44% to 54.1% PS penetration (which includes ServCo SW), and finally;
- 1.00 ('in the target set') to the three workshops with over 60% PS penetration.

Fuzzy-set membership scores are estimated with the same STATA procedure (fractional logit model estimation) and can be found in Table 4-20, together with the qualitative scores and original percentages of PS penetration for each workshop.

Table 4-20: Calibration of PS penetration

Workshop id	Percentage score	Calibration score	Fuzzy-set score
id_1	5	0	0.0013138
id_33	6.2	0	0.0101261
id_34	11	0.2	0.1234945
id_14	13.7	0.2	0.1818175
id_23	14	0.2	0.1873315
id_32	17	0.2	0.2346275
id_29	17.8	0.2	0.2454751
ServCo E	19.3	0.2	0.2646408
id_5	19.75	0.2	0.2701831
id_18	21	0.2	0.2853003
id_31	23	0.4	0.3093081
ServCo S	23	0.4	0.3093081
id_12	28	0.4	0.3746666
id_35	31	0.4	0.4214612
id_2	31	0.4	0.4214612
id_7	33	0.4	0.4569596
id_30	33	0.4	0.4569596
id_28	34.1	0.4	0.4780822
id_3	35	0.6	0.4962225
id_27	38	0.6	0.5620557
id_10	40	0.6	0.6099112
id_22	40.3	0.6	0.6173002
id_17	41.5	0.6	0.6472519
id_25	43	0.6	0.68522
id_16	44	0.8	0.7105512
id_9	44	0.8	0.7105512
id_8	44	0.8	0.7105512
id_4	45	0.8	0.7356437
id_6	45	0.8	0.7356437
id_13	45.1	0.8	0.7381311
id_26	47.8	0.8	0.8027147
id_15	47.9	0.8	0.8049821
id_24	49.5	0.8	0.83966
id_11	50.5	0.8	0.8596204
ServCo SW	54.1	0.8	0.9188411
id_19	65.4	1	0.992871
id_20	66.3	1	0.9943917
id_21	67	1	0.9953686

The set of relationships with high information exchange

I continue with the calibration of the measures of the relationship dimensions, beginning with information exchange. Its frequency distribution demonstrated in Figure 4-4.

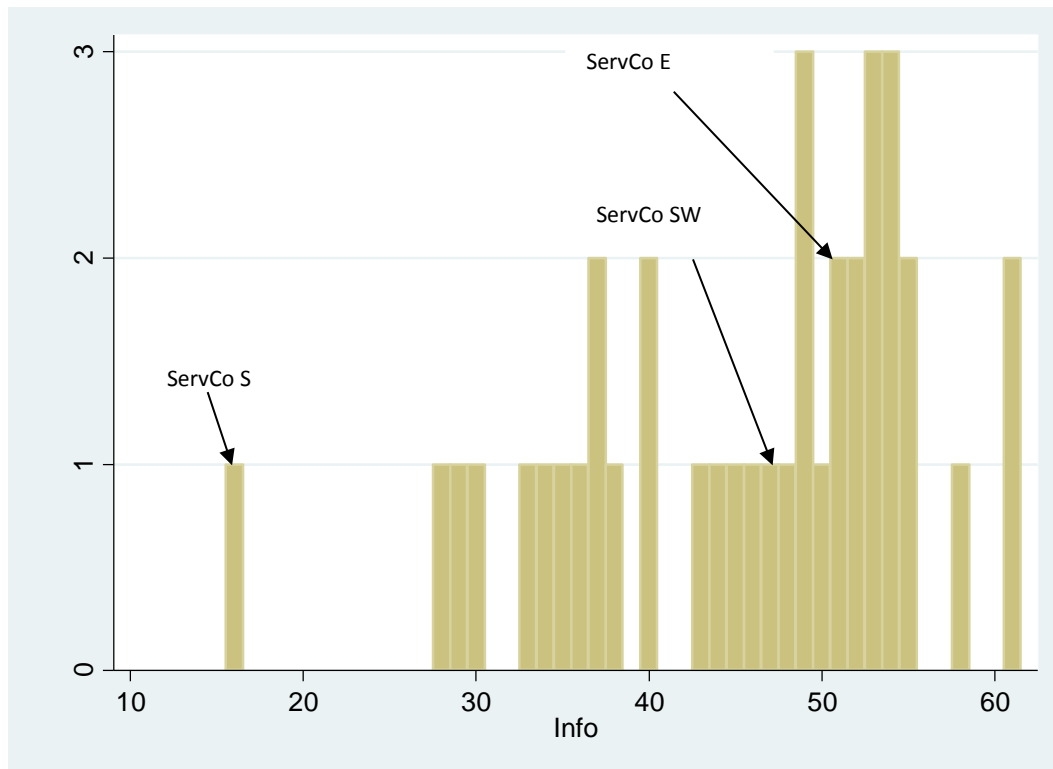


Figure 4-4: Distribution of information exchange

One can easily see in Figure 4-4 that the finding regarding low levels and quality of information sharing in the ServCo S case is reflected here as well. The case ranks comfortably last. Hence, it should definitely be out of the set of cases with high information sharing. With regard to the other two cases, the figure and Table 4-21 (in the end of this sub-section) show that ServCo SW has a summated score of 47 across the 9 items, while ServCo E gets 51. In effect, here I come up against the single respondent bias from which most survey research suffers. From ServCo SW it was the service operations manager who answered the questionnaire, while from ServCo E it was the workshop controller. The qualitative phase revealed that the opinions about information sharing in ServCo SW were homogenous (satisfactory with some particular concerns), while in ServCo E they were not. The significant deviation which forced me to rank the overall level and quality of information exchange relatively lower for the

ServCo E case was the views of the principal (who did not complete a questionnaire). He had specific and serious complaints about the communicativeness of high-rank TrucksUK personnel and the sales department overall. The type of information he was referring to however was predominantly of a strategic nature, not the day-to-day exchange. Because his opinion is not captured by the survey, and because most questions that remained after the reliability analysis are more likely to have captured the participants' views about the exchange of operational information, I get this incongruence between the two data collection methods. This is a limitation, but taking into consideration the two former points it is not counter-intuitive for the level and quality of exchange across the two cases to be considered similar. Thus, using the indirect method of calibration I give the same qualitative score for the two cases (0.60). Additionally, one can easily see that the distribution is skewed to the left (mean 45, median 48.5). Taking this into consideration, together with the obvious fact that most respondents hold a positive view about the level and quality of information exchange between their workshop and TrucksUK (else the mean and median would be closer to the average of 36 [9 items * 4 which is the mid-point of a 7-point Likert scale]) I proceed to the following coding scheme:

- 0.00 to ServCo S which has a sum of 16 (average response = 1.777);
- 0.20 to those with sums between 28 and 30 ($3.111 < \text{average response} < 3.444$);
- 0.40 to the cases with sums between 33 and 43 ($3.666 \leq \text{average response} \leq 4.777$);
- 0.60 to the cases with sums between 44 and 52 ($4.888 \leq \text{average response} < 5.777$);
- 0.80 to the cases with sums between 53 and 58 ($5.888 \leq \text{average response} \leq 6.444$);
- 1.00 to the three cases whose sum across the 9 items exceeds 58 (average response > 6.444).

Fuzzy-set membership scores are estimated with the same STATA procedure (fractional logit model estimation) and can be found in Table 4-21 underneath, together with the qualitative score and summated scale score for information exchange of each case-relationship.

Table 4-21: Calibration of information exchange

Workshop id	Scale score	Calibration score	Fuzzy-set score
ServCo S	16	0	0.0236024
id_24	28	0.2	0.2045864
id_3	29	0.2	0.2216922
id_4	30	0.2	0.2389608
id_9	33	0.4	0.2921991
id_17	34	0.4	0.3105911
id_22	35	0.4	0.3293903
id_23	36	0.4	0.3486428
id_33	37	0.4	0.3683896
id_30	37	0.4	0.3683896
id_31	38	0.4	0.3886648
id_7	40	0.4	0.4308919
id_20	40	0.4	0.4308919
id_29	43	0.4	0.4984688
id_27	44	0.6	0.5220395
id_32	45	0.6	0.5460517
id_11	46	0.6	0.5704312
ServCo SW	47	0.6	0.5950871
id_16	48	0.6	0.6199116
id_12	49	0.6	0.6447824
id_2	49	0.6	0.6447824
id_21	49	0.6	0.6447824
id_34	50	0.6	0.6695643
ServCo E	51	0.6	0.6941124
id_35	51	0.6	0.6941124
id_15	51	0.6	0.6941124
id_18	52	0.6	0.7182754
id_28	52	0.6	0.7182754
id_8	53	0.8	0.7419001
id_6	53	0.8	0.7419001
id_26	53	0.8	0.7419001
id_10	54	0.8	0.7648363
id_19	54	0.8	0.7648363
id_5	55	0.8	0.7869406
id_13	55	0.8	0.7869406
id_14	58	0.8	0.8470308
id_1	61	1	0.8960169
id_25	61	1	0.8960169

The set of relationships with high levels of operational integration

I continue with operational linkages. The distribution of the summated scale score is presented in Figure 4-5.

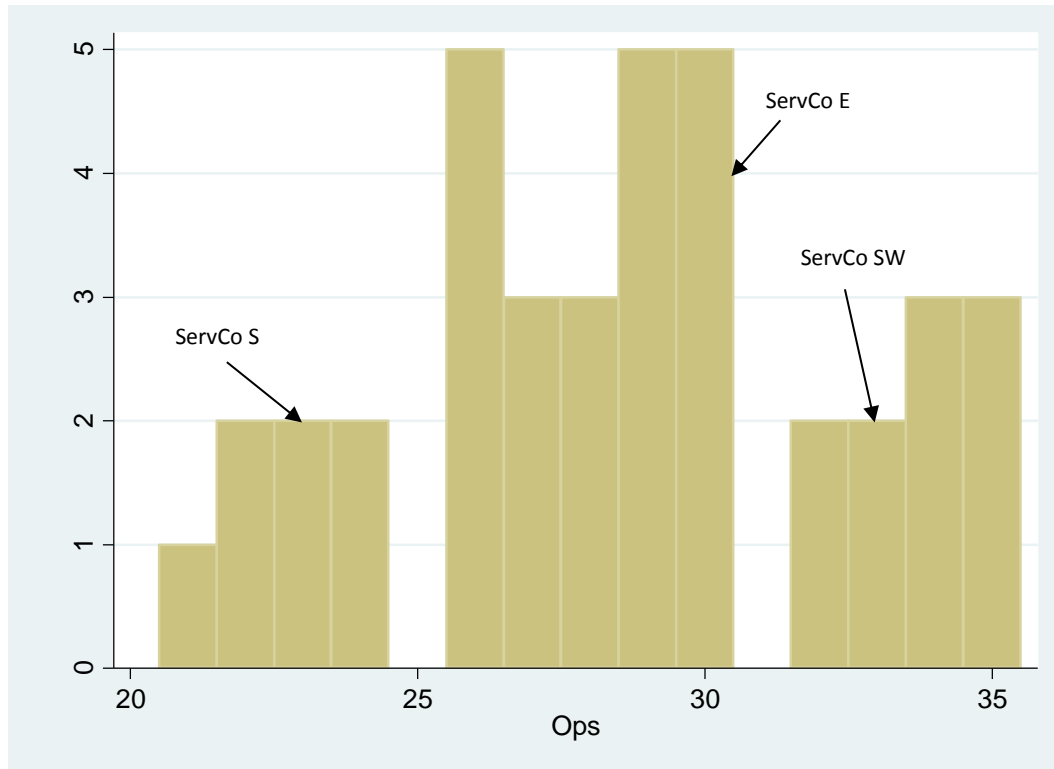


Figure 4-5: Distribution of operational linkages

The process here is less problematic than above. As indicated on the figure, the three cases rank as the qualitative results would predict: ServCo S has a score of 23 (average response of 4.6), ServCo E scores 29 (average of 5.8) and ServCo SW ranks highest with a score of 32 (average of 6.4). Also, the qualitative phase indicated that high levels of operational integration on average should be expected. This is because TrucksUK 'impose' a number of specific systems and processes on the workshops, and centrally encourage certain individuals to develop joint activities with individuals from the workshops. This is reflected here as the sample mean is 29 (an average of 5.8 on the 7-point Likert scale) and the minimum is 21 (an average of 4.2). This, I believe, should be transposed in the coding scheme. Accordingly, I decide not to code any case as fully out of the target set. The ServCo S relationship, which clearly showed relatively lower levels of operational linkages, will take a code of 0.2 with its summated score of 23. At the same time, the 32 of ServCo SW should indicate full or close to full set membership, while ServCo E's 29 should reflect 'more in than out' the target set.

Hence, with the substantive knowledge offered by the qualitative phase I apply the following scheme:

- 0.20 to the cases with summated scores between 21 and 24 (4.2 \leq average response \leq 4.8);
- 0.40 to the cases with scores between 26 and 27 (5.2 \leq average response \leq 5.4);
- 0.60 to the cases with scores between 28 and 29 (5.6 \leq average response \leq 5.8);
- 0.80 to the cases with scores between 30 and 33 (6 \leq average response \leq 6.6);
- to the cases with scores of 34 and 35 (6.8 \leq average response \leq 7);

For each case-relationship, fuzzy-set membership scores, qualitative scores and summated scale scores of operational linkages are included in Table 4-22.

Table 4-22: Calibration of operational linkages

Workshop id	Scale score	Calibration score	Fuzzy-set score
id_33	21	0.2	0.1638981
id_24	22	0.2	0.1883307
id_23	22	0.2	0.1883307
ServCo S	23	0.2	0.2198374
id_4	23	0.2	0.2198374
id_3	24	0.2	0.2602545
id_31	24	0.2	0.2602545
id_22	26	0.4	0.3753397
id_30	26	0.4	0.3753397
id_7	26	0.4	0.3753397
id_15	26	0.4	0.3753397
id_18	26	0.4	0.3753397
id_9	27	0.4	0.4521826
id_27	27	0.4	0.4521826
id_11	27	0.4	0.4521826
id_17	28	0.6	0.5403591
id_29	28	0.6	0.5403591
id_21	28	0.6	0.5403591
id_20	29	0.6	0.6350042
ServCo E	29	0.6	0.6350042
id_28	29	0.6	0.6350042
id_26	29	0.6	0.6350042
id_5	29	0.6	0.6350042
id_32	30	0.8	0.7283439
id_16	30	0.8	0.7283439
id_34	30	0.8	0.7283439
id_35	30	0.8	0.7283439
id_10	30	0.8	0.7283439
ServCo SW	32	0.8	0.8788767
id_2	32	0.8	0.8788767
id_12	33	0.8	0.9275414
id_8	33	0.8	0.9275414
id_6	34	1	0.9595695
id_19	34	1	0.9595695
id_14	34	1	0.9595695
id_13	35	1	0.9788827
id_1	35	1	0.9788827
id_25	35	1	0.9788827

The set of highly cooperative relationships

The distribution of cooperative norms and the position of the three qualitative case-relationships are presented in Figure 4-6.

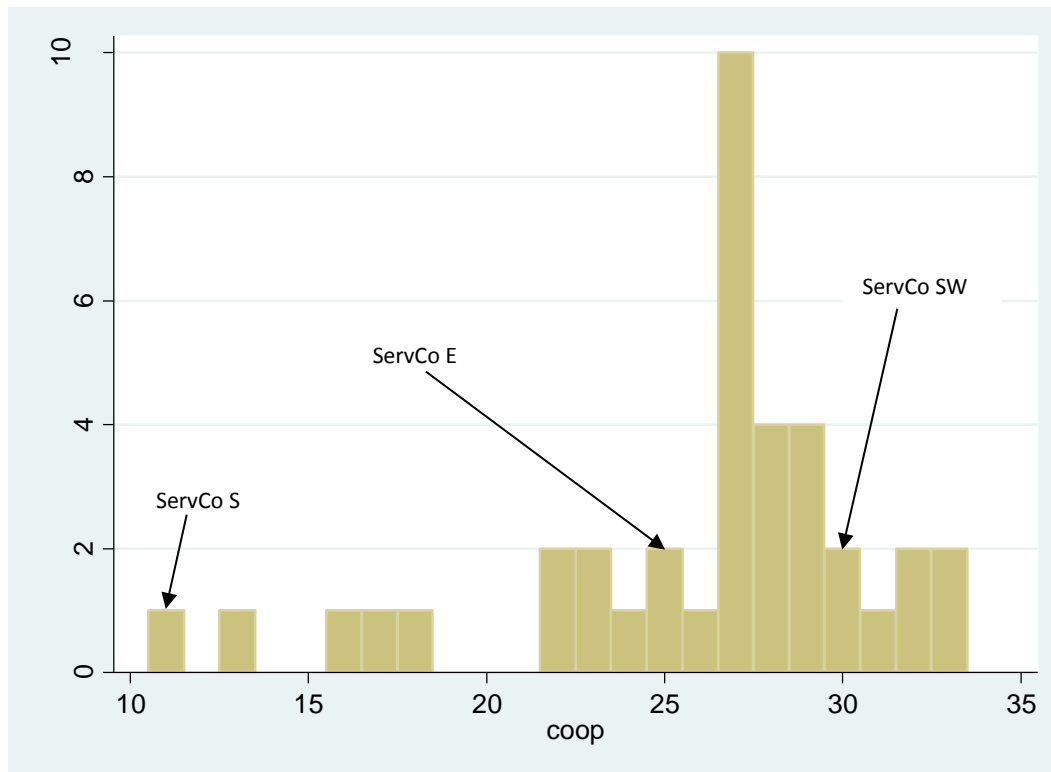


Figure 4-6: Distribution of cooperative norms

Decisions are relatively straightforward for this set. As seen in the figure, ServCo S ranks last with a summated scale score of 11 and will definitely be fully out of the target set. ServCo E gets a sum of 25, which resonates well with the findings of the qualitative phase. The relationship is not cooperative at every level, as there are serious complaints regarding certain issues and the behaviour of particular people from the TrucksUK HQs. ServCo SW is close to the maximum of 35 with a sum of 29. However, as one can see there are another seven relationships which appear to be more cooperative than the ServCo SW case. Hence, I suggest that ServCo SW should not have full membership to the target set. Instead, they should get a score of 0.8. In the same vein, ServCo E should be close to the 0.5 mid-point but probably only just below it. I give it a score of 0.40 and the coding scheme in total goes as follows:

- 0.00 for the two cases with summated scores below 15 (average response < 3);
- 0.20 for the cases with summated scores from 16 to 18 (3.2 ≤ average response ≤ 3.6);

- 0.40 for those with scores from 22 to 25 (4.4 =< average response =< 5)⁴²;
- 0.60 for those with scores 26 and 27 (5.2 =< average response =< 5.4);
- 0.80 for those with scores from 28 to 31 (5.6 =< average response =< 6.2);
- 1.00 for those with scores over 31 (average response > 6.2);

For each case-relationship, fuzzy-set membership scores, qualitative scores and summated scale scores of cooperative norms are presented in Table 4-23.

⁴² In reality, and as shown in the following table, I assign a qualitative score of 0.45 to the two workshops with a summative scale score of 25. This is in order to avoid the fuzzy-set membership to be exactly 0.50, which would be the case if the two workshops were assigned a code of 0.4.

Table 4-23: Calibration of cooperative norms

Workshop id	Scale score	Calibration score	Fuzzy-set score
ServCo S	11	0	0.0292578
id_22	13	0	0.0558046
id_24	16	0.2	0.1098893
id_3	17	0.2	0.1330947
id_4	18	0.2	0.1599177
id_30	22	0.4	0.3200665
id_9	22	0.4	0.3200665
id_23	23	0.4	0.3769835
id_31	23	0.4	0.3769835
id_15	24	0.4	0.4409496
id_7	25	0.45	0.5108345
ServCo E	25	0.45	0.5108345
id_18	26	0.6	0.584449
id_33	27	0.6	0.6586322
id_11	27	0.6	0.6586322
id_17	27	0.6	0.6586322
id_29	27	0.6	0.6586322
id_21	27	0.6	0.6586322
id_8	27	0.6	0.6586322
id_6	27	0.6	0.6586322
id_19	27	0.6	0.6586322
id_14	27	0.6	0.6586322
id_26	28	0.8	0.7296862
id_5	28	0.8	0.7296862
id_16	28	0.8	0.7296862
id_10	28	0.8	0.7296862
id_20	29	0.8	0.7940859
id_32	29	0.8	0.7940859
id_35	29	0.8	0.7940859
ServCo SW	29	0.8	0.7940859
id_13	29	0.8	0.7940859
id_28	30	0.8	0.8492126
id_34	30	0.8	0.8492126
id_27	31	0.8	0.8938072
id_12	32	1	0.9279863
id_25	32	1	0.9279863
id_2	33	1	0.9528998
id_1	33	1	0.9528998

The set of highly formalized relationships

Calibration continues with legal bonds. The empirical distribution of the scale scores and the relative positions of the three case-relationships are presented in Figure 4-7.

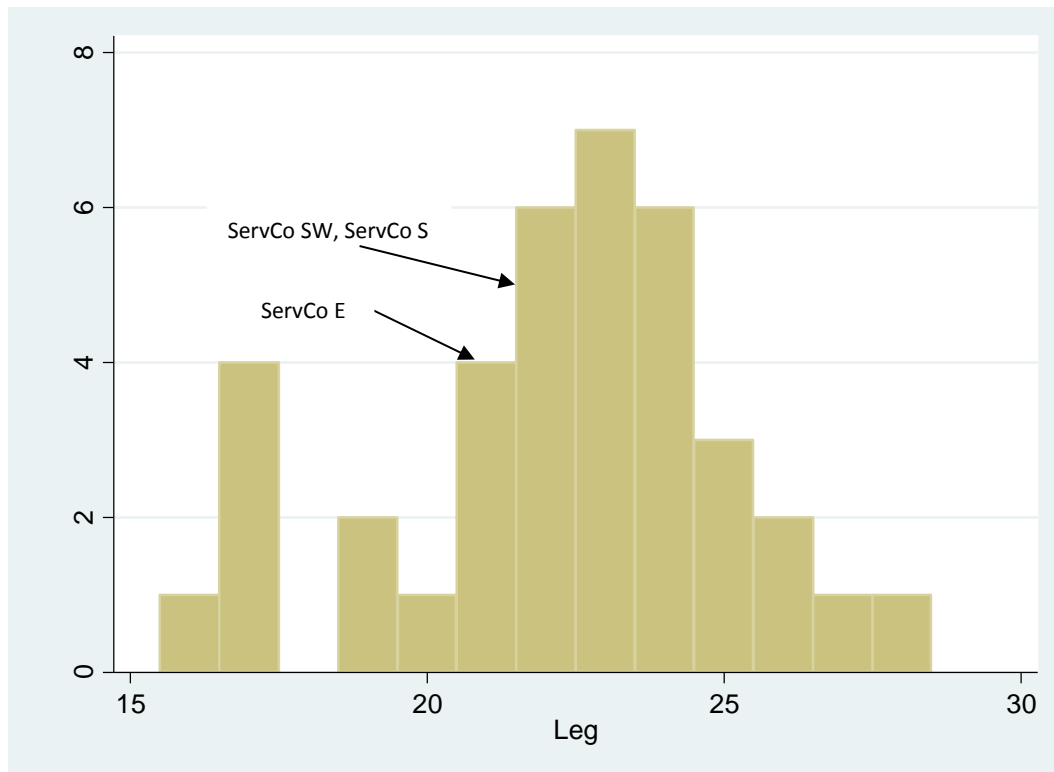


Figure 4-7: Distribution of legal bonds

Here I am confronted again with the single respondent bias like when calibrating the cases with high levels of information exchange. This is because the distinctions suggested by the comparisons during the qualitative analysis are not reflected in this instance. ServCo S and ServCo SW have a summated score of 22, while ServCo E gets 21. Hence, the resultant picture is in contrast to my suggestion that ServCo SW – TrucksUK is a relatively less formalized relationship (as the workshop respondents do not perceive to be hindered by the explicit rules, neither that TrucksUK are unnecessarily intolerant to deviations from the prescribed behaviours). Additionally, after reflecting upon the scales during the reliability analysis phase, I admitted that the items should have probably been worded in a better way and do not capture exactly what the qualitative inquiry captured for this dimension. For example, the item “In this workshop we adhere very closely to the terms and obligations specified in the legal contracts” captures the perception of the respondent about the workshop’s behaviour in the relationship. It does not tell us whether the respondent perceives the relationship as overly reliant (or not) on the explicit contracts. Also, the reverse-coded

item which attempted to grasp informal elements of the relationship was highly unreliable and was deleted.

Overall, because of the ambiguity of the situation I have decided to use the direct method for calibration⁴³ (see section 3.6.3.1) with 21 being the cross-over point (actually 20.5 so as to avoid the 0.5 degree of membership as Ragin [2008] suggests). This, apart from being the score of ServCo E, is also below the mean and median of the sample (22.1 and 22.5 respectively). Because the cross-over point is below the median, most relationships will have a fuzzy set score of over 0.5, which means that they will be closer to full inclusion to the target set of highly formalized relationships than full exclusion. This reflects the substantive knowledge gained from the qualitative work that TrucksUK are trying to keep their relationships very formalized by constantly introducing procedures and instructions to standardize processes and operations. Moreover, TrucksUK are actively trying to make the workshops act according to the rulebook in order to promote a standardized and consistent image across the country. Hence the three qualitative anchors will be:

- Threshold of full membership: the maximum sum of 28 (response of '7' across all four items);
- Cross-over point: 20.5 (average response = 5.1);
- Threshold of full non-membership: 16 (average response = 3.2).

For each case-relationship, fuzzy-set membership scores and summated scale scores of legal bonds are presented in Table 4-24.

⁴³ The direct calibration is simpler than the indirect, in the sense that only three qualitative anchors need to be specified: the point of full inclusion in the set (1.00), the point of full exclusion from the set (0.00) and the point of maximum ambiguity or cross-over point (0.50). It is the 'default' calibration method and is usually employed when the researcher is unsure or does not have enough in-depth substantive and theoretical knowledge of the situation in order to construct a coding scheme (i.e. indirect calibration method).

Table 4-24: Calibration of legal bonds

Workshop id	Scale score	Fuzzy-set score
id_3	16	0.05
id_4	17	0.09
id_28	17	0.09
id_8	17	0.09
id_25	17	0.09
id_6	19	0.27
id_19	19	0.27
id_11	20	0.42
id_23	21	0.55
id_21	21	0.55
ServCo E	21	0.55
id_26	21	0.55
ServCo S	22	0.65
id_30	22	0.65
id_27	22	0.65
id_17	22	0.65
id_16	22	0.65
id_35	22	0.65
ServCo SW	22	0.65
id_31	23	0.73
id_7	23	0.73
id_9	23	0.73
id_20	23	0.73
id_5	23	0.73
id_34	23	0.73
id_10	23	0.73
id_24	24	0.8
id_22	24	0.8
id_18	24	0.8
id_32	24	0.8
id_12	24	0.8
id_1	24	0.8
id_33	25	0.86
id_15	25	0.86
id_13	25	0.86
id_2	26	0.9
id_29	27	0.93
id_14	28	0.95

The set of cases with high relationship-specific adaptations by the workshop

The last candidate causal condition to be calibrated is relationship-specific adaptations. The empirical distribution of the summated scale score is shown in Figure 4-8.

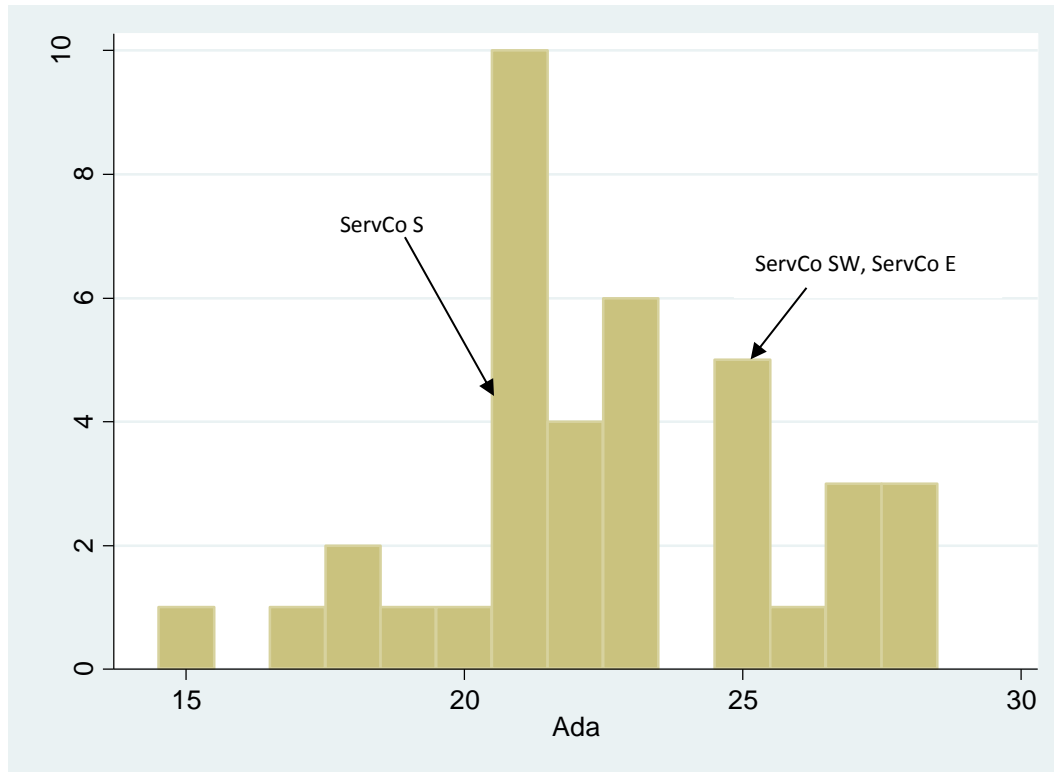


Figure 4-8: Distribution of relationship-specific adaptations

In terms of the three qualitative cases, ServCo SW and ServCo E show identical levels of adaptations (summated score of 25) corroborating what the case data suggested. ServCo S on the other hand lags slightly (summated score of 21 which is the sample mode) but this should have been expected considering the items that have remained after the reliability analysis. As a reminder, the item attempting to capture switching costs generally, and that referring to investments in training have been omitted. The remaining four refer to marketing strategy, infrastructure and opening hours. Hence, a score of 21 is logical because ServCo S have not significantly adapted their marketing strategy and opening hours for TrucksUK because firstly, they were never asked to, and secondly, they never needed to. But as the rich qualitative data analysis showed, all three workshops have in reality resorted to adaptations close to or even exceeding their means. Calibration of the measure should reflect this piece of substantive knowledge. Hence, if not in the same qualitative category, the scores 21 and 25 should at least be close to each other. So the coding scheme will be as follows:

- 0.00 to the case with a sum of 15 (average score = 3);
- 0.20 to those with sums of 17 and 18 (4.25 =< average score =< 3.6);
- 0.40 to those with sums of 19 and 20 (4.75 =< average score =< 5);
- 0.60 to those with sums between 21 and 23 (5.25 =< average score =< 5.75);
- 0.80 to those with sums of 25 and 26 (6.25 =< average score =< 6.5);
- 1.00 to cases with sums of 27 and 28 (6.75 =< average score =< 7).

Also, assigning a positive code to most cases reflects the theoretical knowledge that in servitized settings, relationship-specific adaptations are, to an extent, necessary. For each case-relationship, fuzzy-set membership scores, qualitative scores and summated scale scores of relationship-specific adaptations are presented in Table 4-25.

Table 4-25: Calibration of relationship-specific adaptations

Workshop id	Scale score	Calibration score	Fuzzy-set score
id_23	15	0	0.0758667
id_2	17	0.2	0.1750128
id_22	18	0.2	0.2445642
id_25	18	0.2	0.2445642
id_34	19	0.4	0.3265477
id_19	20	0.4	0.4182612
id_24	21	0.6	0.5152139
ServCo S	21	0.6	0.5152139
id_4	21	0.6	0.5152139
id_27	21	0.6	0.5152139
id_11	21	0.6	0.5152139
id_17	21	0.6	0.5152139
id_20	21	0.6	0.5152139
id_5	21	0.6	0.5152139
id_16	21	0.6	0.5152139
id_3	22	0.6	0.6116263
id_31	22	0.6	0.6116263
id_21	22	0.6	0.6116263
id_32	22	0.6	0.6116263
id_30	23	0.6	0.7015286
id_18	23	0.6	0.7015286
id_9	23	0.6	0.7015286
id_26	23	0.6	0.7015286
id_12	23	0.6	0.7015286
id_1	23	0.6	0.7015286
id_33	25	0.8	0.844505
id_15	25	0.8	0.844505
ServCo E	25	0.8	0.844505
id_10	25	0.8	0.844505
ServCo SW	25	0.8	0.844505
id_8	25	0.8	0.844505
id_7	26	0.8	0.8943153
id_29	27	1	0.9308054
id_35	27	1	0.9308054
id_13	27	1	0.9308054
id_28	28	1	0.9562733
id_6	28	1	0.9562733
id_14	28	1	0.9562733

The set of high performing workshops

The calibration phase ends with the performance measure. Due to the fact that the questionnaires were returned at the end of 2011, the responses reflect the beliefs of the participants about the current state of their relationship with TrucksUK. Thus, the performance measure to be used should be as recent as possible. For that reason I use the average performance in the years 2010 and 2011⁴⁴. The distribution of the composite measure and the positions of the three case-workshops on it can be found in Figure 4-9.

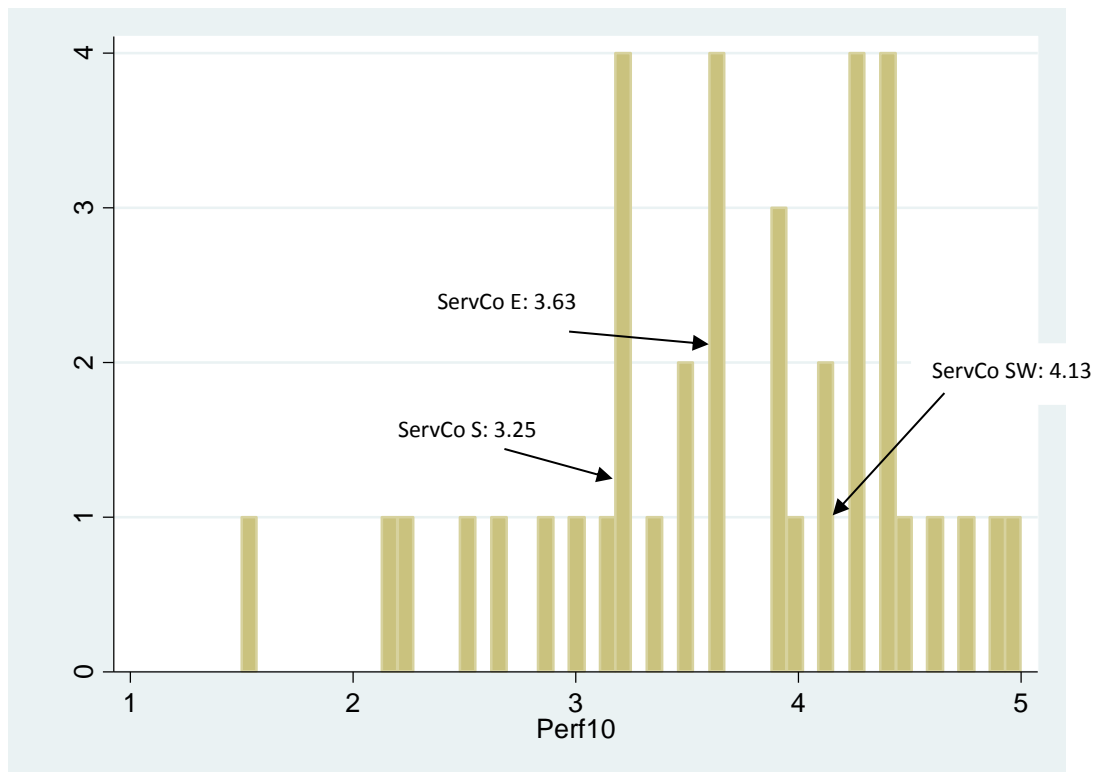


Figure 4-9: Distribution of performance

There is much substantive knowledge coming from the exploratory interviews at TrucksUK and the three case-studies regarding the performance of the service network as a whole, and the different workshops in particular. It is a fact that the quality and consistency of the service has been continuously improving since the introduction of the bonus scheme in 2006. This is reflected through objective numbers (e.g. the average MOT pass rate) and the views that customers share with TrucksUK. Additionally, several TrucksUK individuals admitted that the independent workshops of service partners do better on average than the wholly owned ones. This means that

⁴⁴ Performance since 2010 is correlated positively and significantly with performance since 2009, which was used for case sampling (Pearson correlation coefficient 0.965).

most workshops in my sample (which intentionally consists of independent workshops solely) should be regarded as at least moderately performing. Hence, they should be more in than out of the target set of high performing workshops. The three case-studies also help to design the coding scheme. ServCo E's performance has been improving in the last years, yet it is still not considered to be a top performing workshop. Furthermore, there has been a blip in performance in 2011, due to the decrease in information exchange between the workshop and TrucksUK (as discussed in 4.2.2). Nevertheless, as the qualitative phase revealed, the workshop has been performing better than some high-rank TrucksUK individuals perceive. The TrucksUK regional manager's account proves this. In effect, whether or not it performs well is ambiguous and the diverging opinions within TrucksUK, together with the fact that amongst all workshops in the network its performance since 2009 is the sample mean, support this. Thus, its score of 3.63/5 can provide the cross-over point in a direct calibration method. More explicitly:

- Threshold of full membership in the set is 4.80/5 to include the two workshops which have won 2011 'dealer of the year' awards;
- Threshold of full non-membership is 2.25 to include the three independent workshops with the worst performance since 2010, which were actually suggested by TrucksUK to be approached in the qualitative phase (but in the end did not agree to participate);
- Cross-over point is set a tiny bit below the 3.63 score of ServCo E (3.575).

For each case-relationship, fuzzy-set membership scores and objective scores (based on the composite measure) of workshop performance are presented in Table 4-26.

Table 4-26: Calibration of workshop performance

Workshop id	Performance score (since 2010)	Fuzzy-set score
id_34	1.5	0.01
id_22	2.13	0.04
id_33	2.25	0.05
id_12	2.5	0.08
id_21	2.63	0.11
id_18	2.88	0.17
id_20	3	0.21
id_16	3.13	0.27
ServCo S	3.25	0.32
id_7	3.25	0.32
id_35	3.25	0.32
id_2	3.25	0.32
id_5	3.38	0.39
id_24	3.5	0.46
id_19	3.5	0.46
id_9	3.63	0.53
id_17	3.63	0.53
ServCo E	3.63	0.53
id_28	3.63	0.53
id_29	3.88	0.68
id_32	3.88	0.68
id_6	3.88	0.68
id_25	4	0.74
id_23	4.13	0.8
ServCo SW	4.13	0.8
id_4	4.25	0.84
id_3	4.25	0.84
id_31	4.25	0.84
id_26	4.25	0.84
id_30	4.38	0.88
id_11	4.38	0.88
id_14	4.38	0.88
id_13	4.38	0.88
id_27	4.5	0.91
id_15	4.63	0.93
id_8	4.75	0.95
id_10	4.88	0.96
id_1	5	0.97

4.4.3.3 *Results of the configurational analysis*

Running the standard analysis on the fsQCA software produces a 'Truth Table' where 25 of the 128 possible configurations appear empirically. Considering that my sample size is 38 one can conclude that the different TrucksUK – workshop relationships are indeed diverse in terms of the five connectors and the two exogenous variables. Abiding by Ragin (2008), and to account for at least 75% of the sample, I decide to use the frequency threshold of 1 (hence all cases are retained for the subsequent analysis).

Sorting the configurations according to descending consistency produces the following picture (Table 4-27). The consistencies appear large in absolute values because the calibrated performance measure is naturally high so as to reflect the substantive knowledge (that most workshops should be considered as at least moderate performers). To distinguish the truly consistent configurations one should look at sudden gaps in consistency (Ragin 2008). There are three apparent decreases in this case, as indicated in the table (see last column). There is one after the 0.93 mark, one after 0.895 and a third one after 0.865. Having established this, the next step is to choose one of the consistency thresholds based on one of the three cut-off points. Using the first cut-off point seems to be strict as it will leave out configurations with consistency scores over 0.90 (generally acceptable according to other QCA papers). On the other hand, using the cut-off point of 0.895 seems to be a reasonable decision. This is because 17 out of the 38 workshops are kept as high performing ones, which intuitively resonates with the insight from the qualitative phase. Additionally, the decision is in accordance to decisions taken by the authors of other works in the management discipline that used fsQCA (e.g. Fiss 2011; Meuer 2011). I proceed with this, and as demanded by the software I specify the configurations that consistently lead to high workshop service performance with '1'. The rest are marked zero (see Table 4-27).

Table 4-27: Frequencies and consistency scores of configurations

Frequency	Performance	raw consistency
1	1	0.970951
1	1	0.969359
1	1	0.96848
1	1	0.964123
1	1	0.939133
1	1	0.937961
2	1	0.937186
1	1	0.93648
4	1	0.930126
1	1	0.918362
1	1	0.912102
1	1	0.906177
1	1	0.895098
2	0	0.875418
1	0	0.875402
1	0	0.873521
1	0	0.86895
1	0	0.865635
1	0	0.843853
3	0	0.83391
1	0	0.825039
4	0	0.816013
2	0	0.815036
3	0	0.811832
1	0	0.800908

The next step is to specify the simplifying assumptions for the logical reminders⁴⁵, in order for the intermediate solution to be computed. This requires the researcher to impose their subjective opinion (informed by theoretical and substantive knowledge) regarding whether the presence of each of the conditions could be assumed to have a positive, negative or ‘neutral’ association with the outcome. Based on theoretical and substantive knowledge it can be claimed that every causal condition in this instance, apart from legal bonds, will somehow be positively linked to the service performance of the workshop towards the provider’s customer base. Regarding legal bonds, the evidence is inconclusive; hence it is set to be neither positively nor negatively linked to the outcome (‘neutral’). After applying these assumptions for the calculation of the

⁴⁵ i.e. all $128 - 25 = 103$ possible configurations of causal conditions that do not appear empirically in the sample of 38 case-relationships (see section 3.6.3.1 and Ragin 2008).

intermediate solution, the fsQCA software presents, firstly, the parsimonious solution, and then, the intermediate one. I copy and paste the output directly. Note that ‘*’ signifies set intersection (the Boolean AND), and ‘~’ signifies set negation (the Boolean NOT). Hence, ‘size * information exchange ~ legal bonds’ would signify a configuration of high workshop size, high information exchange and *not* high legal bonds. For the sake of brevity, in the solutions presented below, SIZE refers to workshop size, PS PENE refers to Product-Service penetration, OP LINKS refers to operational linkages, ADAPTATIONS refers to relationship-specific adaptations, COOP NORMS refers to cooperative norms, LEG BONDS refers to legal bonds, and INFO EXCH refers to information exchange.

--- PARSIMONIOUS SOLUTION ---
 Frequency cutoff: 1.000000
 Consistency cutoff: 0.895098

	raw coverage	unique coverage	consistency
~LEG BONDS * ADAPTATIONS	0.497700	0.122202	0.868498
SIZE * OP LINKS * ADAPTATIONS	0.506502	0.058109	0.896897
SIZE * PS PENE	0.493414	0.045826	0.918550
SIZE * ~COOP NORMS	0.390463	0.028142	0.913826

solution coverage: 0.749020
solution consistency: 0.851751

The consistency and coverage scores of the solution are very satisfactory and comfortably conform to the suggested guidelines of Ragin (2008)⁴⁶. Four core configurations leading to high workshop performance have been revealed and are detailed next. This is also known as *first-order equifinality* (Ragin 2000; Meuer 2011):

- 1) High relationship-specific adaptations by the workshop combined with the negation of the set of highly formalized relationships;
- 2) Large workshops with high relationship-specific adaptations and high operational integration with the provider;
- 3) Large workshops with high PS penetration;
- 4) Large workshops whose relationship is not cooperative.

⁴⁶ Consistency should be above 0.75. Coverage is secondary and it should be over 0.50 preferably.

I continue with the presentation of the intermediate solution which is regarded as more interpretable because it includes the peripheral (contributing) conditions. The solution, as produced by the software, is presented underneath. The output also includes the simplifying assumptions. As discussed, all conditions apart from legal bonds are assumed, one way or the other, to enhance the outcome of interest (high service performance). The construct of legal bonds was set as 'neutral'.

--- INTERMEDIATE SOLUTION ---

frequency cutoff: 1.000000
 consistency cutoff: 0.895098
 Assumptions:
 fzpred_ada (present)
 fzpred_coop (present)
 fzpred_ops (present)
 fzpred_info (present)
 fzpred_ps (present)
 fzpred_size (present)

	raw coverage	unique coverage	consistency
ADAPTATIONS * ~LEG BONDS * PS PENE	0.463678	0.121707	0.910696
ADAPTATIONS * ~LEG BONDS * SIZE	0.375498	0.010079	0.936146
ADAPTATIONS * OP LINKS * INFO EXCH * SIZE	0.482838	0.058109	0.902321
ADAPTATIONS * OP LINKS * PS PENE * SIZE	0.406575	0.009474	0.924300
ADAPTATIONS * INFO * PS PENE * SIZE	0.404949	0.004271	0.936750
~LEG BONDS * COOP NORMS * OP LINKS * INFO EXCH * PS PENE * SIZE	0.335490	0.019596	0.973036
LEG BONDS * ~COOP NORMS * SIZE	0.326663	0.028695	0.901787

solution coverage: 0.715192
solution consistency: 0.878067

The intermediate solution produced seven different configurations which are listed below. Three of the configurations from the parsimonious solution have neutral permutations, i.e. the alternative contributing conditions produce different configurations that lead to the same outcome (*second-order equifinality*):

- 1) High relationship-specific adaptations by the workshop combined with the negation of the set of highly formalized relationships are facilitated by *either* high size *or* high PS penetration.
- 2) Large workshops with high relationship-specific adaptations and high operational integration are combined with *either* high information exchange *or* high PS penetration (the unique empirical coverage of the latter though being particularly small).
- 3) The configuration of large workshops with high PS penetration has two mutual permutations, both with the addition of aspects reflecting relationality. In the first instance, high adaptations and high information sharing are added (but empirical

unique coverage is really small), while in the second, the contributing conditions of high information sharing, high operational linkages and low formalization are included.

4) The fourth configuration (Large workshops whose relationship is not cooperative) is supplemented with the contributing condition of high formalization.

I continue this section with the discussion of the results. There is also reference to whether the hypotheses constructed earlier are supported or not.

4.4.3.4 Discussion of the results

Table 4-28 below presents the configurations of relationship dimensions and exogenous factors that, according to fsQCA, lead to high service performance of the partner. The table follows the format used by Ragin (2008), Fiss (2011) and Meuer (2011). The table captures both first- and second-order equifinality: Configurations 1, 2 and 3 from the parsimonious solution have mutual permutations, which are indicated in the table with the subscripts *a* and *b*.

Table 4-28: Emerging configurations enhancing service performance

CONFIGURATION	1a	1b	2a	2b	3a	3b	4
CAUSAL CONDITION							
Info exchange			●		●		●
Oper linkages			●	●			●
Coop norms							○
Legal bonds	○	○				○	●
Rel adapt	●	●	●	●	●		
Workshop size	●		●	●	●	●	●
PS penetr		●		●	●	●	
Consistency	93.6%	91%	90%	92.4%	93.6	97.3%	90%
Raw coverage	37.5%	46.3%	48.2%	40%	40%	33.5%	32.6%
Unique coverage	1%	12.1%	5.8%	0.9%	0.4%	1.9%	2.8%
● : core causal condition present; ○ : core causal condition absent ● : contributing casual condition present; ○ : contributing casual condition absent							

In terms of the hypotheses constructed earlier, the results suggest that there are indeed different configurations leading to the same outcome of high service

performance (equifinality), supporting *H1*. A variable-oriented empirical enquiry based on commonly used statistical methods (e.g. regression analysis) would be unable to detect such configurations. This is because such methods treat variables as competing explanations of the phenomenon. By keeping the integrity of cases and preserving each one's intrinsic characteristics, fsQCA can offer additional insight as it is the case here. Additionally, even though it does not go in such depth as thick qualitative inquiry, its advantage is that it can systematically handle relatively larger numbers of cases. Hence, it can produce more robust and generalizable typologies.

H2 is also supported. The emerging configurations resemble relational relationships rather than transactional ones (apart from configuration 4 which is discussed herein). A few explicative comments on each configuration will make this clear. Embedded in what follows is also the evidence in support of *H3*. The last paragraph of the section is devoted to testing *H4*.

The first configuration indicates that not highly formalized relationships where the partner has invested highly in adaptations can sufficiently elicit superior performance. The two contributing conditions that produce the neutral permutations include high PS penetration (1b) and high size (1a). What this effectively means is that a relationship characterized by high relationship-specific adaptations and relatively low levels of perceived reliance on the explicit rules enhances service performance. Size or high PS penetration facilitate the effect. The unique coverage of the latter neutral permutation though is very small (1%), which means that its empirical presence is minimal. Hence, it should not be considered important.

The second configuration states that relationships between TrucksUK and large workshops characterized by high operational integration and high relationship specific adaptations lead to superior service performance. The causal relationship is facilitated by another aspect of relationality; high information exchange (2a). It can also be facilitated by high PS penetration (second-order equifinality) but the unique coverage of this is very small (0.9%).

Interestingly, the core conditions in the third configuration are high size and high PS penetration. This means that the two are sufficient for high performance, signifying the tremendous importance of the previously discussed exogenous factors. The configuration is facilitated by high cooperativeness, operational integration and

information exchange, and low perceived formalization (3b)⁴⁷. All these are characteristics of relational relationships providing support for *H2*.

In sum, the discovered configurations resemble relational rather than transactional relationships. However, the five connectors combine in different ways to enhance performance, indicating that a unidimensional relationalism construct that encompasses all five is a strong assumption (as Cannon & Perreault [1999] argued).

The fourth configuration is contrary to what someone would expect. It states that large workshops whose relationship with TrucksUK is uncooperative and highly formalized can still perform well. This intriguing result has important implications and is more extensively discussed in the discussion chapter that follows. In short, it means that size is such a strong causal factor that it is able to offset the implications of a non-cooperative relationship and lead to high performance. In other words, a relational relationship may not be a panacea for high service performance if the context is such that the former's 'benefits' are not being missed. Considering this in addition to what configurations 2 and 3 indicate, it can be said that *H3* is also supported; size and PS penetration (the micro-level context of each relationship) are significant causal factors and can play a major role in enhancing the performance of the workshop.

Testing H4; the case of causal asymmetry

To identify which configurations of conditions lead to low performance, I re-run the fsQCA analysis with the negation of the set of high performing workshops as the outcome of interest. The causal conditions remain the same, and in terms of simplifying assumptions I deem the negated sets of cases with high information exchange, operational integration, cooperativeness, relationship-adaptations and size, to positively affect the outcome (i.e. not high performance). Again I specify legal bonds as 'neutral' together with PS penetration⁴⁸. For the sake of brevity and because this particular part of the analysis has a supplementary character, I go straight into the presentation of the results, accompanied with a brief discussion. It is noteworthy that consistency scores were considerably lower in this instance, and a cut-off point of 0.83 was used.

⁴⁷ The neutral permutation that includes high information exchange and high relationship-specific adaptations (3a), has a unique coverage of only 0.4%, which makes it unworthy of further commentary.

⁴⁸ The latter is because, although the qualitative work suggested that PS penetration indirectly increases performance, it did not suggest that low PS penetration would necessarily be associated with low workshop performance.

--- PARSIMONIOUS SOLUTION ---
 frequency cutoff: 1.000000
 consistency cutoff: 0.831889

	raw coverage	unique coverage	consistency
	-----	-----	-----
~ADAPTATIONS * ~SIZE	0.518205	0.033555	0.821114
~INFO EXCH * ~SIZE	0.614310	0.094983	0.745874
~LEG BONDS * ~SIZE	0.460911	0.016056	0.752823

solution coverage: 0.694098
solution consistency: 0.722166

--- INTERMEDIATE SOLUTION ---
 frequency cutoff: 1.000000
 consistency cutoff: 0.831889
 Assumptions:
 ~fzpred_size (absent)
 ~fzpred_ada (absent)
 ~fzpred_info (absent)
 ~fzpred_ops (absent)
 ~fzpred_coop (absent)

	raw coverage	unique coverage	consistency
	-----	-----	-----
~SIZE * LEG BONDS * ~INFO EXCH	0.594074	0.151417	0.798935
~SIZE * LEG BONDS * ~ADAPTATIONS * ~PS PENE	0.356392	0.021977	0.831177
~SIZE * ~LEG BONDS * PS PENE	0.434926	0.063067	0.776511

solution coverage: 0.679118
solution consistency: 0.734645

It is easy to see that the solution consists of configurations which are not symmetric opposites of the configurations enhancing service performance⁴⁹. This means that there is causal asymmetry, supporting the exploratory hypothesis *H4*. A variable-oriented approach based on methods consistent with correlational logic, (e.g. multiple regression analysis) is inherently unable to deal with causal asymmetry, because of the implicit assumption embedded in the statistical procedures that the variables are competing explanations of the phenomenon. fsQCA however can.

More specifically on the substantive results, the significant effect of size is again strongly demonstrated. All three configurations impeding performance have the negation of the set of large workshops as a core condition. Low information sharing on the one hand, and low relationship-specific adaptations on the other (both aspects of non-relationality), are combined with small size to impede service performance. High

⁴⁹ A symmetric opposite, for example, would be (for configuration 1 of the parsimonious solution for high performance), small workshop with 'not high' adaptations and 'not high' operational linkages.

formalization 'facilitates' the effect in both instances. In short, small workshops with non-relational relationships with TrucksUK are very likely to underperform. ServCo S is a representative case.

Interestingly, the third configuration includes low formalization and high PS penetration as additional conditions. Namely, small workshops with high PS penetration who perceive their relationship as not formalized tend to underperform. This means that low formalization does not necessarily exert a positive or negative influence on the service performance of the partner towards the provider's customer-base. In this case, the performance of a small workshop with constrained resources and limited professionalism may be further impeded by a lax relationship. Possibly, a higher level of formalization would act beneficially for its service performance.

4.4.4 Summary of the configurational analysis

In summary, the results of the configurational analysis show two things:

1) There are different, equifinal configurations leading to high performance. Relationship characteristics are indeed important (crudely put: the more relational the relationship the more likely the workshop is to perform well) but are significantly affected by the micro-level context factors (size and PS penetration). This means that in instances, workshops can perform well even if their relationship with the provider is not relational.

2) As Cannon and Perreault (1999) argued and proved, there is no reason to expect the different relationship dimensions to necessarily correlate with each other reflecting a unidimensional construct of relationalism. Characterizing relationships as relational or transactional is intuitively appealing, but systematic, fine-grained empirical inquiry shows that it is possible that alternative configurations exist where the relationship dimensions exhibit different levels.

In the next chapter the implications of the results of the two phases are combined and discussed further with reference to the extant literature.

4.5 Summary of the chapter

This chapter presented the combined qualitative and quantitative results of the research. It began with the within-case analysis of the three TrucksUK – workshop relationships. It continued with a cross-case comparison based on the five relationship connectors, which demonstrated that the three case-relationships have significantly different profiles. The comparison also indicated that the more relational the relationship the higher the service performance of the workshop. It also suggested that the five relationship dimensions affect one another and are dependent on two exogenous, contextual factors. To answer the first research question I embarked on uncovering this complex interplay between the different elements, and capturing it in a model. The latter provides a nuanced picture of how the relationships dimensions affect the service performance of the partner.

The insight gained led to the construction of four hypotheses to guide the configurational analysis. fsQCA produced four equifinal configurations enhancing service performance, which, in their majority, resemble relational relationships where the two exogenous factors have a significant role. The configurations were presented and briefly discussed. In the next chapter, I bring the results of the two phases together when discussing them in connection to the relevant literature that informed the research in the first place.

5 DISCUSSION

5.1 Overview

This chapter discusses the findings and links them to the three literature areas that informed the research. Firstly, the Buyer – Supplier research stream that examines relational influences on performance, secondly, the servitization literature, and thirdly, the emerging literature on triads.

5.2 Research findings and the phenomenon of relational influences on performance

The outcome of my research should necessarily be linked to the BS relationships research strand investigating relational influences on performance, but always bearing in mind the unique nature of the performance I have been looking at. As discussed in section 2.3.3.1, this vast stream of research has been concerned with the performance of the actors within the (dyadic) relationship exclusively, their overall financial performance, or concepts such as exchange or relationship performance (e.g. Anderson & Narus 1990; Carr & Pearson 1999; Krause et al. 2007; Lawson et al. 2008). The specific influence of a focal dyadic relationship on a type of performance pertinent to triadic interaction (i.e. the performance of one actor towards a certain third directly connected to the two focal exchange parties) has not been investigated in this strand of research. This is because the triad has not been used as the unit of reference.

From a high level, the substantive results of the fsQCA (i.e. different configurations leading to the same outcome) show that variable-oriented relationships based on correlational thinking can be supplemented by the additional insight provided by configurational methods (e.g. Flynn et al. 2010). As my work shows, the assumptions embedded in the statistical techniques commonly used in this research strand, do not always allow the identification of seemingly counter-intuitive (but interpretable) causal recipes. fsQCA, by preserving the integrity of each case, focuses on *configurations* of conditions that bring about the outcome of interest. The logic is fundamentally different than that of techniques based on correlation, where the implicit assumption is that a number of independent variables essentially ‘compete’ to better explain the dependent one (e.g. Ragin 2008). In contrast, set-theoretical relationships are asymmetric in nature, so fsQCA can identify causal recipes such as configuration 4. What the latter says is that low levels of cooperation may characterize relationships

between the provider and large workshops, but contrary to what one would expect, these workshops can perform highly. The interpretation of this was briefly discussed in section 4.4.3.4 and is also touched upon below. The implication at a conceptual level though is that the correlation between cooperation and performance is undermined by such cases, which shows the value of configurational thinking and fsQCA specifically.

At the same time, fsQCA can help enrich the insight gained by qualitative inquiry. As I show here, the in-depth, thick description of a phenomenon based on a handful of cases can be supplemented by a data analysis technique that can handle a greater number of cases in a systematic manner. Without breaking away from the data-centred, case-oriented thinking of pure qualitative analysis, fsQCA can illuminate further the emergent relationships between constructs.

In light of this, I start the discussion with the role of each relationship dimension and exogenous factor in the service performance of the partner towards the provider's customer base. Embedded in this is a discussion of aspects of the causal ordering suggested by the model.

5.2.1 Size

My research shows that firm size has an immensely important role to play. Size is very often used as a control variable in IOR and BS relationships research (e.g. Krause et al. 2007; Poppo & Zenger 2002) because it may reflect *“scale and scope economies, market power aspirations, and the ability to aggregate inputs”* (Anderson & Schmittlein, 1984 p. 388). It may also reflect higher bargaining power of one exchange party over the other (Heide & John 1988; Poppo et al. 2008). So size effects are often identified in the relevant literature (e.g. Carr & Pearson 1999; Heide et al. 2007). However, it is noteworthy that in most settings in which such research has taken place, the number of employees in the sample ranges from a few dozens to thousands. In my work it only ranges from 8 to 98, nonetheless, it still turns out to be a salient force that affects the different relationship dimensions and eventually the service performance of the partner. This is reasonable. The qualitative work showed that there is a stark contrast between the way of operation of ServCo S on the one hand, and ServCo E and ServCo SW on the other. ServCo S is a family business while the other two are professional servicers that belong to holding groups which compete nationwide. They, as well as other big workshops, are firms with an evident organizational hierarchy and distinct functions (e.g. human resources, accounting department), whose directors

report to a board which may report to investors or shareholders. Moreover, they may run their own internal bonus schemes and customer satisfaction surveys (the case of ServCo SW). This may effectively compel the workshops to perform satisfactorily and according to TrucksUK's and TruckUK's customers' desires, no matter what the state of the relationship with them is. Consequently, at times it seems that the implications of a transactional relationship can be offset, or may simply be irrelevant for the workshop's performance. This I believe is why configuration 4 leads to high performance, even though the relationship with TrucksUK is far from relational. Simply, these big workshops cannot do otherwise as there is a lot at stake. So, even though cooperative norms are absent, the employees must strive to demonstrate, with objective numbers, that the workshop performs well. This, as shown, is facilitated by a strict, highly formalized relationship between the workshop and TrucksUK (high legal bonds).

Additionally, as far as the model is concerned, the perceived bargaining power over TrucksUK may be another reason why size affects cooperative norms. Losing ServCo SW or ServCo E would be costly to TrucksUK because they would need to be replaced with other workshops in the network. Losing a 'garage' (as the after-sales director characterized some service partners) on the other hand, may not be as costly because it can be easily replaced by another 'garage'. Combining this with the CEO's aspiration to end up with a handful of professional partners with numerous service workshops run centrally, may provide the full rationale behind the discriminatory treatment felt by ServCo S employees. Hence, the size – cooperative norms association in the model may have now been fully explained and justified.

On another note, the fact that size combines with relationship-specific adaptations in four intermediate configurations that enhance performance, highlights the benefits of the fsQCA technique. Although the results do not necessarily imply an association between size and relationship-specific adaptations⁵⁰, they indicate that when the two conditions happen to be both at high levels, their combination considerably increases the chances of the workshop to perform well. Additionally, when considering the core configurations of size and PS penetration (configurations 3a and 3b), a claim that opposes what the model suggests can be made; there may actually be a direct link between size and performance⁵¹. This causal relationship may be due to the unobserved factors discussed in the preceding paragraphs. In further support of this claim, the results of the test of *H4* showed that those workshops that do not perform

⁵⁰ Which is neither identified in the model (adaptations seem to be 'imposed' by the context itself) nor supported by rudimentary statistical analysis (Pearson correlation coefficient: -0.035).

⁵¹ In support of this, the Pearson correlation coefficient between the two constructs is 0.42 and strongly significant.

well are largely the small ones. Such a claim of a direct causal link between size and service performance would have seemed risky and unjustifiable after the in-depth qualitative analysis of only three cases of differently sized workshops. However, the fsQCA phase further emphasizes the impact of size, due to being able to handle larger samples than in-depth qualitative analysis can.

In summary, size emerges as an immensely important factor that can indirectly (through relationship dimensions), or potentially directly (due to unobserved factors such as professionalism and resource abundance), enhance the service performance of the workshop.

5.2.2 Product-Service penetration

In section 4.3.2, the properties of the PS penetration construct were discussed. Crucially, PS penetration captures the degree to which the workshop is familiar with servicing vehicles under fixed cost contracts or warranty (i.e. an integrated product-service offering), as well as the extent of financial dependence of the workshop on TrucksUK. The latter is because the higher the PS penetration, the more labour hours (proportionally) are devoted to servicing contracted vehicles, hence the higher the revenues coming directly from TrucksUK. At the same time, it can be reasonably assumed that the more the workshop deals with TrucksUK vehicles under contract (high PS penetration), the more reliant TrucksUK is on it to do a good job, as partner service performance translates into customer satisfaction. This means that the bonds between the two parties are tighter. On the one hand, the workshop expects much of its revenue to come directly from TrucksUK. On the other, TrucksUK wants the workshop to consistently perform well towards the customer base otherwise customer satisfaction may suffer. Crucially, if this is the case, satisfaction will be relatively more significantly impaired than if a workshop with a low PS penetration underperforms. Thus, PS penetration may in fact reflect interdependence between the provider and the partner, a common theoretical contingency of servitized environments according to the literature (e.g. Bastl et al. 2012; Johnson & Mena 2008; Penttinen & Palmer 2007; Vandermerwe et al. 1989).

My research demonstrated the significant role of PS penetration. According to the qualitative data analysis and the model (section 4.3.2), PS penetration enhances operational integration and decreases the degree of perceived reliance on the prescribed rules. The fsQCA phase also showed that combined with size it is sufficient for high service performance. In effect then, it can be confidently inferred that PS

penetration positively affects performance. On the one hand, with regard to its first property discussed in the previous paragraph, the causal relationship is intuitive. The more the workshop has built up a vehicle base under fixed cost contract, the more experienced it must have become. Compared to workshops with low PS penetration, it should be better prepared and familiar with what needs to be done when servicing those vehicles (e.g. service and repair procedures, documentations). In short, it should be relatively further on the learning curve. In the servitization literature, it is commonly implied or empirically justified that higher service penetration positively influences the effective and efficient delivery of product-service offerings as a whole (Fischer et al. 2010; Lightfoot & Gebauer 2011; Oliva & Kallenberg 2003) and even financial performance (Fang et al. 2008). My findings resonate well with this idea.

On the other hand, with regard to the second property of the construct, the findings confirm the general consensus in the literature that interdependence between the parties indirectly or directly increases exchange performance. Such an effect is commonly predicted by a number of theoretical perspectives applied to examine relational influences (see Palmatier et al. 2007), such as social exchange theory (e.g. Hallen et al. 1991) and relational contracting (Ganesan 1994).

Because of the different concepts that PS penetration may reflect, theoretical discussion may be less relevant than practical. In practice, the analysis suggests that the more a service partner deals with the manufacturer's integrated offering, the higher its chances to perform well towards the manufacturer's customer base (relative to other service partners). This has practical implications which are discussed in the conclusions chapter (chapter 6).

5.2.3 Information exchange

Information exchange has been found to positively influence workshop performance. From the qualitative phase and as demonstrated by the model (Figure 4-1), this influence appeared to be direct. Extensive, timely and complete sharing of information with TrucksUK enables the workshop to service and repair the vehicles of customers optimally and turn them around quickly. The fsQCA phase also showed that high information exchange is a (contributing) element of the two configurations that resemble relational relationships and enhance performance. Even though no distinction was drawn between frequency and quality of communication (e.g. Mohr & Speckman 1994) my research generally supports the idea that information exchange is positively associated with the performance of the involved parties (e.g. Monczka et al.

1998; Wong et al. 2010; Yigitbasioglu 2010). This also resonates with papers from the servitization literature that emphasized the immense importance of the availability of relevant, fine-grained information (e.g. Bastl et al. 2012; Johnson & Mena 2008).

However, the results from the fsQCA also showed that as a causal condition high information exchange is not core (or sufficient). This means that in my sample, case-relationships that exhibit high information exchange should not automatically be expected to elicit superior partner performance. The inability of information sharing by itself to improve performance in marketing channels has also been shown elsewhere (e.g. Kulp et al. 2004). Moreover, my results show that there exist other configurations leading to high performance that do *not* include high information exchange. This means that high information exchange is not necessary for high performance. Of course, the additional and slightly unexpected insight offered by fsQCA may be an outcome of the operationalization of the construct. As mentioned earlier, the survey stage data collection ended up focussing largely on the exchange of information necessary for the day-to-day operation of the workshop, rather than information related to high-level, strategic issues.

Although the results of the two phases do not contradict one another (this is because they both suggest the existence of alternative paths to high performance that may not include high information exchange), a discussion that will fully reconcile the alternative insights is probably impossible. Nevertheless, the substantive insight offered by the fsQCA is that the causal relationship between the construct and performance is not as compelling and unequivocal as the qualitative stage suggested. Technically, this is because case-relationships with relatively low information exchange scores can still perform highly, and in converse, cases exist where information exchange is high but the workshop does not perform as well. Such cases would essentially undermine the correlation between the two constructs⁵² (Ragin 2008). Based on Boolean algebra and set-membership, rather than statistics and correlation between variables, fsQCA preserves the individual integrity of such cases, as shown here. Cases like this may appear in many large-sample studies and constitute an additional reason for the divergence of findings in the extant literature about the exact role and influence of information exchange on relationship or exchange party performance (e.g. Lusch & Brown 1996; Krause et al. 2007; Wong et al. 2010 - see section 2.3.3.3). As shown, some scholars have found a strong, direct link between information exchange and performance, while other empirical results suggest that the link is not direct or that there is no positive association at all between the construct and performance. Thus, fsQCA again demonstrates its usefulness.

⁵² Which actually is 0.186 and not significant at any acceptable level.

Finally, to the direction of further reconciling the results from the two phases, it has to be noted that the strong negative effects of low information sharing on the performance of ServCo S is fully supported by the test of *H4* (causal asymmetry). The latter showed that not high information sharing and small size is the most salient configuration (in terms of empirical coverage) impeding workshop performance.

5.2.4 Operational linkages

The construct of operational linkages has been operationalized in a particularly context-specific manner but has been found to positively affect performance. The qualitative stage suggested that the effect is mediated by information exchange, as both facets of the construct facilitate communication and interaction (Cannon & Perreault 1999). The fsQCA phase does not directly disconfirm this, but indicates that across the sample of case-relationships, the role of operational linkages is more key than that of information exchange. This is because the former appears to be core in one configuration of the parsimonious solution along with size and relationship-specific adaptations (both of which have been suggested to be its antecedents in the inductive model). It also appears as a contributing condition in the configuration where size and PS penetration are the core conditions (3b).

Linking this finding back to the literature is more difficult than the other constructs, because operational linkages are rarely utilized and operationalized as such. The different aspects of the construct (e.g. the existence of joint, routinized activities between individuals from the related parties) are often encapsulated by higher-order constructs such as 'supply chain integration' (e.g. Flynn et al. 2010), 'buyer-supplier relationship' (e.g. Carr & Pearson 1999) or 'structural capital' (e.g. Lawson et al. 2008). However, in a recent article, Cai et al. (2011) empirically proved the dual role of operational linkages, i.e. facilitating information sharing and directly affecting performance. The results of the fsQCA appear to be in full agreement with this argument, while the inductive model's causal ordering concurs it partially. After reflection, I believe that there is a way to reconcile this slight divergence. The qualitative inquiry took as a given, that operational integration between TrucksUK and each workshop is, to a certain degree, necessary. This is because the IT-based systems and processes are effectively imposed by TrucksUK as otherwise it would be impossible for any workshop to undertake basic tasks and probably finish any job. This commonality across the different TrucksUK – workshop relationships has been discussed in section 3.5.1.3 and constituted the point of departure for the context-sensitive operationalization of the construct before the case-study phase. As a

reminder, qualitative inquiry focussed firstly, on differences between the case-relationships in terms of the familiarity/competence of the workshop employees with the IT systems, and secondly, on the existence or not of joint routinized activities. Hence, by taking the basic-level operational integration for granted, the analysis may have understated the general importance of the operational linkages construct. Because the questionnaire includes basic-level items (e.g. 'Our workshop's operations are closely connected with the operations of TrucksUK'), it captures that fundamental effect. The results also support the empirical findings of Bastl et al. (2012) and Penttinen and Palmer (2007), as well as arguments of other authors in the servitization literature (e.g. Slack et al. 2004), that higher operational integration with suppliers and customers must occur when manufacturers move towards integrated product-service offerings.

5.2.5 Cooperative norms

The qualitative inquiry suggests that cooperative norms are an antecedent of the factors that affect performance directly (legal bonds, information exchange). Also, according to the fsQCA results, cooperative norms appear as a contributing condition in one of the relational configurations enhancing performance (configuration 3b). In general terms, these findings seem to confirm the results of Palmatier's et al. (2007) longitudinal, comparative study of the different theoretical perspectives. The authors showed that relational norms such as flexibility, solidarity and mutuality (aspects of which are captured by the scale items), should be considered as antecedents of the key exchange performance drivers ("*providing foundational rules and conformance pressures*", p.189) rather than as direct performance enhancers. Perspectives that postulate direct effects of relational norms may be overstating their significance.

However, the fsQCA phase goes one step further by revealing that the negation of the set of highly cooperative relationships leads to high workshop performance when the focal workshop is large (configuration 4). As discussed earlier (section 5.2.1) size as an exogenous factor seems to offset the supposedly detrimental effects of uncooperativeness, and still manages to elicit superior performance. This means that a relationship does not necessarily need to be based on cooperative norms to elicit high partner performance. Conversely, uncooperative relationships may have the same effect, if other conditions are in place. As configuration 4 shows, these conditions do not even need to reflect relationality. The workshop's large size (and whatever that signifies) is enough to make it perform highly. The idea that uncooperative relationships may lead to high performance of the parties or the relationship as a

whole is not discussed in the literature. Indeed, it would be difficult for such an insight to arise from the use of linear statistical techniques (e.g. regression analysis and all regression based methods such as SEM), on which the vast majority of research is based (see section 2.3.3.4). As mentioned, this interesting insight emerged due to the ability of fsQCA to preserve the integrity of each case-relationship as opposed to statistical methods based on correlation. The implications of this substantive finding extend to the servitization and service triads literatures and are discussed in succeeding sections.

In terms of the causal ordering, the fact that cooperativeness increases the tendency of the parties to engage in frequent exchange of relevant information supports the dominant view in the literature (e.g. Cai et al. 2011; Mohr & Sohi 1995, Wong et al. 2010). On the other hand, as opposed to what is commonly argued, no direct effect on operational linkages was identified (Cai et al. 2011; Heide 1994). This may be due to the context-specific operationalization of operational linkages (see section 3.5.1.3), which understates the basic-level operational integration achieved through the compulsory adoption and utilization of certain web-based systems.

Overall, it could be claimed that the construct of cooperative norms in my research setting appears to be a service performance driver of secondary importance. Firstly, it seems that its effect is mediated by other constructs, and secondly, its presence at high levels is not necessary as most configurations of relationship dimensions and exogenous factors do not include the set, or even include its negation.

5.2.6 Legal bonds

Firstly, it needs to be restated that the operationalization of the construct in this research is context-specific. Because all relationships are effectively governed by the same contractual agreements (as all service workshops are members of the TrucksUK network), I sought to grasp the degree of perceived formalization of the relationship. This perception is supposed to be a reflection of the day-to-day working relationship, and specifically the degree of reliance on the prescribed, explicit rules, the degree to which TrucksUK tolerates deviations from them, and the degree to which issues can be resolved in an informal manner. Thus, as I argued in section 3.5.1.3, legal bonds resemble the 'formalization' construct of organization theory, which has been imported at instances in IOR research (e.g. Choi & Hong 2002). Hence, it does not correspond exactly to dual concepts such as formal and social control, contractual and relational governance, or explicit and normative contract often used in the BS

relationships literature (e.g. Heide et al. 2007; Li et al. 2010; Lusch & Brown 1996; Poppo & Zenger 2002). Additionally, it is not expected or assumed (e.g. Cannon & Perreault 1999) in this research that legal bonds and cooperative norms are alternative means of governance. Hence, I do not argue about whether they function as complements or supplements, a long debate in the IOR literature (e.g. Dyer & Singh 1998; Poppo & Zenger 2002; Uzzi 1996).

Nevertheless, the results generally suggest that if the workshop individuals feel constrained by the explicit rules, the performance of the workshop may suffer. This is demonstrated by the case-study analysis and configurations 1a and 1b, as well as the intermediate solution configurations of the causal asymmetry analysis (section 4.4.3.3). I elaborate on these points in the following paragraph.

ServCo SW respondents had no complaints about the degree of formalization and indicated that working in a rather informal manner with their TrucksUK counter-parts is possible. The workshop's performance is greater than that of ServCo E and ServCo S who believe that their relationship with TrucksUK is over-formalized and that the obsession with explicit procedures detracts their capability to quickly turn vehicles around. Configurations 1a and 1b also show that 'not high' formalization combined with high relationship-specific adaptations is sufficient for the workshop to perform well. Additionally, high formalization emerged as a 'facilitating' condition in two configurations in the causal asymmetry analysis. As discussed earlier, this means that high formalization impedes performance, which is in total agreement with the cross-case analysis and standard fsQSA analysis. Hence, the findings indicate that the perception of an over-formalized relationship does not enhance the performance of the workshop. Reversely, when the workshop individuals feel that their relationship with the provider is not hindered by the explicit rules and procedures, and that there exists the potential for working in an informal manner, service performance towards the customer base is enhanced.

Furthermore, the case-work indicated that PS penetration affects the construct of legal bonds. Workshops whose workload is heavily based on TrucksUK fixed-cost contracts and warranty are likely to have become relatively more used to the explicit rules and procedures, and generally to what is expected from them. Hence, with increased exposure, the employees may have stopped feeling constrained by the over-explicitness (like in the ServCo SW case) as most tasks and procedures have become embedded in everyday practice.

On the other hand, according to configuration 4, high formalization contributes to eliciting high performance when the relationship between TrucksUK and large

workshops is not cooperative. As it has been discussed, this indicates that the large size of the workshop (and everything that this reflects) is such a strong driver for performance that the disadvantages of a non-relational relationship (low cooperation, high formalization) are offset. It may be the case that these large workshops, which are probably professional servicers rather than family enterprises, work along these lines by default, i.e. keeping their relationship with TrucksUK at a non-intimate, strictly professional level (low cooperative norms) and abiding closely to whatever is predicted in the explicit contracts (high formalization), and still performing well due to their scale and professionalism.

Finally, the analysis of causal asymmetry showed that low formalization in the relationship between TrucksUK and small workshops with high PS penetration, produces the reverse outcome (low performance). This means that low (high) formalization in the relationship is not necessarily good (bad) for performance. Configurational logic suggests that the effect of formalization depends on the presence of other conditions such as micro-level context factors (size and PS penetration). This finding resonates well with BS relationship research that does not take the relationalism continuum assumption for granted. For example Cannon & Perreault's (1999) empirically derived taxonomy indicates that in certain contexts, relationships based primarily on legal bonds do actually perform well.

In short, the results suggest that in this context, the effects of the construct of legal bonds depend heavily on the presence and levels of other causal conditions. Nevertheless in most instances, low formalization of the relationship should be expected to enhance the service performance of the partner.

5.2.7 Relationship-specific adaptations

Relationship-specific adaptations by the partner saliently turn out to have a large and direct impact on workshop performance. Adaptations in the way of operation (e.g. opening hours, training) and in infrastructure (e.g. IT, equipment), help the workshop undertake the necessary tasks efficiently and effectively, enhancing its monitored service performance. The immense importance of the construct was corroborated through the results of the fsQCA phase. Adaptations as a causal condition appeared to be a core element in two out of the four configurations in the parsimonious solution. When it comes to the intermediate solution, adaptations constitute an element of the five out of the seven configurations. It can be said that amongst the five relationship connectors, adaptations is the most significant service performance driver.

This finding resonates well with one of the central arguments of TCE; that relationship-specific investments (RSIs) enhance exchange performance (e.g. Heide & John 1990; Parkhe 1993). It also agrees with the results of Palmatier et al. (2007) who found compelling evidence that RSIs have a direct relationship with performance, no matter which theoretical perspective is implicitly or explicitly applied. Their empirical comparison showed that tenets of SET and the relational contracting theory in the BS relationship literature seem to understate the effects of RSIs in their empirical papers. Palmatier et al. (2007) convincingly justify that in addition to a mediated effect, a direct effect of the construct should also be considered. My work concurs that relationship-specific adaptations by the partner have a strong and direct effect on service performance.

Moreover, my research suggests that adaptations are independent of any other considered construct. This, I have suggested, is because of the contingencies of my research setting. Firstly, relationship-specific adaptations have been found to be inherently necessary in servitized contexts (Bastl et al. 2012; Lockett et al. 2011). Secondly, the fact that the workshop voluntarily agrees to become a service partner of TrucksUK, automatically imposes certain standards, which to be achieved relationship-specific adaptations (e.g. investments in infrastructure) are necessary. These points indicating the 'necessity' of relationship-specific adaptations, reinforce the suggestion that amongst the five relationship connectors, the construct emerges as the key performance driver in this particular research setting.

5.2.8 Summary

In this section I have discussed the implications of the results for the phenomenon of relational influences on performance and for each observed theoretical construct individually. Although the relationship connectors and the relationship as a whole can affect the performance of the partner, their effect depends greatly on the micro-level contextual factors (size and PS penetration). I have also demonstrated the beneficial additional insight offered by configurational thinking and specifically fsQCA. In the following section I proceed with the discussion of the substantive findings in relation to the servitization literature.

5.3 Research findings and servitization research

It was demonstrated in section 2.2.8 that it is common in servitized settings for the product to be provided by the manufacturer/provider but the services to be delivered by subcontracted service partners (e.g. Cohen et al. 2006). This, as well as issues pertinent to the service network in general, has been a largely unexplored phenomenon in the servitization literature. An issue of immense importance to the manufacturer is to ensure that these service partners perform to the levels specified and agreed upon in the customer contracts (Pawar et al. 2009), which are often tailored around equipment availability (Baines et al. 2007). This importance stems from the fact that the performance of the partners is determinative for customer satisfaction and loyalty (Tate & van der Valk 2008).

My research showed that the relationship the provider maintains with the service partners has indeed a role to play in the performance of the latter. The qualitative phase helped in deriving a specific model that describes how the different dimensions of the relationship interrelate, and how are themselves influenced by two exogenous factors that emerged as very important (size of the workshop and product-service penetration). In addition, the fsQCA phase identified different configurations of relationship dimensions and exogenous factors ('causal recipes') that lead to superior service partner performance.

From a high level, the combined findings indicate the importance of relationship management in servitized settings, a very common suggestion in the extant literature (Lockett et al. 2011; Matthyssens & Vandenbempt 2008; Windhal & Lakemond 2007). Specifically, the evidence suggests that the provider should strive to have as a relational relationship as possible with its subcontracted partners, because, crudely put, the better the relationship the higher the performance of the partner and consequently the happier the customers. From another lens and using a slightly different terminology, the findings also resonate with the idea expressed by several authors in servitization, that increased integration between the different involved parties (e.g. suppliers, customers) is necessary (e.g. Baines et al. 2009a; Johnson & Mena 2008; Slack et al. 2004). The positive effects of the constructs of relationship-specific adaptations, operational linkages and information exchange clearly support this.

However, my research also provides evidence that in service and servitized contexts, relationships between the actors tend to be, but *not necessarily* are, relational as opposed to transactional. This, in a way, confirms the findings of Bastl et al. (2012) and Matthyssens and Vandenbempt (2008) that firms in servitized settings breed

expectations of highly relational behaviours from their exchange parties, but these expectations do not always materialize in practice. My study suggests that this may be the case because of the influence of micro-level contextual factors such as the size of the service partner and the extent to which its work is concerned with servicing products under fixed-cost contracts. The qualitative analysis, as well as the results from the fsQCA phase, showed that these can to an extent determine the level of relationality of the relationship.

The important feature of the research however is that by having focused on specific relationship dimensions, emergent contextual factors and interrelationships, it provides an in-depth insight and indicates specific ways in which the servitized manufacturer can intervene to improve the relationships with its service partners (discussed further in the conclusions). Improving these relationships may translate into more efficient and effective provision of the product-service offering as a whole and eventually improved customer satisfaction.

Finally, the findings should be discussed with reference to the emerging literature on service triads.

5.4 Research findings and the business triads literature

As the direct interaction between the service partner and the customer(s) means that the two, together with the servitized manufacturer form a triad, my research has implications for the triadic literature as well. I start the related discussion generally and gradually enter into the specifics.

From a high-level, my findings agree with the suggestion in the existing triadic literature that the nature of the dyadic relationships between the actors and the performance of those actors in the triad are interdependent (Choi et al. 2002; Wu & Choi 2005). The specific interdependence studied here is that between the provider – service partner relationship and the performance of the partner towards the customer base (the third actor). As in previous relevant literature (e.g. Ahlstrom & Nordin 2006; van der Valk & van Iwaarden 2011), a clear association was drawn between the two. Specifically, my work showed that the provider – partner relationship can affect the performance of the partner. Because partner performance is determinative for customer satisfaction (Tate & van der Valk 2008), the provider – partner relationship can indirectly influence customer satisfaction. Assuming that the ultimate mission of the triad is the effective and efficient provision of the offering to the customer and the

satisfaction of all three parties, the focal relationship (provider – service partner) can massively contribute towards this.

More specifically, and as already discussed in previous sections, one could generally claim that the more relational the provider – partner relationship is, the higher the performance of the partner towards the customer base. As the performance of the partner is essentially translated into customer satisfaction and consequently harmonious provider – customer relationships (Tate & van der Valk 2008), the beneficial effects of relationality for the triad as a whole become evident. Attributes characterizing relational relationships (cooperativeness, high information exchange, the possibility to work in a non-formalized manner, operational integration and adaptations) in the triad have already been found to have positive consequences for the triad as a whole (Bastl et al. 2012; Peng et al. 2010; van der Valk & van Iwaarden 2011). I confirm this by showing the positive effects on the performance of the partner specifically.

However, my work departs from previous triadic research by providing an empirically grounded model that captures the interplay between the different dimensions of the provider – partner relationship and consequently, the role of each in the performance of the partner in the triad (Figure 4-1). Specifically, it proposes that information exchange, relationship-specific adaptations and legal bonds affect service performance directly, while cooperative norms and operational linkages affect it indirectly. Hence, it goes beyond suggestions such as ‘relational relationships enhance service delivery performance in triadic settings’, by providing a nuanced understanding of *how* this takes place.

The model, in combination with the configurational approach to the analysis of the survey data, shows that the interplay between the five relationship characteristics is complex and is greatly influenced by the two (micro-level) contextual factors. The obvious example of this influence is demonstrated by configuration number 4. The latter implies that not every provider – partner relationship has to necessarily be relational to lead to high service performance of the partner towards the third actor (customer base). An exogenous factor (in this case, size of the service workshop) may in combination with relatively more transactional relationships, lead to the same outcome. This has one significant implication: relational relationships even in service triad contexts are not a panacea for success, an idea hardly ever discussed in the extant literature. Additionally, the effects of contextual factors have been largely ignored so far by researchers on business triads, mainly because the latter have been trying to grasp the basic issues and dynamics of triadic interaction. As triadic research grows, the role of more contextual factors should be explored.

5.5 Summary

The chapter discussed the findings in their own right as well as in relation to the three main bodies of literature that informed the design of the study; servitization, business triads, and the stream in the buyer – supplier relational literature investigating the effects of relationship characteristics on the performance of the parties.

The thesis continues with the conclusions chapter, which presents a summary of the findings and discusses the contributions to knowledge and managerial implications of the research.

6 CONCLUSIONS

This chapter concludes the thesis. Hence, it begins with a brief summary of the findings presented and discussed in the previous chapter (section 6.1). The succeeding section, which constitutes the main part of the chapter, details the contributions to knowledge of my study (section 6.2). I continue by considering and discussing my research findings in light of pragmatism (section 6.3), where I comment upon the issue of generalizability. The managerial implications and limitations of the research follow (sections 6.4 and 6.5 respectively), and the chapter concludes with a few further research directions (section 6.6).

6.1 Summary of findings

This research sought to answer the following two research questions:

- 1) *In a triadic servitized context, how does the provider – partner relationship affect the performance of the partner in delivering the services to the customer base? And;*
- 2) *What configurations of dimensions of the provider – partner relationship ('relationship connectors') and contextual factors elicit superior service performance?*

In summary, my findings consist of a model that emerged from the qualitative phase (three case-studies), and a set of configurations of relationship dimensions and exogenous factors that enhance service partner performance. These configurations emerged from the quantitative phase (configurational analysis). Broadly speaking, these two findings constitute the answers to the first and second research question respectively. I briefly elaborate on these below.

Firstly, the model (Figure 6-1) provides a nuanced understanding of how the provider – partner relationship affects the service performance of the partner towards the provider's customer-base. Specifically, it captures the role of each relationship dimension (relationship connector) and the two exogenous factors that emerged as important (size and product-service penetration). In the suggested causal ordering, the constructs of information exchange, relationship-specific adaptations and legal bonds, exert a direct influence on the service performance of the partner, while cooperative norms and operational linkages affect performance indirectly (via information exchange and legal bonds). At the same time, size and PS penetration play an important role by affecting two relationship dimensions each. Size, because of its unobserved properties such as resource affluence and high bargaining power

(discussed in section 5.2.1), increases cooperative norms and operational linkages. PS penetration increases operational linkages and decreases legal bonds, due to the learning that comes from increased exposure of the partner to the nature and requirements of the integrated offering (section 5.2.2).

The implied links between the different elements of the model are assertions supported with evidence from the qualitative inquiry, and have been justified in section 4.3.1. The model and the subsequent discussion indicated that the phenomenon of relational influences on performance in this context, as expected from the literature review, is causally complex. This is because alternative routes (or causal recipes) leading to high service performance of the partner exist. This idea and the substantive findings from the qualitative case-studies led to the construction of four hypotheses and the configurational analysis to answer the second research question.

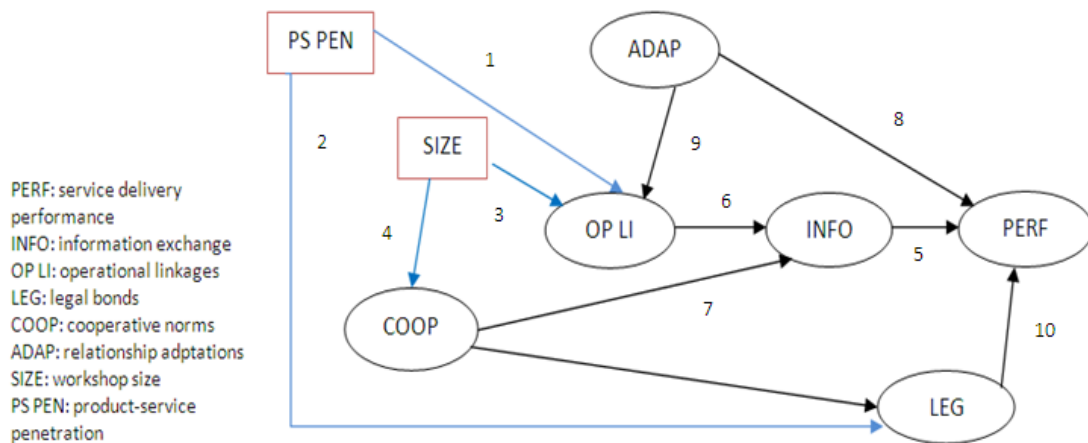


Figure 6-1: The model of provider – partner relational influences on the service performance of the partner

Table 6-1 constitutes the answer to the second research question. It demonstrates the four (first-order) equifinal configurations of relationship dimensions and exogenous variables that elicit superior service performance of the partner. It also shows the neutral permutations exhibited by three of the configurations (second-order equifinality). Apart from confirming equifinality, the results (apart from configuration 4) indicate that provider – partner relationships including elements of relationality are likely to elicit high service performance of the partner. For example, the configurations with the highest empirical coverage (raw and unique) include as core conditions: high relationship-specific adaptations and the negation of the set of high legal bonds (configuration 1b), and high adaptations and high operational linkages (configuration 2a). The importance of the exogenous factors is also highlighted. This is particularly demonstrated by configuration 4, which, as discussed, suggests that size can be so

determinative for partner service performance that its effect can offset the supposedly detrimental influence of a relatively uncooperative relationship.

Table 6-1: The configurations leading to superior performance

CONFIGURATION	1a	1b	2a	2b	3a	3b	4
CAUSAL CONDITION							
Info exchange			●		●	●	
Oper linkages			●●	●●		●	
Coop norms						●	○
Legal bonds	○	○				○	●
Rel adapt	●●	●●	●●	●●	●		
Workshop size	●		●●	●●	●●	●●	●●
PS penetr		●		●	●●	●●	
Consistency	93.6%	91%	90%	92.4%	93.6%	97.3%	90%
Raw coverage	37.5%	46.3%	48.2%	40%	40%	33.5%	32.6%
Unique coverage	1%	12.1%	5.8%	0.9%	0.4%	1.9%	2.8%
●● : core causal condition present; ○○ : core causal condition absent ● : contributing casual condition present; ○ : contributing casual condition absent							

The findings were brought together in the previous chapter, and were discussed in connection to the extant literature domains of buyer - supplier relational influences on performance, business triads and servitization. In light of this, I am in a position to articulate the contributions of my work. These are discussed in the following section.

6.2 Contributions

This section details the contributions of my study to knowledge. I consider my contributions to practice separately in section 6.4.

My primary contributions are to the servitization literature and to the study of business triads. These are a product of having investigated a specific phenomenon, i.e. relational influences on performance, pertinent to triadic servitization settings. They are discussed first. Additionally, because of the approach and methods employed here, I can offer insight into the phenomenon of relational influences on performance itself. This insight is referred to as secondary contribution and is presented in section 6.2.2.

6.2.1 Primary contributions

Although the importance of the network for the effective and efficient provision of PSSs has been suggested and demonstrated by a number of authors (e.g. Bastl et al. 2012; Johnson & Mena 2008; Windahl & Lakemond 2006), the special case which is common in several industrial settings, whereby the manufacturer subcontracts the delivery of services to independent partners (Cohen et al. 2006; Pawar et al. 2009) has remained under-studied. This structural arrangement has a clear implication for the servitized manufacturer. The performance of the partners in delivering the services to the customer base is paramount for the successful delivery of the integrated offering as a whole, and determinative for customer satisfaction. This implication was discussed in the literature review (chapter 2) and was confirmed in my research. Although the few papers that touch upon the issue suggest that providers involved in such a setting should strive to make their partners perform at adequate levels (Pawar et al. 2009), explicit suggestions on how to do this do not exist in the servitization literature. This is because the factors that may affect partner performance have not been studied, which was the motivation behind my research. My contribution to the servitization field stems from considering this particular setting as a business triad, and the research problem as an issue pertinent to triadic interaction. By doing this, I also contribute to the triads literature. I treat the two primary contributions and their ramifications in turn.

Firstly, I have demonstrated that the provider – partner relationship as a whole plays a role in the performance of the service partner towards the provider’s customer base. More significantly, because I explicitly and systematically treat the provider – partner relationship as multi-dimensional, the resultant account of the role of the relationship is a nuanced and elaborate one. This is because:

- The effect of each individual relationship dimension is discerned through the analysis of empirical evidence, and captured in a model. The model demonstrates the position of each dimension in the causal ordering, and their interplay. The analysis suggests that information exchange, legal bonds and relationship-specific adaptations affect the performance directly, while cooperative norms and operational linkages affect it indirectly through increasing or decreasing the levels of the other three dimensions (see section 6.1).
- Through configurational analysis the combinatory effects of these dimensions on service performance are identified. These suggest that the relationship dimensions, as causal conditions, combine in various ways in order to jointly enhance the service performance of the partner (see section 6.1).

In this way, my research is the first, to my knowledge, that provides such a detailed picture of how the provider – partner relationship affects the service performance of the partner towards the provider’s customer base. Two encompassed aspects of this contribution are the positive influence of relationality, and the important role of the emergent exogenous factors. These are demonstrated in the following paragraphs.

The results support the idea that in service (or servitization) contexts, B2B relationships tend to be, but not necessarily are, relational (e.g. Bastl et al. 2012; Matthyssens & Vandembemt 2008). On the one hand, it turns out that relationship-specific adaptations by the service partners is the norm, while there are high expectations for cooperation and increased information sharing. On the other hand though, the examined provider – partner relationships did not show an identical (relational) profile. This is because, as it emerges from the analysis (and in agreement with Cannon & Perreault’s [1999] assumption), the relationship dimensions do not necessarily correlate with each other to reflect a uni-dimensional, high-order construct of ‘relationalism’. The qualitative inquiry showed that, for example, although all three cases demonstrated similar (high) levels of relationship-specific adaptations, and two cases showed similar degrees of operational integration, the levels of information exchange were judged to differ significantly between them. This is mainly because the five dimensions are causally related and affect one another temporally (Figure 6.1). This means that for any relationship at any point in time, if a couple of the dimensions are at levels signifying relationality, the remaining dimensions need not do the same. Nevertheless, both the qualitative and the configurational analysis supported the idea that the provider should strive to have as a relational relationship as possible with its subcontracted service partners, because, crudely put, the better the relationship the higher the performance of the partner.

Moreover, my research shows that the relationship dimensions are affected by the context, in this case, the two inductively identified micro-level contextual factors (partner size and the extent of partner’s reliance on revenues from servicing customers under contract). The role of these factors is uncovered and illustrated in the model, and their importance is further highlighted in the results of the configurational analysis. Crucially, these factors may in instances be enough to lead to superior performance by outweighing the potentially ‘negative’ effects of a non-relational working relationship. This insight was discussed earlier (section 5.2.1) and its higher-order implications are also detailed in the following sub-section, where I summarize the insight that my research has offered to the research stream examining relational influences on performance.

The *second* primary contribution of my work is that it extends triadic theorizing and empirical research to a new domain (servitization). This is because existing papers on business triads, be it empirical or conceptual, have so far mainly focussed on pure product or service contexts (e.g. Choi et al. 2002; Wu & Choi 2005; Li & Choi 2009; Tate & van der Valk 2008). A second and more important extension of the current theorizing of business triads, comes from the provision of an in-depth understanding of the relationship – performance interdependence, through treating the relationship as a five-dimensional construct rather than as either cooperative or competitive (a binary distinction prevalent in the literature, e.g. Choi et al. 2002; Wu & Choi 2005). Hence, I submit a nuanced account of how a dyadic relationship (provider – partner) affects the performance of one of the two dyadic actors (service partner) towards the third party in the triad. This is because the individual roles of each relationship dimension, as well as their combinatory effects are identified. Moreover, the influences of exogenous factors, that inductively emerged as important, were discerned and understood.

6.2.2 Secondary contributions

My research has been a study of the phenomenon of relational influences on performance in a triadic setting, where a PSS is provided. As discussed, I consider my primary contributions to knowledge to refer to business triads and servitization. Nevertheless, I also offer some general insight on the phenomenon itself, which is why I include this here as a secondary contribution. This insight is based on three specific aspects of my research.

Firstly, previous relevant buyer – supplier relationships studies have considered either performance within the dyad (e.g. a supplier's performance towards the buyer) or performance in general (e.g. return on sales, profitability), or both. Examples of works considering performance of the one exchange party towards the other include Cai et al. (2009), Cai et al. (2011), Corsten et al. (2011) and Mohr and Speckman (1994). Examples of papers focussing on business or financial performance include Anderson and Narus (1990), Carr and Pearson (1999), Eisingerich et al. (2008) and Lusch and Brown (1996). Examples of papers that consider aspects of both general types of performance include Flynn et al. (2010) and Lawson et al. (2008). My study, because of framing the particular servitization setting as a triad, considers a type of performance which has not (to my knowledge) been explicitly considered in this literature stream. Namely, the performance of one actor towards a certain other within the network in which the buyer (provider) – supplier (partner) dyad is embedded: specifically, towards

the buyer's customer, with whom the three form a triad. This provides a novel research focus for scholars interested in the phenomenon of relational influences on performance.

Furthermore, my empirical inquiry confirms that B2B relationships are multi-level, and complex (Ritter et al. 2004), and incidents that alter the state of one relationship dimension may or may not have systemic effects so as to affect the other dimensions and eventually performance. Also, the two exogenous variables seem to play a role by affecting one dimension (e.g. operational linkages) and not another (e.g. relationship-specific adaptations), while on the whole, different paths to superior performance seem to exist. These points indicate that the phenomenon is causally complex, a complexity that was captured in the emergent model. The pattern of complex causality justified the adoption of a configurational approach and technique (fsQCA) for the analysis of the quantitative data, and this is where the second secondary contribution comes from. Because of the properties of fsQCA, the results comprised alternative configurations of elements leading to superior performance, something that indicates the empirical diversity of B2B relationships. Especially configuration 4, which indicated the potential of an exogenous factor to outweigh the negative effects of transactional relationships (section 4.4.3.3), demonstrated the benefits of employing configurational logic to complement statistical techniques based on correlational logic. Similar endeavours may help reconcile divergent findings in the relevant literature (see section 2.3.3.3), and offer additional, counter-intuitive but valid insight (e.g. Cannon & Perreault 1999; Flynn et al. 2010).

Thirdly, capturing the interplay between the relationship connectors of the Cannon & Perreault (1999) framework, and their causal ordering when it comes to affecting the service performance of the partner, is something that has not been explicitly done before (see section 2.3.2.5). My research has highlighted the usefulness of the framework and has shown that the connectors are interrelated in a complex manner. Whether the emergent causal ordering can capture the dynamic of the phenomenon in other industry settings and contexts is an empirical question and is discussed in the next section.

As a conclusion to this section, my contributions are summarized in Table 6-2 below.

Table 6-2: Summary of contributions

Domain	Contribution
<i>Primary contributions</i>	
Servitization	<p>Extending servitization literature by providing a nuanced understanding of the influence of the provider – partner relationship on the performance of the service partner. Due to treating the relationship as multi-dimensional:</p> <ol style="list-style-type: none"> 1) The independent role and combinatory effects of relationship dimensions are identified; 2) It is determined that relational relationships generally enhance service performance; 3) But exogenous to the relationship variables (contextual factors) have a significant role to play by affecting certain dimensions.
Triads	<p>Extending triadic theorizing and empirical research:</p> <ol style="list-style-type: none"> 1) In a new domain (servitization) and industrial context (commercial vehicles industry); 2) By considering the relationship as a multi-dimensional construct instead of simply as cooperative or competitive. In this way, the issue of relationship – performance interdependence in a triad is further illuminated.
<i>Secondary contributions</i>	
Buyer – supplier relational influences on performance	<ol style="list-style-type: none"> 1) Considering a type of performance not considered previously (performance towards the third actor); 2) Confirming that the effects of relationship characteristics on performance are context-specific, and the phenomenon as a whole is causally complex. Showing the benefits of employing a novel configurational technique; 3) Capturing the interplay between the five relationship connectors of Cannon & Perreault (1999) and how they affect service performance.

6.3 The findings in light of pragmatism

My research was designed to investigate a specific research problem that arises due to a particular structural arrangement taking place in servitization contexts (the provider assigning the delivery of the services to independent partners). Hence, although the research setting that TrucksUK provided was demonstrably suitable to answer the research questions, the generalizability of the results is restricted by both the context and the structural setting. This means that my findings should not be considered applicable at face value to non-servitized contexts and non-triadic settings. Additionally, one could claim that the findings are specific to TrucksUK and its network. After all, all three case-relationships constitute ties of the ego-network of TrucksUK, and all questionnaire respondents' answers refer to other such relationships/ties. On top of this, the performance measure and the operationalization of the relationship connectors are context specific. Such a line of argumentation could challenge the

generalizability and applicability of my findings, and in consequence, the contributions of my work to knowledge. I believe that the claims to knowledge one makes depend on the philosophical assumptions that informed that research in the first place. Hence, as a pragmatist, I discuss the issue by drawing from the writings of one of the most important pragmatists, John Dewey (as read in Biesta 2010).

In accordance with Dewey and the philosophy of pragmatism, I believe that the products of my research are effectively ‘warranted assertions’⁵³. Through a pragmatic lens, I have made an account of what followed from my actions upon the world, “*what has been possible in this particular situation*” (Biesta 2011, p.111). The action – consequence – reflection chain is what constitutes knowledge for pragmatists, and can be expressed through warranted assertions. These assertions, or conclusions, have been drawn on the basis of careful analysis and in relation to this particular situation (research context). For the analysis to produce credible results, all measures to increase validity that were deemed feasible were applied during both phases of the research design (sections 3.5.2.3, 3.6.4). It does not follow though that the assertions produced here will be warranted for all time and in all similar situations. That is, I make no knowledge claims to ‘Truth’. What I have done in the discussion section (chapter 5) is revisit the theoretical knowledge in the relevant literature in light of the knowledge produced here. Additionally, I acknowledge that the theoretical claims made have emerged from context-specific research and are a product of the ‘tools’ (e.g. case-studies and fsQCA) I have employed.

Even though the produced knowledge does not offer certainty (i.e. generalizability) the possibility for the conclusions drawn here to be useful in other situations is not precluded. As Dewey puts it, sometimes what has been possible in one situation (research setting) may be possible in another. Some other times, the determinants of the specific situation are different, hence what was possible in the previous situation now is not. This whole argumentation means that knowledge produced by research is fallible, but, crucially, not because of an alleged gap between ourselves and the world (the Cartesian dualism of mind and matter, and subsequently of objectivity and subjectivity) but because we cannot be sure about what future situations hold. Moreover, the knowledge from a different research endeavour would again represent the action – consequence – reflection chain of the researcher, even if that researcher was the same person. What however is important according to pragmatism is that the

⁵³ Through a Deweyian pragmatic lens I consider the ‘warranted assertions’ to include not only the links between the elements of the model of Figure 6-1 (which, as I have earlier stated, comprise assertions) but also the specific configurations and the broader insight gained from the analysis (for example that relational relationships in this context enhance the service performance of the partner); in short, the findings of the research.

knowledge (what has been possible, the warranted assertions) gained in one situation *transfers* to another situation by guiding the perceptions of those involved. More generally, the knowledge may suggest situations where it can be applied to solve problems. This transferability of knowledge with the view to solve problems, instead of the generalizability of the findings is what matters the most. This leads naturally to the managerial implications of my research outcomes.

6.4 Managerial implications

Even though the generalizability of my findings is limited (see section 6.3), some of the generated insight can be confidently claimed to be transferable to practice. The implications are discussed herein.

From a high level, my research indicates the importance of managing the relationships with the service partners that are in direct and ongoing interaction with the customer base. In effect, the importance of relationship management in servitized settings is emphasized (*cf.* Lockett et al. 2011; Matthyssens & Vandenbempt 2008; Windhal & Lakemond 2007). As TrucksUK has realized, the introduction of monetary incentives, tied around service performance indicators, is a useful measure to improve the service performance of the partners but not a sufficient one. Its effects on the performance of the individual partner need to be enhanced with practices embedded in the every-day working relationship. Specifically, these practices should be towards making the working relationship with the partners more relational. This suggests that the human factor becomes increasingly important with the increase in the complexity of the product technology and in the sophistication of the integrated offering as a whole. These two seem to intensify: 1) the need for quick and standardized collection, transmission and receipt of information through electronic means; 2) the necessity for relationship-specific adaptations, and; 3) the number of formalized procedures that need to be undertaken day in day out. My work suggests that these contingencies should be supplemented with increased human interaction between the provider and its partners. This human interaction, in the form of inter-personal communication and joint activities should demonstrate to the partners that the provider cares about them. As the qualitative work showed, the perceptions of those working at the workshops are very important. Take for example the (perceived) uncooperative attitudes of the co-located TrucksUK salesman in the ServCo S case, and of the high-rank TrucksUK managers in the SerVCo E case. Or take the detrimental effects on service performance, of the (perceived) over explicitness and utter confusion of respondents with the web-based systems in the ServCo S case. The accounts of interviewees almost

unanimously imply the need to see a face every now and then or talk to people they know in the HQs. But, solely putting people in place to interact with the workshops may not be enough. Developing strong inter-personal relationships is more difficult but may prove to be the fundamental premise that will eventually translate into superior performance. These inter-personal relationships will facilitate information exchange and operational integration and improve the perceptions of the service partners regarding the level of cooperativeness and formalization of the relationship. An emerging idea is that for this to happen, it may be beneficial for individuals in interaction with the service partners to be trained to be cooperative and attentive, in the same way as the customer-facing salesmen are. The service partners enjoy being treated by the provider in the same attentive and caring way they themselves treat the provider's customers.

Additionally, the importance of PS penetration indicates the effects of learning by doing and of the interdependence of the related parties. The provider should strive to give as much service work as possible to its partners. This seems to affect both the perceptions of individuals and the actual way of working. And crucially, where the assignment of satisfactory levels of service work is impossible (e.g. in the ServCo E case), the provider should compensate by striving to keep the relationship close and relational rather than letting it weaken.

The findings of the research, and in extension, the contributions to knowledge and managerial implications, have to be assessed alongside the limitations of this work. I turn to these next.

6.5 Limitations

Like any research, my work suffers from a number of limitations. I begin with the limitations that are embedded within the methods I am using, and continue with those that are contingent to the way in which my research was undertaken.

Even though the combination of qualitative and quantitative data reduces the effects of the limitations of each (section 3.7), it is impossible to claim that these limitations are nullified. For example, even though I have attempted to gather information about each case-relationship from multiple respondents, the qualitative data analysis is an individual enterprise and another researcher may have come up with different causal relationships between constructs. As Sipe and Ghiso (2004) say, any coding exercise is a judgement call, as the researcher brings their subjectivity and presuppositions into

the process. I hope however that by providing rich quotes for every construct and association, and by reflecting upon my decisions in the discussion section where I integrated the results of the two phases, I have convinced the reader that my account is a plausible and credible one.

Similarly, as I highlighted in section 4.4.3.2, the single-respondent bias of the quantitative data collection part produced at instances a picture which was counter to the in-depth and more credible insight gained from the qualitative part. Specifically, my impression from the qualitative data analysis was that the ServCo SW case clearly exhibited higher levels and quality of information exchange than the ServCo E case. The (single) questionnaire respondents though were in direct disagreement. It is true that, as shown in section 4.4.3.2, the calibration process helps to ameliorate the problem, but this incongruence at the very basic level needs to be highlighted here. It may also be the case that other respondents have provided biased accounts (towards the one or the other end of the scale). Nonetheless, as I demonstrated, the results of the fsQCA are interpretable and what they suggest are plausible real-life scenarios (section 4.4.3.4).

Regarding the fsQCA, its limitations have already been mentioned at the end of section 3.6.3.1. As a technique, fsQCA is still new and the computational procedures are still evolving, while debates on issues such as the appropriate consistency and coverage thresholds are still ongoing. More importantly, the calibration process is effectively subjective, even though it is based on all available theoretical and substantive knowledge. In my case, the analysis of the three case-relationships provided a solid ground to appropriately calibrate the measures and I believe every related decision has been transparently and sufficiently justified (section 4.4.3.2). That does not preclude however the possibility that another researcher might have calibrated the same measures differently. Obviously, this is because the process is based on the analysis and interpretations of qualitative data, which as mentioned in the first paragraph of this section, are subject to the researcher's beliefs and presuppositions.

Moving away from the limitations embedded in the 'tools' employed, there are others which are contingent to parts of my particular research design and the research process as a whole. There are four such limitations. Firstly, the exploratory sequential mixed methods design (which was in principle employed in this research) predicates that the qualitative phase concludes before the collection of quantitative data. It has been mentioned however in the methodology section, that this was deemed impossible due to time constraints. In actuality, the construction of the questionnaire began during the analysis of the second qualitative case-relationship. The single most important implication of this was that time for reflection of the findings was limited,

hence, the finalization and administration of the questionnaire may have been somewhat premature. In several instances during the analysis of the quantitative data (for example in section 4.4.3.1), I noted that certain items could have been worded better. That is, if I had had the final (rather than interim) findings of the qualitative phase at my disposal, and more time for reflection. Nevertheless, the reliability analysis helped in omitting several items and has mitigated this limitation to some extent.

The second limitation has to do with the sampling process of the qualitative case-studies. As mentioned in section 3.5.1.2, it proved unexpectedly difficult and time consuming to approach a badly performing workshop. According to the performance measure, ServCo S (which was eventually sampled) does not really perform badly. It has indeed been performing worse than averagely (ServCo E) but only slightly. Additionally, its performance has been consistently improving with time. Nevertheless, as my analysis and interpretations show (sections 4.2, 4.3), the heterogeneity may have been sufficient for patterns to emerge.

The third limitation has to do with the number of the respondents to the questionnaire. Although the technique deployed for the analysis of the data (fsQCA) is ideal for small samples, the small sample size had a couple of implications. Firstly, the 47 responses were not enough to conduct a proper confirmatory factor analysis, especially when considering the large number of questions. This of course may have threatened the validity of the results. However, as it has been discussed, factor analysis is rarely used in studies that employ fsQCA, precisely because the small samples prohibit it. Secondly, the small sample size did not allow a pilot test of the instrument. A pilot test may have highlighted the problematic items, prior to the reliability analysis. Nonetheless, the effects of both implications have been reduced through the reliability analysis and the informed reflection upon it (section 4.4.3.1). Both assisted the calibration phase to a great extent, and subsequently the results and their interpretation.

The fourth limitation is the fact that I used the influence of the TrucksUK CEO and Head of Service during the quantitative data collection. Although their letters to the potential questionnaire respondents were simply encouraging and stated the independence of my research, this action may have compromised the integrity of the responses to some extent. However, considering the context specificity of the study and the limited pool of knowledgeable individuals, there was always going to be a trade-off between the ultimate response rate and the potential respondent bias. I hope through the mild wording and impartiality of the aforementioned letters, and

through the assurance of anonymity I provided, I have managed to minimize this sort of bias.

Before concluding the chapter I provide some further research directions.

6.6 Further research

Further research to empirically examine the transferability of my findings is justified. I note some obvious examples. Firstly, one extension would be to study triads in different servitized industry contexts and countries. Or indeed contexts where the offering under study is considerably different (e.g. a *result-oriented* Product-Service system – Tukker & Tischner 2006). Providers of complex industrial equipment and machinery are often reliant on independent partners for the provision of the service parts of their integrated offerings. Such industry settings include sectors such as defence and aerospace, rail and sea transport, office equipment and others. It would be interesting to identify whether high-level variables such as industry concentration, environmental and demand uncertainty (among others) affect the applicability of the substantive findings or not. Does the relationship between the provider and the partner affect the service performance of the partner? Do the relationship dimensions interrelate in a similar manner? Are there alternative, equifinal configurations signifying relationality that enhance service performance? Moreover, is it the contingencies pertinent to the provision of integrated offering, or is it the alternative context-specific factors more important in determining the effects of the relationships on service performance? That, in my opinion, is a very interesting question to ask.

Another research direction pertinent to triads is the examination of indirect influences. As the reader may have realized, the focus of this research has been a direct influence, in the sense that the effects of a dyadic relationship on the performance of one of the two actors (towards the third) have been investigated. An indirect influence would be the effect of this particular relationship on the performance of the third actor, and vice versa, i.e. the role of the third actor in the focal dyadic working relationship. As the proponents of triads argue (e.g. Choi & Wu 2009c; Choi et al. 2002), a triad is the fundamental building block of the network, because it is the smallest unit where indirect influences can be examined. As shown here, servitization provides a suitable context to study triadic interaction, not only because the structural arrangement is common, but also because service exchange necessitates ongoing interaction and is based on relational rather than transactional exchange. This makes servitization triads arguably more interesting than triads in pure manufacturing contexts.

On a more general note, as mentioned in section 2.2.7, there is still a lot of research to be done to start understanding end-to-end servitized networks and their principles. Related research is limited and has remained largely anecdotal (or based on a few instances and case-studies). An especially fruitful research direction would be to explore, in a context-sensitive manner, the differences between networks providing different types of offerings (Johnstone et al. 2009). What are the fundamental network patterns and principles for the provision of different types of PSSs? Are they similar or different? Such and similar questions have not so far become the focus of empirical servitization research.

6.7 Summary of the chapter

This chapter formally concludes the thesis. The findings of the study were initially summarized and the contributions were detailed. Practical implications, limitations and further research directions followed. Also, a section that considered the findings in light of pragmatism was embedded in the chapter.

7 References

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8 Appendices

Appendix (A): Some seminal and recent articles concerned with the phenomenon of relational influences on performance

For the sake of brevity and relevance I include works which consider performance of one of the two involved parties *per se* as outcome variable, as opposed to works which blend performance with other concepts such as buyer or supplier satisfaction. The table that follows includes the name of the authors, the type of performance considered the relational influences explored or tested and the precise context the study took place.

Paper	Type of performance	Relational influences explored/tested	Exchange parties
Lusch & Brown (1996)	Relative, perceived, business performance (sales and profit growth, profitability, cash flow, labour productivity)	Normative contracts lead to improved buyer (wholesaler) performance in situations of interdependence. Explicit contracts lead to performance when the supplier is heavily dependent. Relational behaviour (information exchange, flexibility, solidarity) do not have an effect on performance	Small wholesalers (less than 20 employees) and major suppliers
Carr & Pearson (1999)	Financial performance (ROI, profits % sales, net income, value of the firm)	A construct 'buyer-supplier relationship' (encompassing information exchange, operational linkages, cooperation) enhancing financial performance with the association being more pronounced for large firms.	Buyers from multiple industries and strategic suppliers
Cheung et al (2011)	Perceived, relationship performance (cost reduction, new product development, product quality improvement, on-time delivery rate)	Information sharing, joint sense-making and knowledge integration (as components of relational learning) enhance the performance of both parties in an	Five US manufacturers and their overseas suppliers from several industries

		international BS relationship	
Corsten et al (2011)	Relative, perceived aspects of operational performance in the relationship (cost, operational volatility, operational failure, innovation)	Information exchange, relationship specific adaptations affecting different aspects of performance while effect of trust is mediated through information exchange only.	BS relationships in the German automotive industry
Oosterhuis et al. (2011)	Supplier performance improvement (price, quality, innovation of parts, volume flexibility, delivery reliability)	Communication frequency positively affects supplier performance only when both suppliers and buyers perceive high technology uncertainty. The effect is negative the buyer perceives high uncertainty and while the supplier low.	86 matched dyads of manufacturers and suppliers
Cai et al. 2011	Supplier performance (product quality, on-time delivery, meeting costs, sales and service support)	Cooperative norms positively affect information exchange and operational linkages. The latter affects performance directly, while information exchange only moderates the effect of operational linkages	278 cross-industry manufacturer and (important) supplier dyads. Buyer's perspective
Lawson et al. 2008	Buyer's performance improvement (product and process design, product quality, lead time)	Relational capital (personal interaction, trust, mutual respect) and structural embeddedness (several aspects of communication at the managerial and technical levels) improve performance	111 UK manufacturers from several industries and their strategic suppliers. Buyer's perspective
Krause et al. (2007)	Buyer's performance improvement (product costs, quality, delivery, manufacturing flexibility)	Commitment, shared goals and values, interdependence improve performance. Information exchange is not associated with performance	373 manufacturers from various industries. Buyer's perspective
Wong et al. (2010)	Relationship performance (product or service quality)	Cooperation (extent to which the parties believe to have	95 cross-industry matched dyads of buyers and suppliers of

	improvement, cost reduction, pricing)	common goals) enhances information sharing (specifically sharing of practices) which enhances relationship performance	parts and services (outsourcing partners)
Yigitbasioglu (2010)	Buyer's performance (output, resources, flexibility)	Information sharing improves performance. The relationship is explained by the level of uncertainty (the higher it is, the higher the information sharing) and level of interdependence (as above)	221 Swedish and Finnish buyers from different sectors, and their key suppliers. Buyer's perspective
Autry & Golicic (2010)	Supplier performance measured objectively (on-time task completion and cost-efficiency)	Proposing and confirming that the association between relationship strength (duration, frequency and intensity of interaction) and performance is cyclical. Relationship strength increases performance and performance increases subsequent relationship strength	323 buyer – supplier relationships in the highway construction industry (measures retrieved from secondary data)
Handfield & Bechtel (2006)	Supplier performance (responsiveness)	Site asset specific investments (but not human) by the supplier increase buyer's trust. Trust increases supplier performance while buyer dependence on the supplier decreases it	97 manufacturer – supplier relationships in several industrial contexts in the U.S (manufacturer's perspective)
Poppo et al. (2008)	Performance of the vendor in terms of cost, output quality and responsiveness	Asset specificity, exchange tenure, and difficulty in measuring performance negatively moderate the positive effects of relational governance on performance	299 IT outsourcing partnerships in the U.S manufacturing and finance sectors (buyer's perspective)
Kauffmann & Carter (2006)	Non-financial performance of the (international supplier) in terms of delivery quality and reliability.	Social bonding and behavioural transparency increase supplier performance in both samples, extendedness of the relationship does not.	450 International buyer – supplier relationships. In 200 of them the buyer was from the U.S and in 250 the buyer was from Germany (buyer's

		Complexity of the purchased item affects behavioural transparency	perspective).
Fynes et al. (2008)	Supplier's Supply Chain Performance in terms of cost, flexibility, delivery, quality	Relationship quality as one-dimensional construct encompassing cooperation, communication, adaptations and trust, positively affecting supply chain performance. Effect moderated by relationship duration. Product standardization and position in the supply chain do not moderate the effect	200 manufacturers / suppliers from the electronics sector in Ireland (supplier's perspective)

Appendix (B): The Interview protocol

Opening questions	
1) What is your role and how does it fit in the organization?	
2) How old is your organization's relationship with TrucksUK?	
3) What is your general view about the working relationship between the two organizations?	
Topics / construct facets & manifestations	Specific questions
<i>Information exchange</i>	
Extent and quality of information sharing with: <ul style="list-style-type: none"> - contract maintenance team - regional engineer - co-located salesmen - technical department - national accounts salesmen - parts rep - parts department - business manager - high ranks (escalating) - during: purpose specific meetings - during: customer review meetings - during: Road-shows - during: out of hours 	<p>With whom in TrucksUK do you interact and communicate?</p> <p>- Frequency?</p> <p>Who from within the dealership interacts and communicates with TrucksUK?</p> <p>How do you judge the sharing of information? (quality, speed, openness, effectiveness, efficiency)?</p> <ul style="list-style-type: none"> - for day-to-day operational issues (new vehicles coming in etc) - for strategic issues (proprietary info, future actions, customer-related) <p>How does the level and quality of information exchange affect you?</p>
<i>Operational Linkages</i>	
Systems/routines/procedures	<p>To what extent are your routines and systems linked with TrucksUK's? (similarity / compatibility of IT systems)</p> <p>What is your opinion of, and experience with them?</p> <p>What is expected from you and your company? How do they affect you and your company?</p>
Joint activities: e.g. Going out to customers with: 1) co-located salesmen, 2) parts rep.	<p>What are the problems in your view?</p> <p>Have you got any activities linked or joint (with individuals from TrucksUK)?</p> <p>What are their implications for your workshop?</p>
<i>Legal Bonds</i>	
<ul style="list-style-type: none"> - Explicitness - Tolerance to deviations - Informal arrangements 	<p>What is your view on the contracts that govern your TrucksUK relationship? How important are they?</p> <p>What are their implications?</p> <p>How strict or rigid is your relationship with TrucksUK? What are the implications of TrucksUK attitude?</p> <p>Do you believe you that aspects of your working</p>

	relationship are not explicitly prescribed? Give examples. What happens when there is conflict?
<i>Cooperative Norms</i>	
Goal congruence / common future / mutuality etc.	How intertwined is your success with TrucksUK's success? What common goals do you perceive? What do you do to achieve the common goals? What are the implications for your workshop?
Support - TrucksUK engineer - cost sharing - salesmen	How do TrucksUK support you? What do you think about the level of support? What are the implications?
Cooperative behaviours (e.g.) - Dealer trying to get customers back in - Supporting salesman - Retaining customers under contract	How do you cooperate with TrucksUK people? What are the implications of these cooperative behaviours?
<i>Relationship specific adaptation</i>	
Adaptations in processes, procedures, operation	How have you adapted the way you operate to fit TrucksUK (e.g. staff, opening hours)? Have you invested in infrastructure? What are their implications?
What is your success based upon?	

Appendix (C): The survey instrument

Dear dealer principal / general manager

Since 2009 Cranfield University has been collaborating with [TrucksUK] as part of a government funded project that investigates the adoption of advanced service strategies by manufacturers.

The *Service Networks* project is trying to understand how successful networks operate. Within the commercial vehicles industry, the [TrucksUK] network stands out with its performance. This is evidenced through the high and constantly improving MOT first time pass rates, among other metrics. We strongly believe that this is not only due to the policies and measures introduced by [TrucksUK], but also because of the behaviours and actions of the service partners themselves. Relevant questions that we seek to answer through our research include:

- How are the service network members affected by the increased demands for faster and better service delivery?
- What are the reasons behind their good performance?
- What could [TrucksUK] or its partners do to enhance the performance of the network?

Our research would be benefited to a great extent if you helped us by responding to the attached questionnaire, and encouraging the key knowledgeable people about the [TrucksUK] part of the business in each of your [TrucksUK] network member workshops to respond as well. This may include the service manager, parts manager and workshop controller. You can either reply by filling the gaps and ticking the checkboxes which follow, and subsequently sending the completed questionnaires to:

Lynne Wall

Cranfield University

School of Management

Cranfield

MK43 0AL

Alternatively and much more conveniently, you can follow the link provided underneath and reply to the questionnaire online.

https://cranfieldsom.eu.qualtrics.com/SE/?SID=SV_3pCWWidOilgepRW

Completing the questionnaire takes approximately 10-12 minutes. Note that some of you and your delegates have already completed it. You do not need to reply again.

Please note that neither the answers, nor the data you provide will under any circumstances be shared with anybody outside the team of researchers at Cranfield University (this exclusion includes TrucksUK). It has been clearly explained to TrucksUK senior managers that dissemination of research findings will only be in the form of general conclusions and recommendations. They will, in their turn, communicate these conclusions to the network in a way they deem appropriate.

Thank you very much in advance,

Antony Karatzas

Supply Chain Research Centre

Cranfield School of Management

Please contact with any queries: Antonios.karatzas@cranfield.ac.uk

Please answer the questions one by one. Please do so with honesty and to the best of your knowledge. If possible, do not leave any unanswered items.

Please note that there is no right or wrong answer and that you are not going to be judged based on your answers!

I appreciate your cooperation.

As some of you may be principals / general managers of more than one of the [TrucksUK] dealership network members, please choose the location with which you are most familiar. Make sure you specify it underneath.

Workshop controllers / service managers please refer to the workshop you work in.

Which service workshop will your answers refer to?

For how many years have you *personally* been employed at the organization?

For how many years has this workshop under the current ownership been a member of the [TrucksUK] network?

How many people are currently employed at the workshop (including technicians, parts people, admin and management staff)?

Has the number of the workshop's immediate competitors in the commercial vehicles sector been decreasing, increasing or remaining stable during the last three years?

Decreasing	Remaining stable	Increasing
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Has the strength of the workshop's immediate competitors in the commercial vehicles sector been decreasing, increasing or remaining stable during the last three years?

Decreasing	Remaining stable	Increasing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All the remaining questions refer to the relationship between the workshop you have specified and [TrucksUK]. Please answer to the best of your knowledge. Tick only one box per question.

Drawing from 1) your experience of interacting with the different contacts you have within [TrucksUK], and 2) from your knowledge about the workshop's interaction with TrucksUK employees in general: please indicate the extent to which you agree with the following statements.

1) We share our workshop's sensitive information with [TrucksUK] (e.g financial data, information about competition...).

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2) [TrucksUK] is provided with *any* information that might help them.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3) Exchange of information between [TrucksUK] and this workshop takes place frequently, informally and/or in a timely manner.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4) We are provided with *any* information that might help us (e.g regarding new vehicles sales, new vehicles coming in, customer specific information...).

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5) We have frequent face-to-face planning/communication with our [TrucksUK] counterparts (e.g with the co-located salesmen, customer reviews, business development...).

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6) We keep each other informed about events or changes that may affect the other party.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7) Information exchange between [TrucksUK] and this workshop is timely.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8) Information exchange between [TrucksUK] and this workshop is accurate.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9) Information exchange between [TrucksUK] and this workshop is complete.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10) Information exchange between [TrucksUK] and this workshop is adequate.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11) Information exchange between [TrucksUK] and this workshop is reliable.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Based on your knowledge about the relationship between this workshop and [TrucksUK], indicate the extent to which you agree with the following statements.

1) We have got closely linked business activities with individuals from [TrucksUK] (e.g joint marketing, campaigns, visiting customers with the salesmen...).

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2) The efficient usage of the web-based systems of [TrucksUK] is essential to the workshop's operations.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3) Our workshop's operations are closely connected with the operations of [TrucksUK].

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4) In this workshop we adhere very closely to the procedures specified by the [TrucksUK] web-based systems.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5) In this workshop we are very comfortable using the [TrucksUK] web-based systems.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Based on your perception of the relationship between [TrucksUK] and this workshop, please rate the extent to which you agree with the following statements.

1) Both sides are concerned about the other's success and profitability.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2) [TrucksUK] will not take advantage of a strong bargaining position against this workshop.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3) [TrucksUK] and us must work together to achieve our mutual goals.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4) Our relationship with [TrucksUK] is better described as a cooperative effort rather than an uncooperative one.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5) When we have a problem (e.g with one of [TrucksUK] customers), [TrucksUK] help us solve it.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6) When we are solving problems jointly, [TrucksUK] are very cooperative in resolving them.

Strongly disagree		Neither agree nor disagree				Strongly agree	
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7) We support [TrucksUK] as much as we can.

Strongly disagree		Neither agree nor disagree				Strongly agree	
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8) In our relationship with [TrucksUK] whatever is specified in the legal contracts is followed very closely.

Strongly disagree		Neither agree nor disagree				Strongly agree	
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

9) The only way we seem to communicate effectively with [TrucksUK] is when everything is spelled out in detail.

Strongly disagree		Neither agree nor disagree				Strongly agree	
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

10) Over time, in our interaction with [TrucksUK] we have developed ways of doing things that never need to be expressed formally.

Strongly disagree		Neither agree nor disagree				Strongly agree	
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

11) In this workshop we adhere very closely to the terms and obligations specified in the legal contracts between us and [TrucksUK].

Strongly disagree		Neither agree nor disagree				Strongly agree	
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

12) [TrucksUK] are keeping their relationship with this workshop very rigid and formal.

Strongly disagree		Neither agree nor disagree				Strongly agree	
-------------------	--	----------------------------	--	--	--	----------------	--

1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Based on decisions and actions that this workshop has taken historically, please indicate the extent of your agreement with the following statements.

1) We have made significant investments in tools and machines dedicated *specifically* to the relationship with [TrucksUK].

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2) We have made substantial commitments in time and money for employee training to be able to deal with [TrucksUK].

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3) Just for [TrucksUK] we have changed the workshop's opening hours.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4) Just for [TrucksUK] we have changed our marketing strategy.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5) Just for [TrucksUK] we have changed the workshop's information systems.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6) If we switched to another commercial vehicles franchisor, we would lose a lot of investments made in the relationship with [TrucksUK] in this workshop.

Strongly disagree			Neither agree nor disagree		Strongly agree	
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you very much for your time.

ENDS