The Role of Trust at the Inter-Personal and Inter-Organisational Levels in Business Relationships

A thesis submitted to the University of Manchester for the degree of Doctor of Philosophy in the Faculty of Humanities

2013

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Abstract

Name of the University: The University of Manchester
Candidate’s Name: Bahar Ashnai, Degree Title: Doctor of Philosophy
Thesis Title: The Role of Trust at the Inter-Personal and Inter-Organisational Levels in Business Relationships
Date: January 2013

This study investigated and distinguished between two different aspects of trust (i.e. inter-personal and inter-organisationl) in business relationships. Reviewing the extant literature, a model of business relationships was developed, bridging social exchange theory and transaction cost economics, in addition to using some ideas from the resource-based view. This model was built on an overall framework consisting of three main groups of business relationship characteristics, (1) attitudes (inter-personal and inter-organisational trust) (2) behaviours (commitment, information sharing and relationship-specific investments) and (3) outcomes (financial and non-economic (soft) performance). The overall framework suggested that the attitudinal characteristics affect behavioural characteristics, which consequently affect relationship outcomes. Furthermore, the role of the other party’s opportunistic behaviour as an antecedent of trust aspects was suggested in the model. In line with the overall framework, a basic model was developed with sixteen hypotheses. The model was extended considering dependence as a moderator, and suggesting two additional hypotheses.

A questionnaire was designed to measure the characteristics in the model. Data collected from 331 informants (i.e. middle or senior managers knowledgeable about supplier relationships) was used to empirically test the model, using structural equation modeling. The analysis was performed testing the model fit and its underlying hypotheses, additionally using a control variable (the relationship length) and multiple-group analysis (controlling for the size of the company). Inter-personal trust and inter-organisational trust were found to be two distinct constructs (by means of implementing several techniques testing discriminant validity). The results supported the impact of inter-personal trust on inter-organisational trust, inter-personal trust impacting on commitment and information sharing while inter-organisational trust impacting on commitment, information sharing and relationship-specific investments (all in a positive way). The positive effect of behavioural characteristics on relationship outcomes was supported, commitment and relationship-specific investment influencing both financial and non-economic performance, while information sharing influencing non-economic performance. Relationship-specific investments impact positively on commitment, and financial performance impacts positively on non-economic performance. The moderating effects were supported; the positive effect of inter-organisational trust on relationship-specific investments and the positive effect of relationship-specific investments on commitment decrease as dependence increases. The negative effect of the other party’s opportunistic behaviour on trust dimensions was found, while its expected negative effect on relationship-specific investments was not supported in the whole sample. A mixture modeling approach was performed to explore this result. The negative effect was supported in a number of responses, as expected. However, surprisingly a positive effect was also found in a group of responses that were characterised by having relatively longer relationships with the supplier and observing a higher degree of opportunistic behaviour. Additionally relationship-specific investments had a stronger effect on its consequences within this group. Potential explanations for the findings with regard to this group were introduced. The research contributions and implications were also discussed.
Declaration

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Dedication

To my father (Mohammad Ashnai), mother (Mahvash Kamouneh) and sister (Shadi Ashnai), whose love and support make my work possible.

- Bahar
Acknowledgement

I would like to thank Professor Stephan Henneberg and Professor Peter Naudé for their supervision. Their guidance and encouragement has played a significant role in the completion and success of this dissertation. I am also very grateful to the examiners of this dissertation, Dr. Kathleen Keeling and Professor Lars Huemer, whose input has helped improve the quality of this work. My sincere thanks to the University of Manchester staff, including Manchester Business School post-graduate office and librarians, who have provided great support and scholarly access required for this work, additionally to my colleagues who have offered continuous motivation. I also thank my family and friends who have been devotedly with me throughout this journey. I extend special appreciation to my father (Mohammad Ashnai), mother (Mahvash Kamouneh) and sister (Shadi Ashnai).
Preface

Bahar Ashnai (the author of this thesis) has completed a bachelor’s degree in Electrical Engineering in Shahid Beheshti University in Iran, and a master’s degree in Marketing and Electronic Commerce in Lulea University of Technology in Sweden. She has been a research assistant and PhD candidate at Manchester Business School since August 2007. Her primary research interests are Business-to-Business Marketing, Sales, International Marketing/Selling and Quantitative Methods. She has published in peer-reviewed journals (the publications are listed below), has presented at a number of conferences (including Industrial Marketing and Purchasing, American Marketing Association, Society for Marketing Advances and Academy of Marketing Science) and won several awards (including the Best Paper Award for B2B/CRM Track at Society for Marketing Advances 2011 and 2010, the Literati Network Outstanding Paper Award for Excellence 2010, and the Pearson Education Best Abstract Award 2007). She has started her position as an assistant professor at William Paterson University in New Jersey in September 2012.

List of Publications:

List of Abbreviations

AMR – Academy of Management Review
AMJ – Academy of Management Journal
ANOVA – Analysis Of Variance
ASR – American Sociological Review
AVE – Average Variance Extracted
BJM – British Journal of Management
CFA – Confirmatory Factor Analysis
CFI – Comparative Fit Index
CL – Comparison Levels
CMV – Common Method Variance
CO – Commitment
CR – Construct (Composite) Reliability
C’d Model – Constrained Model
DE – Dependence
Def – Definition
df – Degree of Freedom
DM – Database Marketing
EFA – Exploratory Factor Analysis
eM – electronic Marketing
EJM – European Journal of Marketing
FP – Financial Performance
GOF – Goodness-Of-Fit
IS – Information Sharing
IT – Information Technology
IJRM – International Journal of Research in Marketing
IMM – Industrial Marketing Management
IM – Interaction Marketing
IMP – Industrial Marketing and Purchasing
IMR – International Marketing Review
JBR – Journal of Business Research
JIT – Just-In-Time
JHTMR – Journal of High Technology Management Research
JM – Journal of Marketing
JMR – Journal of Marketing Research
JMS – Journal of Management Studies
JR – Journal of Retailing
MBA – Master of Business Administration
MG Model – Multiple-Group Model
ML – Maximum Likelihood
MS – Management Science
M&S – Marks and Spencer
NA – Not Applicable
NE – Number of the Employees
NM – Network Marketing
NP – Non-Economic Performance
OP – Opportunistic Behaviour
OS – Organization Science
OT – Inter-Organisational Trust
O.L. – Outliers
PM – Psychology and Marketing
PT – Inter-Personal Trust
p. – Page Number
R – Reverse
RBV – Resource-Based View
RBV+ – Resource-Based View and Resource Dependence Theory
RMR – Root Mean Square Residual
RMSEA – Root Mean Square Error of Approximation
RNI – Relative Noncentrality Index
RS – Relationship-Specific Investments
RSI – Relationship-Specific Investments
R. – Relationship
R\(^2\) – Squared Correlation
SEM – Structural Equation Modeling
SES – Socio-Economic Status
SET – Social Exchange Theory
SET+ – Social Exchange Theory and Its Following Theories (i.e. Commitment-Trust Perspective, Dependence Perspective and IMP Perspective)
STD – Standard Deviation
SMJ – *Strategic Management Journal*
SRMR – Standardised RMR
SUR – Seemingly Unrelated Regression
TCE – Transaction Cost Economics
TCE+ – Transaction Cost Economics and Relational Norms
TM – Transaction Marketing
TSI – Transaction-Specific Investments
ULMC – Unmeasured Latent Method Construct
\(\alpha\) – Cronbach’s Alpha
\(\lambda\) – Factor Loading
\(\chi^2\) – Chi-Square
1 Chapter 1: Introduction

This chapter begins the dissertation by discussing what motivates this research. It also frames the research, discussing how it is informed by and contributes to the broader subject area of business-to-business marketing; a figure is presented that illustrates the dissertation chapters and their sections. It shows how these chapters and sections are guided and informed by each other.

1.1 Motivation

Marks and Spencer (M&S) was known for many years as a leader in the management of business relationships (Lewis 1995). For 70 years their special partner relationship with suppliers was the cornerstone principle of the company; they would not even have contracts. “A contract would weaken trust” said one M&S manager (Blois 2003, p. 81). There were close inter-personal relationships between the personnel of M&S and its suppliers; Both M&S and its suppliers used the term ‘trust’ extensively to describe their relationship; M&S would claim that the relationship with the suppliers was long term and based on trust; The suppliers were willing to take risks because there was a high level of trust in the relationship (Lewis 1995).

On the other hand, the suppliers’ comments about the relationship with M&S indicates an emotions-based judgement. They evaluated their relationship with M&S referring to the mutual feelings. The chairman of one of the M&S suppliers stated: “Effective cooperation with M&S is to a significant extent a cultural process... I am certain they feel the same way about us” (Lewis 1995, p. 193). M&S promoted close relationships between its senior personnel and those of its suppliers. Suppliers’ management conferences, frequent top-level
meetings, daily communications between suppliers’ and M&S’ senior and middle managers were routines that strengthened individual-level and inter-personal relationships (Blois 2003). Therefore the suppliers’ judgment of the relationship with M&S was based on personal perceptions influenced by emotions-based evaluations and the atmosphere created dominantly by M&S versus a rational-based evaluation.

Baird was one of M&S’s four major clothing suppliers. Well-informed observers believed that M&S-Baird relationship represented an excellent example of relationship management, at least until October 1999. After unusually poor sales and profits in 1998 and 1999, M&S informed Baird that its current order due for delivery in April would be its last and that its 30-year relationship as a supplier would end at that point. It was a great loss for Baird, making 4300 employees redundant at a cost of £15 million (Blois 2003). “We are extremely disappointed that such a long-standing relationship, based on trust, has to be terminated this way” said one of Baird’s managers (Gosling 2000, p. 22). The total breakdown of the relationship was demonstrated by Baird’s announcement that it was suing M&S (Blois 2003). The question as to whether a (trust-based) relationship existed before that remains. The news headlines indicated a shock caused by this breakdown. This response was almost certainly partially because of the public perception that M&S did have a trust-based relationship with its suppliers with a long term orientation (Blois 2003).

Trust (at least at the inter-personal level) between M&S and suppliers was evident in statements such as “should there be cutbacks, M&S would remain loyal to this group” (Lewis 1995, p. 138) (i.e. suppliers), stated by M&S implying a benign attitude to the suppliers. Thus, although both M&S and its suppliers use the term ‘trust’ when describing their relationship, there had been some indicators that the existence of trust was under question (at
least with regard to some aspects); for instance many of the requirements M&S imposed on its suppliers showed that there were significant issues with regard to that there was not trust (Blois 2003). For M&S supplier it was easy to move “from explicit trust to a habitual and confident state of lack of conscious trust” (Blois 1999, p. 209).

This case questions the appropriateness of the conceptualisation of trust as a central characteristic in business relationships. It emphasises that trust needs to be recognised as a complex concept. It is necessary to evaluate trust in business-to-business relationships investigating with regard to what aspects and to what degree it exists. Clarification of its different aspects operating at different levels is critical. It emphasises the importance of evaluating trust, distinguishing between the individual and inter-personal aspect from the institutional and inter-organisational one.

In the current turbulent marketing environment, organisations form networks and cooperate closely within their business relationships in order to survive, a phenomenon that can be explained via lenses such as social exchange theory (Cook and Emerson 1978), resource dependence theory (Pfeffer and Salancik 1978), transaction cost theory (Achrol 1997) and the resource-based view of firms (Palmatier et al. 2007a). In business-to-business marketing it is critical to understand such business relationships, looking at the interactions between the companies (Ford and Håkansson 2006b); and to understand how these relationships are maintained and developed (Ford et al. 2006). Trust is posited as an important aspect for successful business relationships (Morgan and Hunt 1994). It is therefore crucial to gain insights into how trust affects business relationships. However, trust is a multi-dimensional construct and studying its various aspects extends our knowledge on trust in business relationships (Fang et al. 2008). Scholars (e.g. Zaheer et al. (1998) and Mouzas et al. (2007))
distinguish between two different notions of trust, those operating on the inter-personal and inter-organisational levels. However, many studies consider trust as a uni-dimensional construct, and there are too few studies that clarify and empirically test the different sub-constructs (Fang et al. 2008). Thus, there exists some ambiguity in the literature about the precise role of trust as it operates at different levels of analysis, and about how trust impacts on performance (Zaheer et al. 1998).

As was evident in the M&S case, the nature of business-to-business relationships differs from the merely individual-based relationships, such as marriages (Blois 2003). Some similarities among business-to-business relationships and such individual-based relationships can inform researchers and help them understand the role of trust (e.g. Dwyer et al. 1987). However when studying inter-organisational activities, it is important to avoid “the easy analogy from individual to institutional issues that abstracts from institutional constraints” (Hardin 1993, p. 511) and consider the inter-organisational operating issues in addition to inter-personal operating ones. Scholars warn of direct analogies between marriage and business-to-business relationships, supporting the idea that differences between these forms of relationships should be noted. Within a marriage (or any close personal relationship) it is not normal for the parties to follow some policies, for instance regularly, even if infrequently, formally assessing the value or quality of the relationship (Blois 2003).

Distinguishing between different aspects of concepts in studies of business management topics, particularly the inter-personal and inter-organisational aspects, focuses on how these concepts operate at these two levels and has been encouraged (Dwyer et al. 1987; Doney and Cannon 1997; Zaheer et al. 1998; Currall and Inkpen 2006; Fang et al. 2008). The management of channel relationships benefits from understanding level issues. This has been
pursued by scholars investigating different strategic management concepts. For instance, in corporate branding strategy, organisation-level versus salespeople-level issues are explored, and potential misalignment between these issues and its consequences are examined (Anisimova and Mavondo 2010); understanding and distinguishing between personal-level and organisational-level issues help better explaining organisations’ performance, for instance it is considered when studying corporate brand perceptions (Yaniv and Farkas 2005). Such examination can help organisations to improve their performance by appropriate staff (e.g. salespeople) training.

It is critical for managers to know how they can better manage their business relationships; it is important for them to understand how different relationship characteristics play a role in the outcomes of the relationship. Successful management of inter-organisational relationships is critical to firms (Palmatier et al. 2007a) as it can improve their financial performance (e.g. their sales and profit) (Palmatier et al. 2006). It can also create value by other means (Cannon and Homburg 2001); it can promote learning, for instance with regard to the end-user’s needs and preferences (Selnes and Sallis 2003; Beugelsdijk et al. 2009). Such outcomes can be enhanced by the way firms behave in the relationship (i.e. how firms invest in the relationship (Heide and John 1990) and how they communicate and share information (Poppo et al. 2008)).

The firm’s attitude with regard to the relationship influences the way it behaves in the relationship (attitude-behaviour theory: Fishbein and Ajzen (1975)). Trust influences commitment (Morgan and Hunt 1994) and commitment itself influences relationship outcomes (Palmatier et al. 2007a). Also the way the other party behaves in the relationship can influence the level of the firm’s trust. Understanding the impact of trust (with a focus on
its two different aspects, inter-personal and inter-organisational) as an attitudinal characteristic on behavioural characteristics (i.e. commitment, relationship-specific investments and information sharing) and consequently on relationship characteristics presents an attitude-behaviour-outcome framework analysis which is insightful for management of business relationships.

There are studies on the inter-play of trust and commitment (Morgan and Hunt 1994), the impact of commitment and trust on relationships outcomes (Palmatier et al. 2007a), focusing on inter-organisational trust. On the other hand, a few studies investigate the role of trust with a consideration of its different operating levels (Chow and Holden 1997; Doney and Cannon 1997; Zaheer et al. 1998; Fang et al. 2008; Jiang et al. 2011). They examine their impact on resource investments and financial outcomes (e.g. Fang et al. 2008). However, the extant literature has not investigated the attitude-behaviour-outcome framework of business relationships with a focus on differentiating between inter-personal and inter-organisational aspects of one of the main business relationship characteristics (i.e. trust). This study addresses this gap.

Particularly, in the management of inter-organisational relationships it is important to understand the relationships between the inter-personal and inter-organisational operating factors, especially with regard to trust. Trust is a cornerstone of inter-organisational relationships (Morgan and Hunt 1994; Geyskens et al. 1996; Fang et al. 2008); a review of the studies that have investigated this concept and emphasised on its importance is presented in the following chapter of this dissertation. It is important to understand how these two different aspects impact on each other. Trust is a concept involving emotions as well as rationality, and influenced by the evaluation of other party’s behaviours and intentions. The
emphasis on the role of inter-personal trust and inter-organisational trust is relevant in terms of understanding how this pivotal concept works in inter-organisational relationships. Additionally it contributes to the understanding of inter-personal and inter-organisational aspects of these relationships in general. This study examines the role of trust looking at its two different aspects and analyses how one aspect influences the other one. Framed in an attitude-behaviour-outcome model, it also investigates how these two aspects of trust influence the behavioural characteristics and consequently the relationship outcomes. It also examines the role of the behaviour of the other party (particularly the other party’s opportunistic behaviour). This examination, in spite of its importance, has not been done before.

This study aims to address these issues by developing a nomological model of trust at both the inter-personal and inter-organisational levels in business relationships, which is tested empirically, including its effects on other attributes and outcomes of business relationships. As a result, the pivotal construct of trust in business relationships is further qualified, and the role of opportunistic behaviour as an antecedent of trust is clarified. As such, the results provide further qualifications of how one of the pivotal aspects of business relationships, namely trust in its different facets, contributes to collaborative business relationships, thereby providing valuable theoretical input as well as guidance for relational management practices.

1.2 Framing

This research looks at the literature of business-to-business relationships. It is particularly informed by the literature on trust in inter-organisational studies and how this has been addressed at different operating levels. The study also benefits from the business-to-business
and inter-organisational studies with a focus on various business relationship characteristics and how they inter-play with trust. The following chapters review the relevant previous studies and discuss how they inform this research.

The dissertation structure is presented in Figure 1-1. In this figure the dissertation’s overall structure and flow is illustrated, introducing different parts, chapters and sections. It shows how different chapters and sections inform each other and how the dissertation is progressed through them. The five major parts are (1) introduction and objectives, (2) literature review, (3) operationalisation and research design, (4) analysis and (5) findings and conclusions. (1) Introduction and objectives include chapters one and three. Chapter one (i.e. introduction) consists of the discussion about the motivation of this research in addition to its framing. Chapter two presents the literature review and chapter three introduces the research questions. Chapter three is informed by chapter two (i.e. literature review), which includes general research objectives and literature review. Framing and motivation guides the general research objectives and determines what literature informs this research. Based on the review of the extant literature the research questions are specified.

In the second chapter the literature of business-to-business marketing is introduced, and different views of business relationships are discussed. Characteristics of business relationships are introduced and trust as a key concept within those characteristics is particularly examined. Finally different operating levels of trust, investigated in previous studies, are reviewed. Additionally, in this part the development of the model is discussed. The model development is based on the methodological standpoint undertaken in the research. The discussion about the epistemological basis for the research method is
introduced at the beginning of chapter four. This section is influenced and informed by the research questions introduced previously.

The development of the model is based on several sections; these discuss the constructs that are included in the model. Inter-personal trust, inter-organisational trust and commitment are introduced first. The opportunistic behaviour of the other party, the behavioural characteristics (i.e. information sharing and relationship-specific investments) and the relationship outcomes are discussed. The constructs’ measurements are reviewed and their relevant hypotheses are developed. Based on these hypotheses a basic model is developed and introduced. The construct dependence is then discussed with a presentation of its measurement and relevant hypotheses, which leads to the development of a model with the moderating effects.

The third part is the operationalisation and research design. Chapters five and six form this part. In chapter five (i.e. measurement and pretest), the measurement scales are selected. As is shown in Figure 1-1, this section uses the corresponding measurement scales for the constructs, which are reviewed in the relevant sections of the chapter four. The reflective measurement models are explained in this chapter, as they are used in this research. The last section of this chapter presents the procedures undertaken to pretest the measurement scales. Chapter six introduces the unit of the analysis, the empirical informants, the sample and the framing of the questionnaire. The non-response bias and common method bias are analysed in this chapter as well.

The fourth part (i.e. analysis) consists of chapters seven and eight. The analysis techniques used in these two chapters are based on the research method, which is elaborated in chapter
six. In chapter seven the constructs measures’ validity and reliability are tested. Exploratory Factor Analysis (EFA) is performed to investigate the items loadings into the constructs. The measurement model is tested by Confirmatory Factor Analysis (CFA) as a Part of Structural Equation Modeling (SEM). Constructs’ reliability using Cronbach’s alphas and the discriminant validity of the constructs are tested. In chapter eight the data is analysed for the purpose of testing the models and their underlying hypotheses.

The first section of chapter eight introduces SEM as the primary analysis technique used in this study. The following sections test the models and their hypotheses. The mediating effects embedded in the model and the moderating effects suggested in chapter four (model development) are tested. The impact of relationship length as a control variable is examined. Multiple-group analysis is performed to control for the size of the companies. Finally using mixture modeling results with regard to a particular relationship (i.e. the effect of opportunistic behaviour on relationship-specific investments) that was not supported in previous sections is further explored.

The fifth part (i.e. findings and conclusions) consists of the final chapter of this dissertation. Chapter nine (i.e. discussion and conclusion) discusses the findings of the analysis with regard to the basic model and the model with the moderating effects. This discussion is based on the analysis in the previous chapter, also the outlined research questions, literature review and research method chapters. This chapter concludes the dissertation by presenting a discussion of the contributions and implications of the research, the limitations and a proposition for future research. It also includes an overall conclusion. These sections are informed by the introduction chapter, research questions and method discussed in the previous chapters.
2 Chapter 2: Literature Review

In this chapter the general research objectives informed by the previous chapter are presented. The extant literature in business-to-business marketing, business relationships and their characteristics, particularly trust, are reviewed. Business-to-business marketing and its differences to business-to-consumer marketing are discussed. The Industrial Marketing and Purchasing (IMP) research group’s overall perspective as one of the perspectives that informs this research particularly with its emphasis on different aspects of trust in business relationships, is discussed, and the benefits of long-term relationships in business marketing are argued.

The next section reviews business relationships and various views of them. This review consists of the transaction cost economics perspective, the relational norms perspective, the social exchange theory perspective, the commitment-trust perspective, the dependence perspective, the IMP perspective, the resource-based view and the resource-dependence perspective. It explains how these perspectives are related to, and inform, this research. The next section reviews various characteristics of business relationships that are introduced in the extant literature. It is followed by a section focusing on trust as a key business relationship characteristic. Also two aspects of trust operating at different levels that are the focus of this study are reviewed.

2.1 General Research Objectives

This study contributes to understanding the role of trust in business relationships with consideration of two different levels of operation, the inter-personal and inter-organisational
ones. It attempts to investigate how one aspect of trust impacts the other. It also tries to understand the impact of these two aspects on business relationships, and in doing so it examines the impact of trust on other characteristics of business relationships and the outcomes of those relationships. In doing so, the study incorporates attitudinal and behavioural characteristics of business relationships. It also seeks to incorporate the behaviour of the other party.

2.2 Business-to-Business Marketing

The distinction between consumer and industrial marketing is acknowledged. Alternatives to the term industrial marketing are business marketing or business-to-business marketing (Ames 1970; Webster 1978; Cooke 1986; Gummesson 1987; Lilien 1987). By definition industrial marketing is marketing to the organisational buyers, whereas consumer marketing is marketing to the ultimate consumer (Cooke 1986). The organisation can be a corporation, a public authority, a reseller, a hospital, etc. (Gummesson 1987). Business marketing is about how marketing takes place between businesses (Ford et al. 2002).

One approach with regard to business-to-business marketing has been on the basis of short-term transactional exchanges, which suggests that companies mainly focus on minimising costs and achieving economic advantages through their transactions with other companies (Williamson 1975). Another approach differentiates discrete transactions from relational exchanges. A relational exchange is longer in duration, the history and the anticipated future influences the exchange, obligations are customised, important personal, non-economic satisfaction are derived (Macneil 1978; 1980). The development of business-to-business
relationships based on the relational aspect of business-to-business exchanges is further emphasised by scholars (Ford 1980; Dwyer et al. 1987; Anderson and Narus 1990).

The introduction of the relational aspect of business-to-business marketing resulted in discussions clarifying and distinguishing between different types of marketing relationships and strategies. Grönroos (1991) suggests the marketing strategy continuum, distinguishing between transaction marketing and relationship marketing. Webster (1992) suggests a continuum with seven types of marketing relationships. These discussions characterise relational aspects of business marketing; which are based on a long-term perspective rather than a short-term; it is interactive and focused on managing the customer base rather than monitoring the market share; and is based on mutual trust and commitment.

Scholars advocate a shift from a transactional to a relational approach (Sheth et al. 1988; Grönroos 1990b; 1990a; Christopher et al. 1991; Houston et al. 1992; Sheth and Parvatiyar 2000), placing more emphasis on relationships with customers and other stakeholders including suppliers and channel intermediaries (Morgan and Hunt 1994; Wilkie and Moore 2003; Vargo and Lusch 2004). The contemporary marketing practices literature investigates whether there has been such a shift in marketing practice from transactional to relational marketing. These studies seek to bridge between theory and practice by understanding how firms actually relate to their markets (Brodie et al. 1997; Brodie et al. 2008).

Contemporary marketing practices literature proposes four forms of marketing, extending the transactional-relational polarisation, (1) Transaction Marketing (TM) involves attracting and satisfying potential buyers by managing the elements in the marketing mix, and actively manages communication ‘to’ buyers in the mass market in order to create discrete, arms-
length transactions. Database Marketing (DM) uses database technology to create a relationship, thus allowing firms to compete in a manner different from mass transactional marketing. It attempts to retain customers, although marketing is still ‘to’ the customer. It is also introduced as electronic Marketing (eM) using the Internet and other interactive technologies to create and mediate interactions with customers. Interaction Marketing (IM) implies interaction ‘with’ the customer, as both parties in the dyad invest resources to develop a mutually beneficial relationship. Similarly, Network Marketing (NM) is ‘with’ the customer but occurs across and among organisations. In this practice, managers commit resources to develop their firms’ position in a network of various firm-level relationships (Brodie et al. 1997; Coviello and Brodie 2001; Coviello et al. 2001; Coviello et al. 2002; Brodie et al. 2008).

These studies of contemporary marketing practices show that firms are comfortable with and apply multiple (i.e. ‘parallel’ or ‘hybrid’) marketing practices, suggesting that a view of ‘transaction versus relationship’ marketing is a rather simplistic dichotomy. Although applying more modern marketing techniques, such as using interactive and networked relationships, rather than relying on a more traditional approach to the market, contributes to a firm’s success (Coviello 1994), these practices co-exist in practice (Brodie et al. 1997; Coviello and Brodie 2001; Coviello et al. 2002; Brodie et al. 2008). Other studies have also theorised the variety of business-to-business marketing approaches in terms of the level of interaction and their transactional versus relational nature (Grönroos 1991; Webster 1992; Holmlund 2004). This study acknowledges the existence of different marketing practices and approaches, but focuses on relationships that are long-term, highly interactive and important and incorporates ideas based on the relational view to investigate them.
The relational view recognises the increasing importance of relationships between firms as a unit of analysis for explaining profit and performance (Anderson et al. 1994; Naudé and Buttle 2000; Ulaga and Eggert 2006; Palmatier et al. 2007a; Palmatier 2008; Palmatier et al. 2008); it suggests that a firm’s critical resources may extend beyond firm boundaries, including the inputs by suppliers. It emphasises that to understand competitive advantage, the unit of analysis should be the relationship between firms. It goes on to argue that several primary issues must be analysed including relationship-specific assets, knowledge-sharing routines, complementary resource/capabilities and effective governance (Heide and John 1992; Heide 1994; Dyer 1996; Dyer and Singh 1998; Joshi and Stump 1999; Cannon et al. 2000; Håkansson and Snehota 2000; Gilliland and Bello 2002; Palmatier et al. 2008; Wang et al. 2008).

Ford et al. (2002) define business marketing as the task of selecting, developing and managing customer relationships for the benefit of both parties (i.e. customer and supplier) with regard to their own skills, resources, technologies, strategies and objectives. Ford, Håkansson, and other scholars of the IMP group have founded a research stream on the principle that relationships are a key factor in business marketing (Ford 1980; Håkansson 1982). The IMP approach is one of the perspectives that informs this research with its recognition of the role of business relationships, the social aspects of business relationships, trust and commitment (Ford 1980; Håkansson and Snehota 1995a; Blois 1999; Mouzas et al. 2007). The IMP approach is discussed in more detail later in this chapter.

The research in the area of business marketing attempts to understand and identify ways of establishing, developing, and maintaining successful business relationships (Ford 1980; Dwyer et al. 1987; Morgan and Hunt 1994; Håkansson and Ford 2002). With regard to any
firm, ten forms of business relationships can be considered, that are the relational exchanges involving (1) goods suppliers, (2) services suppliers (grouped as supplier partnerships), (3) competitors, (4) nonprofit organisations, (5) government (categorised as lateral partnerships), (6) ultimate customers, (7) intermediate customers (classified as buyer partnerships), (8) functional departments, (9) employees, and (10) business units (grouped as internal partnerships) (Morgan and Hunt 1994). While the final three concern aspects of internal marketing, the first five types involve business-to-business or business-to-government relationships. Also types 6 and 7 refer to business-to-business relationships (as long as they involve business customers). Considering business-to-government relationships as a form of business-to-business relationships, it is noticed that business-to-business relationships are relevant in many relational exchanges with which the companies deal. It is critical to understand them and their different aspects such as attitudinal characteristics (e.g. trust), behavioural particularities (e.g. sharing of information) and outcomes (e.g. financial outcomes). This research contributes to this understanding.

There are some similarities between business marketing and consumer marketing, for instance both consumer and business purchasers are affected by the previous experiences, they both consider possible future purchases; and need reassurance with regard to aspects of the purchase that cannot be assessed by themselves, therefore solicit word of mouth and seek advice from third parties (such as specialists and friends) (Granovetter 1973; Kotler and Bloom 1984; File et al. 1994; Gummesson 1994; Ford et al. 2002). They both make some of their concerns explicit to the suppliers, but some are implicit in discussions, and therefore harder for the marketer to identify (Ford et al. 2002), for instance both adopt various styles of complaint behaviour (i.e. exhibit action, exhibit voice complaint behaviour, or exhibit no-action) (Trawick and Swan 1981; Hansen 1997; Hansen et al. 1997).
There are differences between business marketing and consumer marketing too. They have different sorts of needs and problems. In general, business marketing and its relevant concepts (e.g. inter-organisational trust) are more complex than consumer marketing and its underlying concepts (Jap 2001; Ford et al. 2002; Curral and Inkpen 2006; Hutt and Speh 2009). Therefore it is more challenging for those who practice and study it. Consumer marketers, unlike business marketers, deal with thousands or millions of customers who can be insignificant individually and can be grouped in homogeneous segments (Kotler et al. 2010; Linoff and Berry 2011). Handling a few very large and important customers is totally different from handling many small customers (Gummesson 1987; Anderson and Narus 1990; Ford et al. 2002). The characteristics of industrial markets are summarised as below:

- Interactive business relationships are not only marketing interactions; there are also interactions during which the service or product is produced. So the customer is often a co-producer (Gummesson 1987). The success of each business partner depends in part on the other one (Anderson and Narus 1990; Wilson 1995), calling for a high level of collaboration and partnership (Ford 1980; Powell et al. 1996; Dyer 1997; Jap 1999; 2001) or even integration (Johnson 1999; Das et al. 2006; Esper et al. 2010; Flynn et al. 2010)

- There are usually several people involved in a business purchase; these people are often professionals, making decisions in settings such as organisational buying centres (Johnston and Bonoma 1981; Gummesson 1994; Ford et al. 2002; Chandler and Johnston 2012)

- A business purchase or sale is not an isolated event, it is affected by the previous experience of both customer and supplier, with each other (i.e. the relationship
history) and with others (Anderson and Weitz 1992; Doney and Cannon 1997; Ford et al. 2002; Poppo et al. 2008; Fink and Kessler 2010)

- There are usually long lead times before industrial purchases take place (Håkansson 1982). The business purchase involves a sequence of activities such as recognising a need and a general solution, searching for potential sources, acquiring and analysing proposals, evaluating proposals and selecting supplier(s) (Webster and Wind 1972; Sheth 1973; Chandler and Johnston 2012). A business purchase can also take a long time from the time of issuance until the time of delivery (Ford et al. 2002)

- Relationships between sellers and customers are more often highly stable, parties expecting and seeking the relationship’s continuity; Changes in the composition of the customer and supplier markets are fewer and occur relatively slowly (Ford 1978; Håkansson 1982; Gummesson 1987; Anderson and Weitz 1989)

- In many cases each business customer is important and in charge of a significant proportion of the total sales. In addition each supplier is typically individually important and key; business partners in business-to-business markets are fewer but increasingly significant (Anderson and Narus 1990; Ford et al. 2002; Hutt and Speh 2009)

2.2.1 IMP Research Group

The IMP approach informs this study in addition to other perspectives such as transaction cost economics, which are discussed in the following sections of this dissertation. The IMP perspective is particularly important to this research due to its emphasis on two aspects of trust operating at inter-personal and inter-organisational levels (e.g. Blois 1999). The IMP perspective emphasises the importance of business relationships (Håkansson 1982;
Håkansson and Snehota 1995a; 2000), notes the inter-personal aspects of the business-to-business exchange process (Håkansson and Snehota 1995b), such as informal cooperation and continues to rethink business marketing by reinforcing the role of interactions, social resources and relationships (Håkansson et al. 2004; Ford and Håkansson 2006b). These focuses inform this research, and lead to further development of its objectives and questions.

Furthermore, the IMP approach investigates different issues with regard to business relationships, such as the role of technology (Håkansson 1987; Håkansson and Waluszewski 2002), the relationship process and structure (Håkansson et al. 1976; Ford and Håkansson 2006b; Ford et al. 2011), stability factors (Ford 1978), business networks (Håkansson and Snehota 1989; Håkansson and Johanson 1992; Håkansson et al. 2009; Mouzas and Ford 2009; Ramos and Ford 2011), business contracts (Mouzas and Ford 2004; 2006), and international business (Ford 1984).

The IMP perspective looks at ongoing business relationships with a focus on exchange processes; it introduces relationships in industrial marketing as being usually close and long term, and involving complex patterns of interaction between the two companies (Håkansson 1982). The group has been very active in working on areas of business marketing, purchasing and inter-company networks (Johanson and Mattsson 1985; Håkansson and Snehota 1989; Axelsson and Easton 1992; Johanson and Mattsson 1994; Ford et al. 2002). The IMP interaction model has been the result of collaboration between researchers in France, Italy, Sweden, West Germany and Great Britain. The original book by Håkansson (1982) describes purchasing and supplying firms from those countries, in order to generate a more comprehensive picture of business relationships. They emphasise the importance of ongoing long-term relationships between buyers and sellers in industrial markets. The interaction
approach challenges the concentration on a single and discrete purchase. It emphasises that what happens between the company and others constitutes the core of business and argues that the relationship between buyers and sellers involves complex patterns of interactions (Håkansson and Ford 2002; Ford et al. 2011).

The four basic elements introduced in the interaction approach are (1) the interaction process, (2) the participants in the interaction process, (3) the environment within which interaction takes place and (4) the atmosphere affecting and affected by the interaction (Håkansson 1982). (1) The interaction process includes individual episodes, which each consists of several exchanges (i.e. product or service, information, financial and social exchanges) (Ford 1978; Håkansson 1982). (2) The interaction and relationship depends on the characteristics of the parties involved, which include the firms’ characteristics in addition to their position in the market and the forms of products or services that are being delivered. (3) The inter-organisational relationships are also influenced by the environment of the interaction. This includes the wider context (e.g. the network, channel and social system) within which the interaction takes place. (4) The atmosphere of the interaction is influenced by the interaction and relationship between the organisations. This concerns the power-dependence issues as well as how the two organisations cooperate and what they expect from each other (Håkansson 1982; Ford et al. 2011).

The structure of long-term business relationships includes social and economic dimensions (Anderson et al. 1994; Barnes et al. 2007). It involves specific characteristics such as a certain degree of mutual trust, commitment, dependence and relationship-specific investments (Anderson et al. 1994; Tellefsen 2002; Barnes et al. 2005). Business relationships’ concepts and characteristics are investigated in the literature. For instance
different aspects of trust are examined (Blois 1999; Mouzas et al. 2007), also the relationship of trust with other characteristics is investigated (e.g. with social and economic capital (Finch et al. 2010), information (Denize and Young 2007) and commitment (Jiang et al. 2009)).

The IMP approach assumes that “a company’s technological, social and economic features are the result of its interaction with other companies” (Håkansson et al. 2004, p. 9). The focus of the IMP Group on understanding business relationships versus transactional exchanges and the interactive view of businesses leads to a dyadic and consequently a network view of business activities, which further develops understanding of the business-to-business markets (Håkansson and Ford 2002; Ford and Håkansson 2006a; Henneberg et al. 2006; Bocconcelli and Håkansson 2008; Johnsen and Ford 2008; Håkansson et al. 2009; Mouzas and Ford 2009; Henneberg et al. 2010; Ford et al. 2011).

2.3 Business Relationships and Different Views of Them

2.3.1 Business Relationships

As mentioned before, business-to-business relationships are based on relational exchanges that are longer in duration, reflecting an ongoing process in comparison to discrete transactions. Discrete transactions, on the other hand, have discrete beginnings, short durations and sharp endings (Dwyer et al. 1987). Distinguishing between their differences is important when trying to understand business relationships. The most important factor that differentiates discrete transactions from relational exchanges is that relational exchanges transpire over time (Macneil 1978; 1980). In an early study of inter-organisational relationships Levine and White (1969, p. 120) define exchange as “any voluntary activity
between two organisations which has consequences, actual or anticipated, for the realisation of their respective goals or objectives”.

Partnerships, as a form of business-to-business relationships, are defined as purposive strategic relationships between independent firms who share compatible goals, strive for mutual benefits, and acknowledge a high level of mutual interdependence; firms join efforts to achieve goals that each firm could not reach easily if they act alone (Mohr and Spekman 1994). Wilson and Jantrania (1995) introduce a strategic alliance or partnership as a relationship where a synergistic combination of individual and mutual goals encourages the partners to invest time, effort and resource to create a long term collaboration that achieves individual and partnership strategic advantage. This definition contains the motivator of a relationship.

In the early studies of inter-organisational exchanges the importance of understanding inter-organisational linkages and ties are emphasised; Benson (1975) concentrates on the notions of power, dependence, control and how political economy influences an inter-organisational network, and also on how organisations’ power and market position affect the extent to which they can influence the resource flows. Such research looks at dominance of organisations in the network in which they operate and how they can decide with regard to acquisition and defence of resources. The relevance of exploring business-to-business relationships in the marketing literature is verified by ongoing research and publications in leading journals on the topic (e.g. Cannon and Perreault 1999; Jap 1999; Wathne and Heide 2000; Cannon and Homburg 2001; Kim and Hsieh 2003; Narayandas and Rangan 2004; Ulaga and Eggert 2006; Bolton et al. 2008; Joshi 2009).
These studies include supplier relationship management (e.g. Barnes et al. 2007; Joshi 2009) as well as business customer relationship management (e.g. Palmatier et al. 2007b; Bolton et al. 2008) and distributor relationship management (e.g. Anderson and Narus 1990; Kim and Hsieh 2003; Skarmeas et al. 2008). Firms seek continuous supplier performance improvement, using available mechanisms and tools, because it helps them become more competitive in the market (Joshi 2009). The importance of successful business relationship management in today’s competitive markets is re-emphasised by Ulaga and Eggert (2006). They focus on how suppliers can gain and sustain their status by value-based differentiation in business relationships. The results of their study challenge the traditional focus on quality, delivery, costs and price. They show that relationship benefits have a stronger potential for differentiation in supplier relationships.

Businesses can enhance their competitive position by strategic relationship management. Buyers can reduce their current supplier base by creating single source relationships. This allows them lower costs through Just-In-Time (JIT) and quality programs. This is only possible by building and maintaining a close relationship with the supplier (Wilson and Jantrania 1995). Long-term business relationships reduce obstacles and result in stability, which benefits firms. Such obstacles for the buying firms can be associated with the problems that firms face in three different areas: in the process of search and evaluation of the potential supplier, those with regard to the firms’ internal routines and staff experiences, and those due to technological adaptation in the firm’s machinery and its knowledge (Håkansson 1982).

Change causes problems for selling firms too. The selling firm must search and evaluate customers. It has to decide whether it is ready to establish new business relationships. There are costs associated with building new contacts and adapting to the specific requirements of
new customers (e.g. technical requirements). Relationships are expensive and it is cost saving to maintain old relationships rather than building new ones. In addition it is more likely that firms get relevant information with regard to purchasing plans and also get new ideas for product development from their old customers (Håkansson 1982; Håkansson and Ford 2002; Ford and Håkansson 2006a; 2006b; Bocconcelli and Håkansson 2008; Johnsen and Ford 2008; Håkansson et al. 2009; Ford et al. 2011).

The firms’ perception of the likelihood that the relationship will continue (expectation of continuity) reflects the degree to which a long-term relationship has been established between them (Anderson and Weitz 1989). The selling firms benefit from the expectation of continuity as the customer is more likely to assist in new product development, conduct and report formal and informal market research, engage in activities with a longer term payoff (e.g. customer education, and other forms of sales support), be responsive to the selling firm's requests and react to unforeseen contingencies with flexibility (Etgar 1976; Arndt 1979; Williamson 1985; Thorelli 1986). A strong relationship with customers has a positive effect on the selling firm’s financial performance (McKenna 1991; Palmatier et al. 2007a). Long-term relationships and partnerships can also help firms gain competitive advantage in the marketplace, access new technologies, be more innovative, access additional knowledge and skills and also share the risks (Ganesan 1994; Mohr and Spekman 1994; Morgan and Hunt 1994).

2.3.2 Business Relationships in Different Perspectives

Business-to-business marketing and inter-firm studies investigate business relationships with various considerations and focuses. Different approaches have been undertaken in these
Theories have been developed with a transaction cost economics perspective investigating inter-organisational relationships (Heide and John 1990; Noordewier et al. 1990; Parkhe 1993), which explore the role of specific investments and opportunism in business relationships and their impact on relationship outcomes. The outcomes considered include performance, inter-firm cooperation and joint action. These models have been used as a basis of a range of more recent studies into channel and inter-firm relationship management issues (e.g. Cavusgil et al. 2004; Heide et al. 2007). The relational norms perspective (Heide and John 1992) is rooted in transaction cost economics. But it challenges some aspects of that perspective particularly its underlying behavioural norm of opportunism and incorporates ideas from the earlier introduction of discrete-versus-relational norms by Macneil (1980).

The social exchange perspective is another basis of several dominant theories in understanding business relationships. Morgan and Hunt (1994) build commitment-trust theory informed by social exchange theory. Bucklin and Sengupta (1993) and Hibbard et al. (2001) build on social exchange theory with a dependence perspective. Dependence among partners is a consequence of exchange among them. One way of increasing control over resources is increasing interdependence between partners (Pfeffer and Salancik 1978).

Bucklin and Sengupta (1993) argue that imbalances in power and invested resources are drawbacks to alliance operations and have a significant role in limiting alliance success; they suggest that reducing power imbalance increases the effectiveness of the alliance. Hibbard et al. (2001) investigate how companies react to a destructive act by their partner, and how such reactions are influenced by dependence-related characteristics, considering interdependence, total and relative dependence. The IMP group approach, which was discussed previously, is also based on the social exchange perspective; it emphasises on the social exchange and the role of individuals in the inter-organisational interactions and considers the social bonds and
relationships in business-to-business marketing and purchasing and networks (Håkansson 1982; Blois 2003; Ford and Håkansson 2006a; Ford et al. 2011).

In addition to the transaction cost perspective and social exchange perspective (and the theories that are based on them) the resource-based view of firms (Palmatier et al. 2007a) and resource-dependence theory (Pfeffer and Salancik 1978) have been used for studying inter-organisational relationships. In the following sections these perspectives are reviewed. A discussion of how and why some of these different perspectives inform this study is presented as well.

2.3.2.1 Business Relationships from a Transaction Cost Economics Perspective

Transaction Cost Economics (TCE) has its root in traditional economics (Williamson 1975). TCE has interested many scholars who have used it as a basis for a large number of empirical applications. Many of the empirical studies based on TCE have been conducted by marketing researchers. This has occurred for at least two reasons: First, TCE’s primary focus on exchange makes it relevant to many marketing phenomena (Rindfleisch and Heide 1997). Exchange forms the core phenomenon for study in marketing, and can focus on direct and indirect transfers of tangible, intangible and symbolic entities between two or more parties (Bagozzi 1975). Second, marketing’s rich tradition in construct measurement and survey study techniques has contributed to operationalise and test the TCE framework (Rindfleisch and Heide 1997). TCE views the firm as a governance structure. Coase (1937) proposes that firms and markets are alternative governance structures that differ in their transaction costs and under certain conditions, the costs of conducting economic exchange in a market may exceed the costs of organising the exchange within a firm. In this context, transaction costs
are the ‘costs of running the system’ and include such ex-ante costs as drafting and negotiating contracts and such ex-post costs as monitoring and enforcing agreements (Rindfleisch and Heide 1997). The types of exchanges that are more appropriately conducted within firm boundaries than within the market are discussed by Williamson (1975; 1985; 1996). He develops Coase’s (1937) framework suggesting that transaction costs include both the direct costs of managing relationships and the possible opportunity costs of making governance decisions. This framework rests on two main assumptions, bounded rationality and opportunism. Bounded rationality is the assumption that decision makers have constraints on their cognitive capabilities and limits on their rationality. Although decision makers often intend to act rationally, this intention may be circumscribed by their limited information processing and communication ability (Simon 1957). Opportunism is the assumption that, given the opportunity, decision makers may unscrupulously seek to serve their self-interests, and that it is difficult to know a priori who is trustworthy and who is not (Barney 1990).

Williamson (1985) notes that in closer relationships there should be a shift from a market-based exchange focus to more bi-lateral governance. Heide and John (1990) base their empirical study on a normative transaction cost analysis approach. Transaction cost analysis assumes that firms try to adapt efficient organisational forms or governance structures. In its normative nature it implies that the firms can improve their performance by implementing its suggestion. Heide and John (1990) try to identify the operational dimensions of governance structure focusing on inter-firm relationships. The three dimensions that they consider are joint action, continuity and verification of supplier. Joint action is defined as “the degree of interpenetration of organisational boundaries”, continuity is defined as “the perception of the bilateral expectation of future interaction”, verification (or verification effort) is defined as “the scope of efforts undertaken by the buyer ex-ante to verify the supplier's ability to
perform as expected” (Heide and John 1990, p. 25). These are introduced as the three key dimensions when business partners move towards closer relationships. In their suggested model, they look at these three dimensions as the outcomes of the relationship. They examine the effects of buyer specific investments, seller specific investments, uncertainty (including volume unpredictability, technological unpredictability, and performance ambiguity) on the first two outcome dimensions (i.e. continuity and verification) and consequently on the third dimension (i.e. joint action).

Parkhe (1993) discusses that the structure of inter-organisational relationships can either increase the likelihood of opportunism or safeguard the organisation’s interests. Organisations seek to safeguard their interests in their relationships with other organisations. Successful strategic alliances can promote cooperation between firms and consequently can improve the firms’ exchanges and performance. Cooperation is influenced by backward-looking (e.g. relationship history) and forward-looking (e.g. expectation of continuity and its related benefits) factors. Firms behave reciprocally; their behaviour is influenced by the other party in iterations. The potential for opportunism impacts on the relationship structure and performance; and the structure impacts on the performance.

TCE suggests that transaction-specific investments must be safeguarded against opportunism by moving away from arms-length market relationships towards a vertical integration. But in the cases of small companies in their relationship with another party that is a dominant player in the market this approach is irrelevant. Additionally the small companies might not have the contractual safeguards. In such cases as an extension to the TCE framework, the role of dependence-balancing is investigated by Heide and John (1988). They introduce some actions, such as developing personal relationships with the end users as a bonding
mechanism. They also argue that some investments can be engaged as a means of safeguarding the transaction-specific assets. For instance the customers would face switching cost terminating the relationship. So dependence-balancing can play a role to safeguard the relationship-specific investments.

Transaction cost economics has contributed to the study of business-to-business markets and inter-organisational relationships. Its particular attention to behavioural characteristics, such as relationship-specific investments and opportunistic behaviour (e.g. Williamson 1985), informs this research as well.

2.3.2.2 Business Relationships from a Relational Norms Perspective

With a relational norms perspective scholars (e.g. Heide and John 1992) acknowledge the usefulness of transaction cost theory in giving insight into the comparative mechanisms for identifying the conditions under which different arrangements are appropriate in structuring business relationships. The relational norms perspective is rooted in transaction cost economics perspective, however it criticises the focus of transaction cost theory on its underlying behavioural norm of opportunism. The relational norms perspective, informed by sociology, argues that the exchange is typically embedded in social structures in which opportunism is the exception. Accounts of stewardship (Donaldson 1990) and relationalism (Macneil 1980) describe human behaviour that differs significantly from opportunism. They show opposition to the transaction cost economics perspective in which it is assumed that there is a positive relationship between the presence of specific assets and the presence of safeguards for the investing party.
As mentioned above, stewardship theory introduces a rationale for consideration of relational norms as a purpose of developing transaction cost theory. Donaldson (1990) discusses the potentials and pitfalls of the new major components of the paradigm shift in management studies, i.e. organisational economies, that are agency theory and transaction cost economics. Stewardship theory is a countervailing view, developed about corporate governance (Donaldson and Davis 1989). It holds that there is no conflict of interest between the two parties. It looks for an organisational structure that allows coordination to be achieved most effectively. According to this theory parties are not opportunistic agents but good stewards.

Another rationale for consideration of relational norms within the study of inter-organisational relationships is presented by the scholars introducing relationalism. Macneil (1980) introduces ‘discrete’ versus ‘relational’ norms. Based on this typology Heide and John (1992) further develop the concept of relationalism. They introduce the norm of flexibility, norm of information exchange and norm of solidarity as relational norms. Flexibility is related to the parties' expectations of making adjustments in the relationship. Information exchange is related to the expectation that particular pieces of information that might help the other party will be provided. Solidarity is related to the expected efforts of the parties toward preserving the relationship. They study the association between some aspects of business relationship with the relational norms. For instance they show that there is a positive relationship between specific assets and relational norms. Kaufmann and Dant (1992) operationalise dimensions of relational norms (e.g. relational focus, mutuality and conflict resolution) introduced in Macneil’s (1978; 1980; 1981; 1983) framework. Their test confirms the proposed measurement for all dimensions except for conflict resolution.
Noordewier et al. (1990) consider the role of relationalism in the transaction cost economics model with a focus on understanding the relationship between environmental uncertainty and performance. This consideration further develops inter-organisational studies informed by transaction cost economics. They study purchasing arrangements in industrial business relationships. They introduce five dimensions of relationalism: supplier flexibility, supplier assistances, information provided to supplier, monitoring of supplier and expectation of continuity and show that under conditions of uncertainty, firms introduce more relational elements (relationalism) into their purchasing arrangements. Their study supports the relational norms perspective.

With a relational norms perspective, Heide and John (1992) argue that a firm can safeguard specific assets in those cases in which vertical integration is absent, by acquiring vertical control over the exchange partner. However, this is possible only if the exchange partner has the confidence that this control will not create a condition of vulnerability. Such confidence can be provided by the presence of supportive norms (or relational norms).

Relational norms are considered when studying the impact of market orientation on business relationships. Market oriented behaviour of the seller affects the distributor's market orientation, trust, cooperative norms, commitment, and satisfaction with financial performance (Siguaw et al. 1998). Generally social or relational norms are defined as shared expectations regarding behaviour in the literature (Gibbs 1981; Axelrod 1986; Bendor and Mookherjee 1990). “The norms reflect expectations about attitudes and behaviours parties have in working cooperatively together to achieve mutual and individual goals” (Cannon et al. 2000, p. 183). Cannon et al. (2000) investigate the performance implications of governance structures involving contractual agreements and relational social norms. They
find that increasing the relational content of a governance structure containing contractual agreements enhances performance when transactional uncertainty is high.

2.3.2.3 Business Relationships from a Social Exchange Perspective

Exchange partners can exert different sorts of control and mutual dependence on their business partners to formulate power (Thibaut and Kelley 1959). A social situation is a reciprocal affair in which each person is stimulable and reactive (Cottrell 1942) and interaction patterns are to be analysed (Lewin 1947). In a study of the social psychology of groups, Thibaut and Kelley (1959, p. 2) argue that “each subject’s behaviour is at the same time a response to a past behaviour of the other and a stimulus to a future behaviour of the other”. Social Exchange Theory (SET) emphasises the social relationships (Blau 1964) stressing on the inter-personal relationships.

With a social exchange theory (Emerson 1981) perspective inter-organisational relationships are looked at through a different lens from a traditional transaction cost economic perspective. In economic theories there has been a trend to dissociate the transactions from the actors treating actors as interchangeable (Emerson 1972). In a sense in those studies properties of the groups and their performance are investigated while the process of social interaction is ignored. However, social interaction is an important object that has been recognised in social psychology. It plays an important role in situations in which individuals are interdependent in achieving favourable outcomes and are to be considered when trying to investigate the variables under study. Individuals are involved in relationships, which are continuing and are to be viable. Various forms of problems confront them including problems associated with emotions and feelings. With a social exchange theory perspective, studies
look at these problems and at what these individuals should do if their relationship is to be stable and satisfactory (Thibaut and Kelley 1959).

Based on social exchange theory it is assumed that social behaviour will not be repeated unless it is reinforced (e.g. rewarded) (Thibaut and Kelley 1959). If a person properly reciprocates another person’s behaviour (e.g. a service) the other person’s behaviour is reinforced (Blau 1964). A group exists upon the participation and satisfaction of the individuals involving in it, so “the group functionalism becomes an individual functionalism” (Thibaut and Kelley 1959, p. 5). The social theories attempt to explain the complex interdependence between substructures at different levels, understanding the process of interpersonal relationships between individuals to more complex relationships “in and among large collectivities” so this is an attempt to “derive the social processes that govern the complex structures of communities and societies” (Blau 1964, p. 2). This suggests explaining simpler aspects in order to explain complex aspects of social life.

It is noteworthy that a body of the literature draws attention to limitations of reductionism. Based on reductionism, scholars try to explain the social life in terms of the motives that govern individual behaviour. One major problem as a result of studies based in this approach is over-simplification. The critiques (in line with “gestalt” theory) emphasise that the whole is other than the sum of its parts (Blau 1964, p. 3).

Thibaut and Kelley (1959) introduce a dyad, at its smallest form, as a two-person relationship. They argue that social theories attempt to provide a good understanding of problems within the dyad at its smallest form and then extend this knowledge to understanding of the problems in larger and more complex social relationships. Interaction is
the essence of any relationship. Two individuals interact when they “emit behaviour in each other’s presence, they create products for each other, or they communicate with each other. In every case we would identify as an instance of interaction there is at least the possibility that the actions of each person affect the other” (p. 10). Two individuals are said to have formed a relationship when they are observed to interact repeatedly. Two dominant consequences of interaction examined in social psychology are rewards (a person receives) and costs (he incurs). The outcomes (in terms of these rewards and costs) form a matrix that is used to explore the interactions. Thibaut and Kelley (1959) also introduce norms as an important issue when studying groups. “A norm is defined as a behavioural rule that is accepted to some degree by both members of a dyad (or by most members, in the case of larger groups)” (p. 147). They also argue that norms can reduce the costs, improve the outcomes attained by the members of a dyad, and so increase their interdependence. Blau (1964) conceptualises exchange as a social process of central significance in social life. He argues that social exchange underlies relationships between groups (and individuals), conflicts, cooperation, attachments and connections.

Cook and Emerson (1978) argue that exchange theory emphasises the dyadic study of exchanges and investigates the social structural determinants of exchange constructs. It considers both economic and social dimensions of dyadic exchanges, for instance when studying commitment, power and equity in these exchanges. In other words, the importance of social dimension of exchanges, in addition to the economic dimension is noted. There is a contrast between the economic and sociological dimensions of dyadic exchanges. Social exchange theory looks at the inter-personal relationships in which social actors are involved in repetitive exchanges. This includes exchanges and interactions in inter-personal attractions and in institutionalised arrangements such as marriages or long-term employment contracts,
or through collectively or normatively enforced systems of obligation. On the other hand with an economics perspective the exchange resources between the two interacting actors are carefully studied and solutions for maximising the benefits of exchange for the two actors are introduced. The social dimension is added to the economic mechanism, when two parties engage one another in reciprocally tactical interaction (Cook and Emerson 1978). This makes social exchange theory a relevant and useful theory to be added to the transaction cost economics for this study.

### 2.3.2.4 Business Relationships from a Commitment-Trust Perspective

Commitment-trust theory is built on social exchange theory, which proposes that commitment is central in relational marketing (Thibaut and Kelley 1959; Blau 1964); and is considered essential “in distinguishing social from economic exchange” (Cook and Emerson 1978, p. 728). Commitment is introduced as a key issue in channel relationships. Gilliland and Bello (2002) introduce attitudinal commitment with two major components: calculative commitment, which is based on a rational, economic calculation, and loyalty commitment, which is based on an emotional and social sentiment. They discuss that investments impact on different forms of commitment (i.e. calculative and loyalty commitment) (Morgan and Hunt 1994).

Commitment-trust theory conceptualises that successful business relationships need relationship commitment and trust. Morgan and Hunt argue that these two attributes are key and “not power and its ability to condition others” (p. 22) because they (1) work at protecting relationship-specific investments (2) refuse to accept attractive short-term alternatives in favour of the expected long-term benefits of staying with existing partners and (3) allow
consideration of potentially high-risk behaviour based on the belief that their partners will not act opportunistically. Trust and commitment are introduced as key mediating variables between some important antecedents and outcomes. The five important antecedents studied by Morgan and Hunt (1994) are relationship termination costs, relationship benefits, shared values, communication and opportunistic behaviour. Their five important outcomes are acquiescence, propensity to leave, cooperation, functional conflict and decision-making uncertainty. Commitment-trust theory is one of the influential theories in the business marketing field for understanding business relationships with a focus on commitment and trust as key variables.

Trust and commitment are among the most dominant business relationship variables (Dwyer et al. 1987; Anderson and Weitz 1989; Moorman et al. 1992); Wilson (1995, p. 337) argues that commitment is “the most common dependent variable” used in business relationship studies. Commitment implies importance of the relationship to the partners and a desire to continue the relationship. “Trust is a fundamental relationship model building block” and is included in most relationship models. Trust involves a belief that one party will act in the best interests of the other party. There is a body of literature in inter-organisational relationships that investigates trust (Geyskens et al. 1996; Seppänen et al. 2007) and its various aspects (Mouzas et al. 2007; Fang et al. 2008) such as inter-personal and inter-organisational aspects. This is reviewed later in detail in the following chapters due to its particular relevance for the focus of this research.
2.3.2.5 Business Relationships from a Dependence Perspective

The dependence perspective emphasises the impact of the exchange dependence on performance. It suggests that the dependence or power structure among exchange partners drives exchange performance and the level of inter-organisational conflict (Gundlach and Cadotte 1994; Hibbard et al. 2001). Co-marketing alliances particularly show dependence between firms; they are a kind of lateral relationship, whereas buyer-seller or manufacturer-distributor partnerships are classified as vertical relationships (Bucklin and Sengupta 1993). These alliances are a form of working partnership that exhibit mutual understanding that the success of each firm depends in part on the other firm (Anderson and Narus 1990) and involves coordination among the firms.

Dependence of one party provides the basis for the power of the other, so dependence is introduced as a potential indicator of power; unequal resource dependencies result in a power imbalance (Emerson 1962). The power-dependence relationship plays a major role in the distribution channel (El-Ansary 1975). Inter-organisational exchanges can result in resource dependencies. Actors would prefer to do business with firms with the same power (Cook 1977) and so decrease the potential for exploitation (Williamson 1975). Based on these ideas Bucklin and Sengupta (1993) propose that alliances try to mitigate any power imbalance and balance dependencies among the firms. They introduce three major components as factors affecting relationship effectiveness. These are project management, project payoff and partner match. Project management relates to power imbalance, managerial imbalance and conflict. Project payoff defines the partner’s ex-ante views about market opportunity and cost. Partner match reflects the capability of the firms to cooperate with each other.
Dependence is defined as a function of value and availability of alternative sources in the literature of social exchange theory. The notion of availability is treated in terms of simple access to alternative sources and in terms of comparison levels (Thibaut and Kelley 1959; Cook and Emerson 1978). The Comparison Level (CL) constitutes a kind of zero or neutral point on a scale of satisfaction-dissatisfaction. To the degree the outcomes obtained in a relationship “surpass the CL”, to that degree the involved party is attracted to and satisfied with the relationship. To the degree obtained outcomes “fall short of the CL”, the party is dissatisfied with the relationship (Thibaut and Kelley 1959, p. 98). The dependence of A upon B (Dab) is defined as a joint function (1) varying directly with the value of $\alpha_y$ minus $\alpha_x$, and (2) varying inversely with the availability of $y$ to $A$ from alternative sources; $\alpha_x$ and $\alpha_y$ are the unit value (i.e., preference for or "utility") of the resources $x$ and $y$ to $A$ (Cook and Emerson 1978).

Destructive acts and how a channel member reacts to such behaviour is studied by considering the level of interdependence between channel members (Hibbard et al. 2001). Hibbard et al.’s (2001) study is based on Emerson’s (1962) definition of dependence mentioned above. The conceptual development of dependence is extended by the notion of dyadic interdependence that incorporates two (dependence-related) constructs (Gundlach and Cadotte 1994; Lusch and Brown 1996). They are (1) total dependence, which is measured as the dealer dependence plus supplier dependence, and (2) (dealer's) relative dependence, measured as the dealer dependence minus supplier dependence. Hibbard et al. (2001) look at how these two dependence-related constructs impact on how one firm reacts to the other firm’s destructive act.
On the other hand, interdependence and dependence asymmetry are considered by some scholars as important dependence-related concepts, operationalising interdependence as the product of the first party’s dependence on the second party and the second party’s dependence on the first party, whereas dependence asymmetry is the one party’s dependence less the other party’s dependence (Jap and Ganesan 2000). It has been argued that interdependence positively affects relationship performance because dependence increases the parties’ desire to maintain the relationship and the level of adaptation they undertake (Hibbard et al. 2001); and dependence asymmetry negatively influences performance, as it promotes the coercive use of power and reduces willingness to compromise (Gundlach and Cadotte 1994). These studies, using various conceptual development and measurement techniques, emphasise the relevance of dependence and its impact on inter-organisational relationships.

### 2.3.2.6 Business Relationships from an IMP Perspective

The IMP group and a general overview of its research were introduced in the section 2.2.1 (IMP Research Group section). The IMP perspective is also rooted in social exchange theory. The IMP Interaction approach focuses on the relationship between the buying and selling firms as an interaction process. It argues that the marketing mix approach, which is concerned with optimal combination of the marketing mix, is not appropriate when firms do not have a lot of customers that can be treated in a standardised way. It emphasises the need to understand interaction and relationship between buyers and sellers in industrial markets (Håkansson et al. 1976; Håkansson and Wootz 1979).
Managing and developing business relationships with the purpose of enhancing both parties involved (i.e. buyer and supplier) are of a great importance in business marketing (Ford et al. 2002). As mentioned in the previous chapter by development of the network/interaction model the importance of relationships in business marketing is emphasised by the IMP group scholars (Håkansson 1982; Ford 1984). The IMP research project was one of the first studies that provided advocates with a paradigm shift in business markets, focusing on the importance of the management of buyer-seller relationships; noting that these relationships take place between two active parties (Ford 1980). This early project was the result of international collaboration between researchers in several European countries (i.e. France, Italy, Sweden, West Germany and Great Britain) and was based upon hundreds of interviews. Based on this research, Ford (1980) shows the association of technical skills and commercial skills with relationship management skills as basis of purchasers’ assessment of their suppliers. The results of this study emphasise the significant role of relationship dimensions (such as commitment) in addition to the traditional dimensions (such as price) in business markets.

Also based on the IMP research project, Ford (1980) investigates business relationship development as a process through time. The analysis of stages of establishment and development of relationships promotes consideration of relationship variables such as commitment, experience and adaptations. Dependence in business relationships is also studied by IMP scholars. Dependence is investigated associated to adaptation. It is argued that the dependence level influences the level of adaptations; “a firm adapts to a counterpart to the degree that it is dependent on that business partner” (Hallén et al. 1991, p. 31). The IMP literature initiates studying exchange relationships as dyads and introduces the concept of atmosphere involving the issue of trust in a business relationship (Huemer 1998).
Understanding different aspects of trust is emphasised (Blois 1999). The role of other business relationship characteristics, such as commitment, dependence and adaptations, is also investigated. The importance of studying business relationships as a dyadic phenomenon within their business networks is emphasised with consideration of both social and economic dimensions (Anderson et al. 1994).

2.3.2.7 Business Relationships from a Resource-Based View

The resource-based view of firms argues that the parameters of a firm’s competitive strategy are influenced by its resources rather than being defined by the competitive environment (Barney 1991), suggesting that what a firm possesses would determine what it accomplishes (Das and Teng 2000). Based on the Resource-Based View (RBV), firms must do something specialised in order to develop a competitive advantage. Inter-organisational relationships are embedded in inter-organisational networks with scarce resources. The flow of resources is a key concern for organisations within a network (Benson 1975). It is assumed that “organisation decision makers are typically oriented to the acquisition and defense of an adequate supply of resources” (p. 231). Dyer (1996) investigates the relationship between different forms of asset specificity and performance and finds a positive relationship between this specialisation and performance. This includes intra- and inter-firm resources and assets. The greater the inter-firm asset co-specialisation, in terms of human and physical assets, the higher the product quality and profitability. The level of specific investments in a relationship is contingent on factors such as the costs of safeguarding mechanisms.

Firms’ strategic choices should flow mainly from the analysis of their unique skills and capabilities rather than from the analysis of its competitive environment in order to seek
greater than normal economic performance (Barney 1986). The most important sources of economic rents are business-specific; industry membership is a much less important source (Rumelt 1991). The RBV analyses firms from the resource side and tries to highlight the new strategic options that emerge from the resource perspective. This applies to the relationship between profitability and resources and ways to manage the firm’s resource position over time (Wernerfelt 1984). “A firm’s resources at a given time could be defined as those (tangible or intangible) assets which are tied semi-permanently to the firm” (p. 172). Examples of resources are in-house knowledge of technology, employment of skilled personnel, efficient procedures and capital.

The RBV was initially developed within the strategic management literature and suggested a shift of focus from products and external environment to resources and internal aspects of the firm. It sheds light on strategic options, especially concerning firms seeking diversification (Wernerfelt 1984; Robins and Wiersema 1995; Wernerfelt 1995). It is also influential in the study of strategic alliances suggesting that the rationale for alliances is the value creation potential of firm resources that are pooled together (Das and Teng 2000). It has recently received more attention within the international marketing (Lee et al. 2008) and business-to-business marketing discipline as well (Palmatier et al. 2007a).

Productivity gains in the value chain are possible when business partners are willing to make relationship-specific investments and combine resources in an exclusive way (Asanuma 1989; Dyer 1996). Palmatier et al. (2007a) introduce a model based on the RBV of firms. In their model commitment, trust, and relationship-specific investments are introduced as directly influencing the relationship outcomes and mediating the impact of dependence-related constructs, relational norms and opportunism on the outcomes. Their model develops
an antecedents-mediators-outcomes framework, which can inform this study especially with the identification of meaningful relationship outcomes.

2.3.2.8 *Business Relationships from a Resource-Dependence Perspective*

The resource-dependence perspective emphasises that to understand the behaviour of an organisation one must understand the context of that behaviour (i.e. the ecology of the organisation). Resource dependence refers to the availability of alternative sources for the resources that organisations need to acquire and the possibilities for the organisations to switch to those other sources. Organisations are not autonomous. They depend on other organisations in their environment for the resources they themselves require. The organisations are constrained by a network of interdependencies with other organisations and the conditions of their environments and act in order to adjust to them (Pfeffer and Salancik 1978; Pfeffer 1987). This argument builds on the open-system perspective of organisations (Katz and Kahn 1966).

The resource-dependence perspective is rooted in sociology and social exchange theory. Organisations are assumed to be comprised of partnerships, which emerge from social exchanges that are formed to influence and control behaviour (Pfeffer and Salancik 1978; Ulrich and Barney 1984). The organisations face environmental uncertainty in terms of resource acquisition. To minimise such uncertainty, for instance in supply relationships, they can engage in partnership activities such as forming strong personal relationships or alliances/joint ventures (Provan et al. 1980).
This perspective also emphasises that organisations respond to the demands of other organisations that control critical resources. The extent to which an organisation depends on certain types of exchanges influences its vulnerability to the external environment. The survival of the organisations is influenced by the extent to which they are effective, and their ability to acquire and maintain resources. It is important to understand how resources are to be acquired and obtained (in addition to how to be used). The environments change and the organisations face the prospect either of not surviving or of changing their activities in response to these changes (Pfeffer and Salancik 1978). The organisations are linked to their environment by inter-organisational relationships (Aldrich 1976; Pfeffer and Salancik 1978). They try to gain control over resources that minimise their dependence on other organisations and maximise the dependence of other organisations on themselves (Pfeffer 1981).

Inter-organisational exchange behaviour theorises that firms seek to reduce uncertainty by exchanging resources for mutual benefit, especially with regard to specialised functions and skills and scarce resources (Benson 1975; Cook 1977; Pfeffer and Salancik 1978; Aldrich 1979; Frazier 1983a); a political-economic structure influences the inter-organisational interactions; power, dependence and control shape the inter-organisational networks and the flow of resources (Benson 1975). The limitation on the availability of resources creates resource dependencies and fosters specialisation (Cook 1977). The perspective also provides a framework for understanding power differences across organisations (Pfeffer and Salancik 1978; Provan et al. 1980). The resource-dependence perspective applies ideas from both social exchange theory (Emerson 1962; Blau 1964) and from political economy (Zald 1970).
2.3.3 The Perspectives Informing This Study

Studies of business relationships can be categorised into three major groups: (1) transaction cost economics and its continuation (i.e. the relational norms perspective), (2) social exchange theory and its following theories (i.e. commitment-trust, dependence and the IMP interaction theories), and (3) the resource-based view perspective and resource-dependence perspective. As discussed below, this study is framed mainly based on the two theories of transaction cost economics and social exchange theory. The resource-based view influences this study relatively less significantly in comparison to the other two perspectives. These different perspectives are summarised in Table 2-1. This table provides a synthesis into different perspectives that have informed the study of business relationships. They are categorised into the three main categories presented above. The perspectives are introduced as sub-categories of those three. For each sub-category (i.e. perspective), the main characteristics and dominant concepts are summarised followed by a column introducing the seminal articles of the perspective.

Among the first group, TCE focuses on motivating and behavioural characteristics more carefully (Williamson 1979), relevant to behaviour-safeguarding relationships. The relational norms perspective looks at enabling characteristics (Heide and John 1992). As this study attempts to incorporate the behavioural characteristics of business relationships, the TCE approach is used as one of its bases.

Social exchange theory and its developments (IMP perspective, trust-commitment theory and dependence theory) are considered as relevant dominant theories for this research for two

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1 Please note that the table is presented at the end of this section with the purpose of improving the readability (and due to the page "landscape" setting).
reasons. First, the IMP perspective recognises the relevance of inter-personal aspect of inter-organisational interactions. In the early development of the interaction approach individuals are discussed as one of the major factors in business-to-business marketing and purchasing. “At least two individuals, one from each organization, are involved in a relationship. These are usually a buyer and a salesman. More commonly, several individuals from different functional areas, at different levels in the hierarchy and fulfilling different roles become involved in inter-company personal interactions” (Håkansson 1982, p. 19). These individuals take part in the social exchange, share information, and build inter-personal relationships and social bonds that influence the business relationship. The involvement of personal and organisational levels issues is emphasised in the early development of the IMP interaction approach. “The process of learning from experience on both an individual and corporate level is communicated to and affects detailed episodes in interaction. Additionally, the experience gained in individual episodes aggregates to a total experience” (Håkansson 1982, p. 20).

So the theories based on the social exchange perspective look at the social structure of economic exchanges; they consider inter-personal effects in institutionalised arrangements. They characterise the major inter-organisational variables while noting that is essential to distinguish between different aspects (Cook and Emerson 1978), looking at social/inter-personal versus structural/inter-organisational dimensions (Wilson 1995). The second reason is that trust is a critical component of social exchange theory (Blau 1964; Emerson 1976). The studies based on this theory highlight trust-commitment constructs and their interplay with other major constructs such as dependence (or inter-dependence) (e.g. the commitment-trust theory (Morgan and Hunt 1994) built on social exchange theory relationships (Blau 1964)).
The resource-based model focuses on the outcome and performance characteristics of business relationships (Palmatier et al. 2007a), identifying antecedent and mediating factors that result in those outcomes (such as relationship-specific investments). This study incorporates the business relationships outcomes, and therefore benefits from RBV models.

In this way, this research is framed by adopting aspects of both the transaction cost perspective and social exchange theory. In addition it has benefited from the RBV model rooted in strategy research for incorporating the outcome characteristics. Social exchange theory, which embodies core theories such as trust-commitment theory and dependence theory, is informative for this research with the focus on trust (and commitment as a related concept to trust) and the role of dependence. In addition, the Industrial Marketing and Purchasing perspective is rooted in SET and is a basis for this research, with its emphasis on business relationships in industrial marketing and purchasing discipline, and especially on the relevance and importance of different levels of inter-organisational-related concepts.

Furthermore, the RBV informs this study with its advances in introducing outcome-related concepts and its emphasis on performance constructs in order to help businesses evaluate their critical decisions and make strategic choices.

Incorporating ideas from the transaction cost perspective and social exchange theory is a useful technique for studying business relationships. It allows focusing on particular aspects of business relationships (in the case of this study: trust) while considering several dominant aspects of inter-organisational effects (in this study: inter-personal/inter-organisational and behavioural/attitudinal effects). As discussed in the previous section, there are differences between how social exchange theory and transaction cost theory have viewed relationships. Social exchange theory emphasises the social relationships between the actors engaged in a
series of transactions whereas economic theory seems to divorce the transactions from the actors, treating actors as interchangeable (Emerson 1972).

However, these two perspectives can be combined to provide a more comprehensive understanding of inter-organisational transactions and exchanges. The theoretical grounding that allows a researcher to bridge these two perspectives is based on their early development. The early development of TCE considers social exchanges and relationships (Williamson 1973; 1975) emphasised in social psychology (Thibaut and Kelley 1959). “The interesting problems of economic organisation are mainly to be explained by reference to the conjunction of a set of human attributes with a related set of (largely non-technological) transactional factors. Inasmuch as economics is a social science concerned with exchange, this is perhaps unsurprising” (Williamson 1973, p. 316).

So, these different perspectives use different lenses to study business markets and relationships. Incorporating ideas from them can shed light on particular aspects of those studies. Scholars have taken this approach previously; examples of using these two perspectives include the early study of Heide and John (1992) that develops the relational norms. It is rooted in transaction cost economics (Williamson 1985), but incorporates ideas from social exchange theory (Thibaut and Kelley 1959) to study the norms in economic exchange.

Also Bucklin and Sengupta’s (1993) study bridges the two perspectives, social exchange theory and transaction cost economics, confirming the importance of power imbalance in inter-organisational relationships (informed by the former) and the significance of transaction-specific investments as a factor affecting success (informed by the latter).
Ganesan (1994) uses ideas from these perspectives as well. He considers reduction of transaction costs in trusting relationships based on transaction cost (Williamson 1975; 1981). He also includes the role of trust and satisfaction based on social exchange theory (Adams 1965; Kelly and Thibaut 1978) and investigates the long-term orientation in business relationships. Dabholkar et al. (1994) integrate approaches from social psychology and economics for studying business relationships with a focus on negotiation behaviour and bargaining.

Consideration of the resource-based view of firms helps this research in development of an attitude-behaviour-outcome framework, which is introduced in detail in chapter 4 (Model Development). The RBV is traditionally concerned with critical performance-related concepts and emphasises on the strategic decisions that help firms gain competitive advantage in their business networks (Barney 1991; Dyer 1996). Palmatier et al.’s (2007a) study is an example of using SET and TCE perspectives and incorporating ideas from the RBV in order to frame the model with an emphasis on performance-related concepts and outcomes.

This study develops an attitude-behaviour-outcome framework. In doing so it uses the extant literature of SET and TCE, which inform the attitude-behaviour part of the developed model. Trust as the core attitudinal characteristic of the model is particularly informed by SET, with its emphasis on this construct (Morgan and Hunt 1994; Kumar et al. 1995), also on social and inter-personal aspects in business relationships in addition to structural and inter-organisational aspects (Blois 1999; Mouzas et al. 2007; Jiang et al. 2011). Furthermore, based on TCE the study is extended, developing an opportunistic behaviour-attitude-behaviour-
outcome framework, incorporating the other party’s behaviour (i.e. opportunism) (the development of this framework is presented in detail in chapter 4).

TCE informs this research particularly in terms of selection and incorporation of behavioural characteristics. This perspective traditionally emphasises collaboration and coordination characteristics. Behavioural attributes such as relationship-specific investments (Heide and John 1988) and information sharing (Heide and John 1992) have been included in TCE studies since the early stages of its development. Also its emphasis on the opportunistic behaviour in business relationships (Parkhe 1993) is informative to this research.

As mentioned above, the consideration of outcomes by RBV perspective particularly with regard to performance, for instance financial performance (Palmatier et al. 2007a) and the impact of resources (such as investments) on performance, inform this study and helps it to follow the attitude-behaviour-outcome framework. Therefore this study is based on ideas from the perspectives introduced. However, different parts of the research model are informed more significantly by different perspectives as discussed above.
<table>
<thead>
<tr>
<th>Main Category</th>
<th>Sub-Category</th>
<th>Seminal Articles</th>
<th>Main Characteristics</th>
<th>Dominant Concepts</th>
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| TCE+                | Transaction Cost Economics     | (Williamson 1985; Heide and John 1990; Noordewier et al. 1990; Parkhe 1993; Rindfleisch and Heide 1997) | • main assumptions: bounded rationality and opportunism  
• views the firm as a governance structure  
• transaction costs include direct costs of managing relationships and the possible opportunity costs of making governance decisions  
• in closer relationships there should be a shift from a market-based exchange focus to bi-lateral governance  
• structure of inter-organisational relationships can either increase the likelihood of opportunism or safeguard the organisation’s interests | • opportunism  
• relationship-specific investments (asset specificity)  
• uncertainty  
• continuity, verification and joint action  
• trust and commitment  
• relational elements |
| TCE+                | Relational Norms Perspective   | (Macneil 1980; Heide and John 1992; Kaufmann and Dant 1992; Siguaw et al. 1998; Cannon et al. 2000) | • challenges the focus of transaction cost theory on its underlying behavioural norm of opportunism  
• importance of relational and social norms is emphasised; strong relational norms positively affect relationship performance  
• exchange is typically embedded in social structures in which opportunism is the exception  
• stewardship theory informs it and suggests that there is no conflict of interest between the two parties  
• it looks for an organisational structure that allows effective coordination | • norms of flexibility, information exchange and solidarity  
• trust, cooperative norms, commitment  
• performance  
• legal bonds  
• cooperative norms  
• contracting norms |
| SET+                | Social Exchange Theory         | (Thibaut and Kelley 1959; Blau 1964; Emerson 1972; Cook and Emerson 1978; Emerson 1981) | • a social situation is a reciprocal affair; a social behaviour will not be repeated unless it is reinforced  
• exchange is a social process of central significance in social life  
• social relationships, interactions and inter-personal relationships are critical in business exchanges  
• individuals are involved in ongoing relationships and deal with problems associated to emotions and feelings  
• understanding complex social structures require understanding | • individual and inter-personal relationships  
• control  
• power  
• dependence and interdependence  
• commitment  
• equity |
### SET+ Commitment-Trust Perspective

| (Dwyer et al. 1987; Anderson and Weitz 1989; Moorman et al. 1992; Morgan and Hunt 1994; Wilson 1995; Gilliland and Bello 2002) | trust and commitment are the key business relationship factors  
- trust and commitment play role as mediating variables between important antecedents and outcomes  
- they work at protecting relationship-specific investments and refuse to accept attractive short-term alternatives in favour of long-term benefits  
- commitment has some sub-factors (calculative and loyalty)  
- trust, also, has sub-factors and different aspects operating at different levels (inter-personal and inter-organisational) | commitment  
- trust  
- communication  
- opportunistic behaviour  
- cooperation  
- conflict  
- decision-making uncertainty |

### SET+ Dependence Perspective

| (El-Ansary 1975; Bucklin and Sengupta 1993; Gundlach and Cadotte 1994; Lusch and Brown 1996) | emphasises on the impact of the exchange dependence in business relationships  
- dependence or power structure drives relationship performance and the level of conflict  
- dependence of one party provides the basis for the power of the other  
- interdependence positively affects relationship performance  
- dependence asymmetry negatively influences performance | dependence  
- Power  
- interdependence  
- dependence asymmetry  
- performance  
- conflict  
- adaptation |

### SET+ IMP Perspective

| (Håkansson 1982; Ford 1984; Hallén et al. 1991; Anderson et al. 1994; Blois 1999; Ford et al. 2002) | business relationships are based on an interaction process  
- business relationships develop over time  
- the structure of business relationships includes social and economic dimensions  
- social exchanges are a part of the interaction process in addition to products/services, information and financial exchanges  
- trust is a dominant aspect of relationships having different aspects such as inter-personal and inter-organisational | interaction process  
- dyadic relationships  
- business networks  
- relationship development  
- trust and commitment  
- adaptations and investments |

### RBV+ Resource-Based View

| (Wernerfelt 1984; Barney 1986; 1991; Das and Teng 2000; Palmatier et al. 2007a) | firms’ competitive strategy are influenced by their resources  
- firms’ strategic choices should flow mainly from the analysis of their unique skills and capabilities  
- firms must do something specialised in order to develop a competitive advantage  
- the rationale for alliances is the value creation potential of firm resources that are pooled together | resources  
- competitive advantage  
- differentiation  
- strategic alliances  
- investments |
productivity is possible when business partners are willing to make relationship-specific investments.

| RBV+ | Resource-Dependence Perspective | (Benson 1975; Pfeffer and Salancik 1978; Aldrich 1979; Provan et al. 1980; Pfeffer 1987) | organisations depend on other organisations in their environment for the resources they require
|      |                               |                                          | the limitation on the availability of resources create resource dependencies
|      |                               |                                          | organisations are linked to their environment by inter-organisational relationships
|      |                               |                                          | they try to minimise their dependence on other organisations and maximise their dependence on themselves
|      |                               |                                          | a political-economic structure influences the inter-organisational interactions
|      |                               |                                          | dependence, interdependence
|      |                               |                                          | scarce resources
|      |                               |                                          | environment
|      |                               |                                          | survival
|      |                               |                                          | change and uncertainty
|      |                               |                                          | power

TCE+: Transaction Cost Economics and Relational Norms
SET+: Social Exchange Theory and Its Following Theories (i.e. Commitment-Trust Perspective, Dependence Perspective and IMP Perspective)
RBV+: Resource-Based View and Resource Dependence Theory
2.4 Characteristics of Business Relationships

In the literature on business-to-business marketing several characteristics have been used in order to study business relationships. Some of the main characteristics that have been emphasised within different perspectives were introduced in the previous sections. However, there has been a wide range of characteristics considered in the study of business relationships. The characteristics are introduced for various purposes including assessing the relationship quality, defining a successful relationship and explaining the outcomes of the relationship.

For instance Crosby et al. (1990) use satisfaction and trust as indicators for measuring relationship quality, while Mohr and Spekman (1994) suggest that the significant characteristics of any successful partnership are commitment, coordination and trust; communication quality and participation; and conflict resolution through joint problem solving. They use two indicators of partnership success: an objective indicator (sales volume flowing between the dyadic partners) and an affective measure (satisfaction of one party with the other). In another study, Ganesan (1994) identifies trust and dependence as the constructs that play a key role in determining the long-term orientation of business partners.

Storbacka et al. (1994) discuss factors affecting customer profitability in light of the service quality and customer satisfaction. They conceptualise a relationship profitability model that “incorporates the basic sequence: service quality leads to customer satisfaction, which leads to relationship strength, which leads to relationship longevity, which leads to customer relationship profitability” (p. 23). Relationship strength is their indicator of relationship quality. Wilson and Jantrania (1995) propose seven characteristics for a successful business-
to-business relationship (i.e. constructs of value in a relationship) that are goal compatibility, trust, satisfaction, investments, structural bonds, social bonds, and the relative level of investment in alternative relationships. They emphasise that the goals of relationship development are to create satisfactory and successful relationships.

Based on the previous studies, Cannon and Perreault (1999) specify six dimensions of business relationship that are information exchange, operational linkages, legal bonds, cooperative norms, adaptations by sellers and adaptations by buyers. Using these dimensions, they identify several types of business relationships. They show that the types of relationships affect customer satisfaction and evaluation of supplier performance. It is important to understand the outcomes of different types of business relationships. They try to investigate the customer evaluation of supplier performance. In their study, trust is excluded from relationship dimensions (because of emphasis on operation elements of relationship). However, it is mentioned that information sharing (one of the considered dimensions) is unlikely to occur in the absence of trust.

The constructs of high quality business relationships are considered to be trust, needs fulfilment (understanding each other’s needs), supply chain integration, power, and profit by Naudé and Buttle (2000). In their study, the results of a cluster analysis show that there is no one measure of just what constitutes a good relationship. Rather, there are potentially different types of “good” relationship, each composed of different blends of these five attributes.

Therefore the extant literature introduces different underlying constructs for studying business relationships. It includes characteristics such as trust (Crosby et al. 1990), which
refers to the attitude of each party in the relationship. It also introduces characteristics that
demonstrate how each party behaves in the relationship, such as sharing information, making
adaptations (Cannon and Perreault 1999), and investing in the relationship (Wilson and
Jantrania 1995). There are also constructs that by nature represent mutual behavioural
characteristics defined by the behaviour of the two parties, such as coordination and
communication (Mohr and Spekman 1994). Other constructs refer to outcomes of the
relationship, including profitability (Storbacka et al. 1994).

The selection of the characteristics and constructs is determined by the focus of the research,
the research questions and the theoretical framework upon which the study is based. In this
research as mentioned before an attitude-behaviour framework is pursued (Fishbein and
Ajzen 1975) (extended to opportunistic behaviour-attitude-behaviour-outcome). Attitudes are
viewed as underlying variables that are assumed to guide or influence behaviour. This
suggests that the knowledge of an attitude permits predicting one or more specific
behaviours. Particularly the model development in this study is influenced by this framework.
In addition, as explained before, in line with the RBV (Palmatier et al. 2007a) the behavioural
characteristics are linked to the outcomes of the relationship. So an attitude-behaviour-
outcome framework is used, which is also extended by incorporating the other party’s
opportunistic behaviour (Williamson 1975; John 1984).

Based on this framework a model is developed, which is informed by social exchange theory
(Anderson and Weitz 1992; Kumar et al. 1995) and transaction cost economics (John 1984;
Heide and John 1992) in terms of the constructs selected, conceptualised and operationalised.
These constructs are presented and discussed in detail in chapters 4 and 5. Trust in the
literature of business relationships is reviewed in the next section. Its different aspects
operating at different levels are discussed subsequently with particular attention due to the focus of this study.

2.5 Trust in Business Relationships

As mentioned in the previous part of this chapter, trust is embraced in business marketing as a fundamental cornerstone of cooperative and collaborative inter-organisational behaviours and a necessary requirement and determinant of sound business relationships (Schurr and Ozanne 1985; Ring and Van de Ven 1992; Geyskens et al. 1996; Geyskens et al. 1998; Zaheer et al. 1998; Das and Teng 2001; Håkansson et al. 2004; Palmatier et al. 2006; Mouzas et al. 2007; Palmatier et al. 2007a; Poppo et al. 2008; Squire et al. 2009; Jiang et al. 2011). It has been introduced as a significant characteristic of successful partnerships (Mohr and Spekman 1994), furthermore as a key variable that contributes to relationship success (Morgan and Hunt 1994). Supporters of the interaction approach analyse in fine detail dyadic exchange relationships, and have introduced the concept of atmosphere to capture the idea of trust. The atmosphere of the interaction affects, and is affected, by the interaction (Håkansson 1982). Trust is conceptualised as a consequence of human adaptation and costs savings (Ford 1980). It is introduced as a criterion for evaluating a business relationship (Chow and Holden 1997).

The significance of trust in inter-organisational relationships is verified by more recent studies with the inclusion of various countries with different cultures. Fink and Kessler (2010) validate this issue in three countries (i.e. Austria, Slovenia and the Czech Republic). Jiang et al. (2011) investigate the importance of trust at inter-personal level and reliance at inter-organisational level in four countries (i.e. UK, India, Pakistan and Poland). A review of
previous studies dealing with trust in business relationships follows, including how trust is defined, what other constructs are linked to it and how it is measured.

Trust is defined as the confidence or predictability in one’s expectations (Zucker 1986). On the other hand it is defined as confidence in the other’s goodwill (Friedman 1991). Ring and Van de Ven (1992, p. 487) consider “trustworthiness” (open, other-regarding) as the opposite to “opportunism” (self interest seeking with guile). Defining trust as the belief that the other party will fulfill its obligation in an exchange, Mohr and Spekman (1994) introduce trust as a significant characteristic of a successful partnership conceptualising it as existing when one party has confidence in an exchange partner’s reliability and integrity. Morgan and Hunt (1994) develop a conceptual model and test it by a survey, in which commitment and trust are identified as the key mediating variables that contribute to relationship marketing success (commitment and trust theory).

Trust (looking at trustworthiness) has been defined as belief that a party's word or promise is reliable and a party will fulfill their obligations in an exchange relationship (Blau 1964; Schurr and Ozanne 1985). In a more recent longitudinal study of business relationships, and based on Morgan and Hunt’s (1994) study, trust is considered as the confidence in the other party’s reliability and integrity (Palmatier et al. 2007a). Trust is the thing that opens our minds to others and raises the possibilities of leveraging business relationships (Young 2006; Denize and Young 2007).

With the existence of trust, firms might tolerate short-term losses with a confidence of future pay-backs. Anderson et al. (1987) argue that if there is mutual trust between channel members, they are willing to accept short-term dislocation because they are confident that
such dislocations will balance out in the long run. Anderson and Narus (1990) also argue that
trust may lead the firm to act in a way resulting in a possible loss, depending upon the
subsequent actions of the other company. This conceptualisation, which is based on the work
of Ouchi (1980), draws attention to the role of time and relationship history and the
association of trust to the relationships with long-term orientation. Poppo et al. (2008) relate
trust to the expectation of continuity, associating trust to time and relationship history.

Trust is defined as the extent to which a channel member believes its partner to be honest and
benevolent (Kumar et al. 1995; Geyskens et al. 1996; Geyskens et al. 1998). In some cases, it
has been defined by the consideration of just one of these aspects, benevolence (Joshi and
Stump 1999); however, in most studies, when measuring trust, honesty has also been
included within the measurement scales. In addition, trust is defined as the level of
expectation or degree of certainty in the reliability and truth or honesty of a person or thing
(Chow and Holden 1997). Doney and Cannon (1997) introduce it as the perceived credibility
and benevolence of a target of trust. Trust is suggested to exist when the trustor holds a
positive attitude towards the trustee’s goodwill and reliability in a risky exchange situation

Palmatier et al.’s (2006) meta-analysis combines the existing definitions and introduces trust
as the confidence in an exchange partner’s reliability and integrity, including several
dimensions, i.e. trustworthiness, credibility, benevolence, and honesty. In some other studies,
trust is defined as a form of control that reduces uncertainty (Das and Teng 2001; Rodriguez
and Wilson 2002). Trust is also introduced as an exchange partner’s expectation that the other
party can be relied on, will behave as predicted, and will act fairly (Zaheer et al. 1998; Poppo
et al. 2008).
Some trust-related terms are also introduced, identifying the focus of conceptualisation. For instance competence trust and goodwill trust are defined distinctly; competence trust is referred to the expectation of technically competent role performance; goodwill trust is referred to the expectation that the other party demonstrates a special concern for others’ interests above their own (Das and Teng 2001). After a review of studies of trust, Ebert (2009) summarises that it is conceptualised concerning different combinations of one to four dimensions, for instance benevolence, credibility, capability/competence, and expertise.

Möllering (2006) analyses studies into trust and categorises trust-related constructs into those related to reason (trust developed by reasoning based on data), routines (trust developed from situations where there are meaningful routines) and reflexivity (where the parties engage in signalling and in communications in a reflective way that enhances the potential for trust). He also argues that these three categories are interconnected. Möllering et al. (2004) introduce foundations of organisational trust based on the extant literature. They argue that the word trust dates back to 13th century and there are some common foundations with regard to the recent studies of this phenomenon. However studies of organisational trust include various levels (e.g. person-person, person-organisation). These level-related issues also have particular impacts on how trust is to be operationalised.

Huemer (1998) incorporates the ideas from the IMP perspective (Håkansson 1982), examining and reviewing the conceptualisation of organisational trust from a transaction cost perspective. On the basis of this review he proposes a relativist perspective. This emphasises the economic and social elements in the two discussed perspectives and argues that taking neither opportunism nor trustworthiness for granted, makes most sense. This introduction is
followed by a breakdown of trust into several fundamental aspects that are: (1) its preconditions (e.g. risk and uncertainty), (2) its organisational dimension (personal/psychological versus impersonal/institutional level), (3) its antecedents (e.g. reputation and integrity), (4) its nature (strategic/calculative versus passionate/affective), (5) its role (outcomes such as cooperation) and (6) its development over time.

Trust has also been included in studies addressing business networks. To emphasise the role of trust in business networks, Hadjikhani and Håkansson (1996) posit that trust-mistrust in a business relationship is not related only to that relationship. It also depends on the trust-mistrust among connected actors. In addition, the development of trust has been considered in coordinating, controlling and managing business networks (Wilkinson 2001). Trust and informal agreements have been acknowledged by strategists and networkers as alternative governance forms (Gadde et al. 2003).

Geyskens et al. (1998) address trust by a meta-analysis study. They introduce the most-often used definitions of trust in channel studies as the extent to which a firm believes that its exchange partner is honest and/or benevolent. The results of this meta-analysis indicate that trust contributes to satisfaction and long-term orientation; trust and economic outcomes, together, conduct relationship success.

In another more recent distinction introduced, Fink and Kessler (2010) introduce maxim-based trust versus instrumental trust. Maxim-based trust is intrinsically motivated, in contrast to instrumental trust, which is extrinsically motivated. Instrumental trust refers to the exogenous conformity of the other party's behaviour with rules of cooperation; it draws its coordinative power from sanction and control. This form of trust is a result of the awareness
that the other party may face disadvantages in the case of defective behaviour. By contrast, maxim-based trust is intrinsically motivated, drawing its coordinative power from the actor's self-commitment to a maxim (Kant 1785).

Selnes (1998) addresses the complementary role of satisfaction and trust in buyer-seller relationships. One of the major findings of his study, which is based on SEM, is that satisfaction and communication have a significant impact on trust. Satisfaction also has an indirect and a direct effect on enhancement (motivation to enhance the scope of the relationship). Surprisingly trust in his study is not shown to be necessary when the desired outcome is relationship continuity.

Trust has also been introduced as a moderator; Joshi and Stump (1999) propose a model that tests the moderating effect of trust on the effect of manufacturer relationship-specific investments on joint action. The model is tested and the impact is found to be significant. Squire et al. (2009) introduce a model in which trust is hypothesised to have a moderating effect on the impact of the extent of cooperation on knowledge transfer. The model tests and shows that trust positively moderates this relationship.

Ebert (2009) summarise studies of trust published in highly ranked journals between 1966 and 2006. She identifies forty key variables that are directly connected to trust. She groups these variables into eight clusters and uses this to introduce a model of trust looking at its antecedence and consequence factors. The clusters are: dependency, environment, future intention, person, reputation, satisfaction, security/risk and transaction costs. Dependency includes (in-)dependence, autonomy, leadership and power variables. Environment includes time, industry and culture variables. Future intention consists of cooperation, benefit,
collaboration, commitment, reciprocity, loyalty, (re-)purchase and use of product/service. Person includes sociodemographics and involvement variables. Reputation consists of reputation, quality, performance, justice, fairness value and ethics. Satisfaction includes satisfaction and experience variables. Security/risk includes security, risk, conflict and opportunism variables. Transaction costs consist of communication, information sharing, negotiation and control.

Trust can influence other business relationship characteristics; it influences the degree of communication. It is also influenced by the degree of communication. In relationships based on trust the likelihood of continuation is higher (Anderson and Weitz 1989). Trust influences the business relationship success, commitment, satisfaction and long-term orientation (Mohr and Spekman 1994; Geyskens et al. 1996). In another study trust and satisfaction are hypothesised to have a complementary role (Selnes 1998).

Trust enhances cooperative behaviour (Schurr and Ozanne 1985). This can include different relational behaviour such as making investments in the relationship and sharing information. Trust influences how companies communicate with each other and share information (Anderson and Weitz 1989). Trust also influences other characteristics such as loyalty (Chow and Holden 1997). In the model development chapter, the constructs that are related to trust and included in the proposed model for this study are discussed in greater detail.

An overview of studies on trust in business-to-business marketing is presented in Table 2-2. This summarises, in the studies discussed above, how trust has been defined and measured, how it has been linked to other constructs and finally what methods have been used for its

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2 Please note that the table is presented at the end of the chapter with the purpose of improving the readability (and due to the page “landscape” setting).
investigation. In summary, the importance of trust has been highlighted in inter-organisational studies (e.g. Ford 1980; Chow and Holden 1997). A body of the literature contributes towards conceptualising trust, proposing and testing how trust is influenced by and influences other constructs and characteristics of inter-organisational relationships. (Schurr and Ozanne 1985; Anderson et al. 1987; Anderson and Weitz 1989; Anderson and Narus 1990; Ring and Van de Ven 1992; Mohr and Spekman 1994; Morgan and Hunt 1994; Kumar et al. 1995; Wilson 1995; Geyskens et al. 1996; Chow and Holden 1997; Doney and Cannon 1997; Das and Teng 1998; Geyskens et al. 1998; Zaheer et al. 1998; Joshi and Stump 1999; Das and Teng 2001; Rodriguez and Wilson 2002; Palmatier et al. 2006; Denize and Young 2007; Mouzas et al. 2007; Palmatier et al. 2007a; Poppo et al. 2008; Squire et al. 2009; Fink and Kessler 2010; Jiang et al. 2011).

In terms of methodology, the main approach in previous studies has been conceptual development and model development, which is in many cases followed by an empirical test of the model. However, there are also meta-analyses (see Geyskens et al. 1998; Palmatier et al. 2006). While most of these studies are cross-sectional, there are some that are longitudinal (see Narayandas and Rangan 2004; Palmatier et al. 2007a). There is also a critical review of the literature of empirical studies into trust (Seppänen et al. 2007). The vast majority of these studies are conducted in a single country; though there are some exceptions that look at different countries with the purpose of incorporating the impact of cultural differences (e.g. Fink and Kessler 2010).

Most scholars use the term ‘trust’. Additionally some introduce terms that more particularly present the focus of their particular conceptualisation. For instance Das and Teng (2001) discuss competence trust and goodwill trust; Fink and Kessler (2010) conceptualise maxim-
based trust. The previous quantitative studies of trust mostly operationalise the construct using multiple scales. However, in an extreme case, Selnes (1998) measures it using one single item. Issues with regard to operationalisation are addressed more carefully later in the thesis (in Chapter 5: Measurement and Pretest). Some studies inform this research in terms of how they look at level issues regarding trust (Dwyer et al. 1987; Kumar et al. 1995; Doney and Cannon 1997; Zaheer et al. 1998; Narayandas and Rangan 2004; Mouzas et al. 2007; Seppänen et al. 2007; Fang et al. 2008; Jiang et al. 2011). A more detailed discussion of these studies follows, as one of the major focuses of this study is exploring different aspects of trust operating at different levels.

2.6 Two Aspects of Trust Operating at Different Levels in Business Relationships

By nature organisations are multi-level. Individuals work in groups and teams within the organisation and interact with themselves and with other individuals both inside and outside their organisation. It is critical to consider level issues in theory development, data collection and analysis. No construct is level free. Every construct is tied to one or more organisational levels (Klein et al. 1994). It is important to incorporate the appropriate level of analysis. A vast number of studies have focused on level issues in organisational research primarily regarding statistical questions; looking at issues such as how to justify aggregation, how to analyse data in accordance with the level of a theory and how to analyse multi-level data (e.g. Firebaugh 1980; Lincoln and Zeitz 1980; James 1982; Mossholder and Bedeian 1983; Glick and Roberts 1984; Bedeian et al. 1989; Bryk and Raudenbush 1992). In addition to statistical concerns with regard to levels, special attention should be drawn to constructs’ levels in terms of their conceptualisation and measurement. Single-level or mixed-level theories should be identified and distinguished. Such appreciation and recognition will improve the
clarity, testability and comprehensiveness of organisational theories (Rousseau 1985; Klein et al. 1994).

Business relationships involve both inter-personal and inter-organisational relationships. The consideration of inter-personal and inter-organisational variables to study buyer-seller relationships has been promoted within the IMP group. This has also been shown in the concept of bonds in business relationships; Wilson (1995) argues that structural bonds arise from investments made by firms, and social bonds grow out of mutual personal relationships. The association between structural and social bonds and trust is emphasised later by Rodriguez and Wilson (2002). Huemer (1998) argues that one of the fundamental aspects of trust is its level dimension: whether it is at the personal/psychological or impersonal/institutional level. It is crucial to understand the role of individual versus organisational relationships; for instance “customers may form a relationship with an individual boundary spanner in the selling organisation and/or with the selling organisation as a whole” (Palmatier et al. 2006, p. 141).

Trust is a complex and multi-level concept in the inter-organisational context (Currall and Inkpen 2006). Level issues are important when designing organisational studies (Rousseau 1985; Klein et al. 1994). There are some inconsistencies and ambiguities in conceptualisation, operationalisation and measurement of trust in inter-organisational relationships (Seppänen et al. 2007). Trust in inter-firm relationships (trust as an organisational, vis-à-vis personal, facet) deserves careful evaluation (Dwyer et al. 1987). In order to better understand multi-level and complex concepts it is suggested to collect data at a level below the target level of theory, data that can then be aggregated to the level of the theory (Burstein 1980). Klein et al. (1994) recommend approaches that employ multiple and
varied measures of the construct of the theory. In studies on trust, there have been some attempts to understand this construct at different levels. A review of trust studies with a focus on the level of operation follows.

In more recent studies of trust, different aspects of this construct operating at different levels are examined. Fang et al. (2008) look at trust at three different organisational levels. They propose that these three aspects are distinct and have different effects on inter-organisational relationships. These aspects are comprised of (1) inter-organisational trust between collaborating firms, (2) each firm’s agency trust in its own representatives assigned to a collaborative entity (coentity), and (3) intraentity trust among the representatives assigned to the coentity.

Insights about a construct can be obtained when the researcher conducts analyses at one or more levels above or below the focal construct (Hackman 2003). Trust research in an inter-organisational context is of particular importance and specification. One significant specification of trust is its complexity and multi-dimensionality with regard to its levels of analysis. Curral and Inkpen (2006) argue this issue carefully, exploring the impact of trust at one level of analysis on trust at another level of analysis. They propose that it is possible to grasp the complexity of trust at one level (e.g. the inter-personal level) by examining trust at another level (e.g. the inter-group or inter-organisational level). They develop a framework that can be used to understand trust across different levels and think about trustors and trustees at these levels. In this context designation of the trustor answers the question ‘Who trusts?’ and designation of the trustee answers the question ‘Who is trusted?’ Distinguishing between trustors and trustees helps to avoid confusion regarding levels of analysis and clarifying who is trusting versus who is being trusted (Mayer et al. 1995).
Looking at trust at different levels, Doney and Cannon’s (1997) empirical study shows that inter-organisational trust differs from inter-personal trust; they distinguish industrial buyers’ trust of a supplier firm and their trust of the supplier’s salesperson. They propose that trust of the salesperson operates indirectly through supplier firm trust; and they both influence a buyer’s anticipated future interaction with the supplier. Inter-personal trust and inter-organisational trust are introduced as distinct constructs, which influence each other (Zaheer et al. 1998). Zaheer et al. (1998) measure these two constructs by different and particular items. They define trust as the expectation that an actor (1) can be relied on to fulfill obligations (adapted from Anderson and Weitz 1989), (2) will behave in a predictable manner, and (3) will act and negotiate fairly when the possibility for opportunism is present (adapted from Anderson and Weitz 1989; Bromiley and Cummings 1995).

Trust and commitment are both assumed to operate at the individual level by Ganesan (1994) and Morgan and Hunt (1994). Doney and Cannon (1997) consider them as operating across individual and organisational levels. Narayandas and Rangan (2004) introduce trust as an inter-personal construct and commitment as an inter-organisational construct. Their study specifically considers the constructs’ level of operation and compares their specific level-related propositions with previous studies (i.e. Ganesan 1994; Morgan and Hunt 1994). By studying the causal link between trust and commitment, they suggest that inter-personal dynamics affect inter-organisational orientations, whereas the opposite is not true. Therefore, in some studies trust has been introduced as an inter-personal construct (e.g. Morgan and Hunt 1994; Narayandas and Rangan 2004), whereas in others it has been considered as operating across individual and organisational levels (e.g. Doney and Cannon 1997). Chow and Holden (1997) consider two types of trust in purchasing environments: trust in a
salesperson and trust in the selling company. Therefore they distinguish between different levels of operation of this construct. Some attempts have been made to differentiate the sub-constructs of trust that operate at inter-personal and at inter-organisational level (e.g. Blois 1999).

Different relational characteristics are examined by consideration of both organisational and individual levels (Pfeffer and Salancik 1978; Phillips 1981), looking at organisational and personal (individual) factors (Frazier 1983a). Exchange relationships involve two or more “actors”, which are not only individuals but also corporate groups or organisations as collective actors (Levine and White 1969, p. 64).

In an attempt to introduce a definition of trust that can be utilised across different levels (e.g. inter-personal and inter-organisational) (Currall and Judge 1995; Currall and Epstein 2003; Currall and Inkpen 2003; 2006), two principal concepts are considered: reliance (Giffin 1967; Rotter 1980) and risk (Rousseau 1985; Mayer et al. 1995). Based on this conceptualisation, trust is defined as the decision to rely on another party (i.e. person, group, or organisation) under a condition of risk. Reliance is based on positive expectations of, or confidence in, the trustworthiness of another part (Rousseau et al. 1998). Risk is the potential that the trusting party will experience negative outcomes (March and Shapira 1987; Sitkin and Pablo 1992), if the other party proves to be untrustworthy. Thus, risk creates the opportunity for trust (Rousseau et al. 1998).

Studying decision making at various levels is common (Currall and Inkpen 2006). Some examine decision making by individuals. For example Bazerman (2001) studied managers’ rational decision making. Some explore decision making by groups. For instance Bar-Tal
(1990) analyses group beliefs and its behavioural, cognitive, and affective implications for group members and the group as a whole. Hackman (2003) argues that although researchers more often turn to the next-lower level for explanatory mechanisms, a robust understanding of social and organisational dynamics requires attention to higher as well as lower levels of analysis. Following the common approach in physical sciences, studies turn to lower levels of analysis to generate ever more ‘basic’ understanding of the phenomena under study. For example, psychologists may try to explain within-group phenomena in terms of the identities of individual members; this is generally known as reductionism and is viewed as one of the pillars of scientific research. However, Hackman (2003) criticises the version of reductionism called ‘grand reductionism’ (Weinberg 1995), also referred to as ‘explanatory reductionism’ (Mayr 1988), which holds that things operate as they do entirely because of the properties of their constituent parts. He argues that the most useful explanations come from explicitly ‘bracketing’ our focal phenomena, which means including in our conceptual and empirical analyses constructs that exist one level lower, but also one level higher. He exemplifies an inter-group study from flight crews, hospital workers, and orchestra members.

Researchers argue that decisions, and particularly trusting decisions, can be made at organisational levels (in addition to personal levels). For instance Huber (1990) investigates the effect of information technology on organisational design and decision making. Aiming to provide a rigorous approach to the formation of concepts in organisational science, Osigweh (1989) notes the problem of concept stretching (broadening the meaning beyond reason) while maximising the potential for concept travelling (fitting a variety of applications); and describes a procedure for forming and moving concepts from lower to higher levels of abstraction. He argues that persons, groups and organisations all are capable
of making trusting decisions. Therefore a conceptualisation of trust at inter-personal level to inter-group level to inter-organisational level can be developed.

In line with Osigweh (1989)’s argument, mentioned above, Currall and Inkpen (2006, p. 236) define a “travelling” definition; “under a condition of risk, a person’s, group’s, or organisation’s trust is signified by a decision to engage in action that allows its fate to be determined by another person, group or organisation.” In this study, in line with these arguments, it is suggested that a definition of trust at the inter-personal level is required and needed. However, there is a difference in the approach taken here with that of Currall and Inkpen. In this study, two different conceptualisations are provided for trust at the inter-personal and inter-organisational levels, whereas they introduced a definition serving both levels. The conceptualisations and definitions used in this study will be discussed in more detail later in this dissertation (in section 4.3: Inter-Personal Trust, Inter-Organisational Trust and Commitment).

The concept of reliance is introduced by a number of researchers as a complementary concept to (inter-personal) trust, operating at the inter-organisational level. Business relationships presuppose the existence of complementarity in resources, activities and information (Ford et al. 2002). Complementarity among organisations can lead to inter-organisational exchange but this has its price, specifically reliance on other organisations. After exploring the case of Marks and Spencer’s failure, and discussing internal and external factors, Mellahi et al. (2002) suggest that perhaps retailing could be expected to have better protective mechanisms, leading to higher degree of reliance. For instance, the law can protect the expectation interest (Fuller and Perdue 1936). In clarification of this construct’s level of operation, it is useful to review Fuller and Perdue’s (1936; 1937) critique with regard to using the term ‘trust’ for
organisational phenomena: they argue that trust cannot be reified at the organisational level. But the rational construct of reliance can be successfully applied to business relationships.

In line with Fuller and Perdue’s (1936; 1937) proposition, Mouzas et al. (2007) argue that inter-personal trust and inter-organisational reliance in business relationships should be differentiated. In their conceptualisation, reliance is introduced as a construct complementary to trust, which involves protective mechanisms that minimise the risk of exchange relationships and deliver a legitimate right to the companies involved. The source of (inter-organisational) reliance is rationality, whereas the source of (inter-personal) trust is emotions. In their proposed framework, the term reliance is selected in order to stress the “opposed characteristics of a non-person based, rational standard within inter-organisational relationships” (p. 1020). They emphasise that (inter-personal) trust and (inter-organisational) reliance are distinct characteristics. It should be noted that, inconsistent with the position above, Ganesan (1994) has used the terms trust and reliance interchangeably.

Marketing studies have experienced a shift that focuses more significantly on the role of social determinants of behaviour such as trust (and commitment); researchers have to deal with the complexity of these constructs when studying inter-organisational relationships (Gundlach et al. 1995). The attempt to look at the inter-organisational constructs noting the different aspects related to emotional and rational dimensions is evident in previous studies, for instance with regard to ‘commitment’ (Gilliland and Bello 2002). Commitment in this case is introduced with two components: “a rational economic calculation” and “an emotional, social sentiment” (p. 25). The sociology of these two dimensions has been introduced as gesellschaft and gemeinschaft (Kanter 1972; Macneil 1987). The German sociologist, Ferdinand Tönnies, introduces these concepts of Gemeinschaft und Gesellschaft.
first in the nineteenth century. Gesellschaft concerns the rational and task-oriented issues. It involves economic and tangible gains; it deals with challenges to get the job done. Gemeinschaft is more concerned with emotional content and the ongoing traditional relationship values further than mere economic gains, such as sentiments of faithfulness that ties business partners (Gilliland and Bello 2002). This distinction has some specific implications in the study of inter-organisational relationships. The rational dimension (i.e. calculative commitment), which is rooted in gesellschaft, calculates the gains of continuing a relationship and the losses of its termination. However, although this calculative dimension includes a tendency to continuation, it is associated to opportunistic behaviour and a search for alternatives (Kumar et al. 1994). “Thus, while calculative commitment indicates an attachment, there is no indication that relational norms or other pro-social behaviours exist between the two firms. In fact, without a relational bond to tie the manufacturer, it would be willing to terminate the relationship should it receive an economically superior offer from another distributor” (Gilliland and Bello 2002, p. 28). On the other hand, the emotional dimension (i.e. loyalty commitment) is rooted in gemeinschaft (Gilliland and Bello 2002). In line with this conceptualisation, in this study inter-organisational trust is rooted in gesellschaft whereas inter-personal trust has its roots in gemeinschaft.

In addition, some authors mention ‘reliance on trust’ (Ring and Van de Ven 1992; Narayandas and Rangan 2004). Ring and Van de Ven (1992, p. 489) suggest that “reliance on trust can be expected to emerge between firms when they have successfully completed transactions in the past and they perceive one another as complying with norms of equity. The more frequently the parties have successfully transacted, the more likely they will bring higher levels of trust to subsequent transactions. As the level of trust increases, greater reliance may be placed on the actions of the trusted party”. And they propose that “Reliance
on trust will emerge only as a consequence of repeated market transaction between the parties affirming the observance of norms of equity by both parties” and “the greater the ability to rely on trust, the less the risk inherent in a transaction, ceteris paribus” (p. 489).

Mouzas et al. (2007) propose that reliance and trust operate at different levels: trust, as a concept, appears to be more applicable at inter-personal level rather than at inter-organisational level. Reliance does not cover all business relationship concepts that are not explained by trust; it is introduced as a complementary construct to trust that can cover additional elements of business relationships. In this study the notions of inter-personal trust and inter-organisational trust are used as the focus of trust-related concepts. The inter-organisational trust concept used here is therefore similar to the concept of reliance introduced in the previous studies.

Both structural and social dimensions of trust play a role in inter-organisational collaborations (Madhok 1995). Jiang et al. (2011) conceptualise the inter-organisational aspect of trust (called reliance in their study) as a structural dimension critical in business relationships in addition to the inter-personal aspect of trust, as a social dimension. They show that both aspects are significant for building relationships with a long-term orientation.

In a literature synthesis of trust articles, there are a variety of levels observed. These are different types of interaction; which include trust between persons (inter-personal), and trust between organisations (inter-organisational) (Ebert 2009). Ebert argues that there is a transfer of results between these different types of interaction, for instance, which is of particular relevance in the study of business-to-business relationships.
This study attempts to investigate these two aspects of trust operating at different levels in business-to-business relationships. The different aspects of trust are illustrated in Figure 2-1. In this figure, the inter-personal operating level is illustrated in section a and b. Section a illustrates single-actor inter-personal trust. This is about how much a particular employee at company A trusts a particular employee at company B. Section b illustrates collective inter-personal trust. This is about how much employees at company A collectively trust employees at company B. This study focuses on collective inter-personal trust based on consideration of one of the main characteristics of business-to-business relationships: Business-to-business interactions usually involve several people (Ford et al. 2002). Section c illustrates trust at inter-organisational level. This dimension of trust is investigated in this study in addition to the inter-personal trust argued above.

Figure 2-1: Trust at the Inter-Personal and Inter-Organisational Levels
<table>
<thead>
<tr>
<th>Source</th>
<th>Definition of Trust</th>
<th>Operationalisation of Trust (How they have measured it)</th>
<th>Key Constructs and how they are linked (Conceptual model or empirical finding)</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ford (1980)</td>
<td>NA</td>
<td>NA</td>
<td>• human adaptations</td>
<td>Conceptual based on IMP project</td>
</tr>
<tr>
<td>Schurr and Ozanne (1985)</td>
<td>The belief that a party's word or promise is reliable and a party will fulfill his/her obligations in an exchange relationship (based on Blau (1964))</td>
<td>Low Trust/ High Trust induction/introduction to the participants of the study: Regarding “the specific company’s” trustworthiness, I (don’t/--) have many good things to say. I (don’t/--) feel you can trust these people to be very “up front” with you. They (sometimes/will not) play games or give you misleading cues. One year we put ourselves in the position of having to ask “the specific company” to keep a trade secret away from other buyers of “our specific products”, even though it was in “the specific company’s” own interest to spread the news. The secret (spread like wildfire/never got out). I am convinced that you (cannot/can) trust them in your negotiations. (The inductions were represented as two distinct points on a continuum.) Learned High Trust experimental checks: trustworthy, reliable, open, interested in dealing fairly, dependable Learned Low Trust experimental checks: Untrustworthy, unreliable, not open, not up front, could not keep confidence Perceived High/Low Trust experimental checks (scale items): trustworthy/not trustworthy, honest, dishonest, sincere/insincere. Open/closed, straightforward/deceptive, troublesome/not troublesome, and reliable/unreliable</td>
<td>• A seller’s expected trustworthiness plus toughness in bargaining lead to higher level of buyer-seller cooperation and agreement. (i.e., trust plays a key moderating role in making a seller’s tough bargaining strategy successful)</td>
<td>Framework development and conducting a programmed computerised game to test it</td>
</tr>
<tr>
<td>Anderson et al.</td>
<td>Mutual trust: the degree to which the mutual trust is measured as one of the attributes representing inter-organisational climate (scales NA).</td>
<td>Mutual trust is measured as one of the attributes representing inter-organisational climate (scales NA).</td>
<td>• mutual trust</td>
<td>Conceptual model tested by a survey</td>
</tr>
<tr>
<td>(1987)</td>
<td>channel member perceives that its relationship with the supplier is based on mutual trust and thus is willing to accept short-term dislocation because it is confident that such dislocations will balance out in the long run (based on Ouchi (1980))</td>
<td>term dislocation (because they are confident that such dislocations will balance out in the long run)</td>
<td>• trust → (agency’s) time allocation</td>
<td></td>
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</table>
| Dwyer et al. (1987) | The belief that a party’s word or promise is reliable and a party will fulfill his/her obligations in an exchange relationship (based on Schurr and Ozanne (1985)) | NA | • It might be impossible to cover all contingencies in a formal contract for sustained cooperation, but if the partners have trust it may be unnecessary to cover all contingencies in the contract.  
• Trust application to buyer-seller relationships, especially inter-firm relationships (trust as an organisational, vis-à-vis personal, facet), deserves careful evaluation.  
• Trust in the relationship development framework provides a vantage point for unifying the research traditions on marketing channel power and conflict. |
| Anderson and Weitz (1989) | One party’s belief that its needs will be fulfilled in the future by actions undertaken by the other party. | Measured with multi-item scales; sample item: How much you trust the principal to be fair (very little-great deal of trust) | • communication → trust  
• older relationship → trust  
• providing support → trust  
• poor reputation → trust  
• one party dominating the | Conceptual model developed and tested by a survey |
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Definition/Description</th>
<th>Measure Example</th>
<th>Methodology</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anderson and Narus (1990)</td>
<td>The firm’s belief that another company will perform actions that will result in positive outcomes for the firm, as well as not take unexpected actions that would result in negative outcomes for the firm.</td>
<td>Based upon your past and present experience, how would you characterise the level of trust your firm has in its working relationship with Manufacturer X? (7-point scale: don’t trust Manufacturer X/trust Manufacturer X completely)</td>
<td>Conceptual model developed and tested by a survey</td>
<td></td>
</tr>
<tr>
<td>Ring and Van de Ven (1992)</td>
<td>Confidence in other’s goodwill</td>
<td>NA</td>
<td>Exploring the characteristics of the forms of governance with purpose of providing a conceptual framework</td>
<td></td>
</tr>
<tr>
<td>Mohr and Spekman (1994)</td>
<td>The belief that the other party will fulfill its obligation in an exchange</td>
<td>(strongly disagree/strongly agree) We trust that the manufacturer’s decisions will be beneficial to our business. This relationship is marked by a high degree of harmony.</td>
<td>Survey</td>
<td></td>
</tr>
<tr>
<td>Morgan and Hunt (1994)</td>
<td>Trust exists when one party has confidence in an exchange partner’s reliability and integrity.</td>
<td>(7 items, including) In our relationship, my major supplier (anchors: strongly agree/strongly disagree) 1. … cannot be trusted at times. 2. … can be counted on to do what is right. 3. … has high integrity.</td>
<td>Conceptual model developed and tested by a survey</td>
<td></td>
</tr>
<tr>
<td>Wilson (1995)</td>
<td>A belief that one relationship partner will act in the best interests of</td>
<td>NA</td>
<td>Conceptual based on IMP project</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Concept</td>
<td>Measure</td>
<td>Notes</td>
<td></td>
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</tbody>
</table>
| Kumar et al.  | The extent that the channel member believes its partner to be honest and benevolent | (Supplier) honesty measured by 5 items assessing the extent to which the supplier is honest, truthful, and reliable.  
(Supplier) benevolence measured by 5 items capturing the dealer’s belief that the supplier considers the dealer’s interests or welfare. | - distinct look at structural bonds and social bonds  
- Conceptual model developed and tested by a survey |
| Geyskens et al. | The extent that the channel member believes its partner to be honest and benevolent | Trust in the supplier’s honesty is measured by 5 items assessing the extent to which the supplier is honest, truthful, and keeps its promises. A five item supplier benevolence scale captured the dealer’s belief that the supplier considers the dealer’s interests or welfare. The lower-level constructs of honesty and benevolence were equally weighted to create a composite score for trust ranging between 1 and 7. Sample items:  
Honesty: Our organisation can count on the supplier to be sincere.  
Benevolence: When making important decisions, the supplier is concerned about our welfare. | - trust $\rightarrow$ calculative commitment (-)  
- trust $\rightarrow$ affective commitment  
- Moderating role: The negative effect of interdependence asymmetry on affective commitment is mitigated by trust.  
- Conceptual model developed and tested by a survey |
| Chow and Holden | The level of expectation or degree of certainty in the reliability and truth or honesty of a person or thing | Trust in the salesperson (strongly disagree to strongly agree):  
1. Generally speaking, you can’t be too careful in dealing with him/her.  
2. Anyone who completely trusts him/her is asking for trouble.  
3. Despite what s/he says, s/he will try to take advantage of me.  
Trust in the company (strongly disagree to strongly agree):  
1. This company can’t be trusted, it’s just too busy looking out for itself.  
2. I have found that I can rely on this company to keep the promises that it makes. | - Trust is an important construct used by buyers to evaluate and select supplies in a business marketing environment.  
- trust $\rightarrow$ loyalty  
- Conceptual model tested by a survey |
<table>
<thead>
<tr>
<th>Source</th>
<th>Concept</th>
<th>Measure</th>
<th>Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doney and Cannon (1997)</td>
<td>Perceived credibility and benevolence of a target of trust</td>
<td>7-point Likert-type scale (strongly disagree to strongly agree):&lt;br&gt;&lt;br&gt;<strong>Trust in supplier firm</strong>:&lt;br&gt;1. This supplier keeps promises it makes to our firm.&lt;br&gt;2. This supplier is not always honest with us. (R)&lt;br&gt;3. We believe the information that this vendor provides us.&lt;br&gt;4. This supplier is genuinely concerned that our business succeeds.&lt;br&gt;5. When making important decisions, this supplier considers our welfare as well as its own.&lt;br&gt;6. We trust this vendor keeps our best interest in mind.&lt;br&gt;7. This supplier is trustworthy.&lt;br&gt;8. We find it necessary to be cautious with this supplier. (R)&lt;br&gt;&lt;br&gt;<strong>Trust in salesperson</strong>:&lt;br&gt;1. This salesperson has been frank in dealing with us.&lt;br&gt;2. This salesperson does not make false claims.&lt;br&gt;3. We do not think this salesperson is completely open in dealing with us. (R)&lt;br&gt;4. This salesperson is only concerned about himself/herself. (R)&lt;br&gt;5. This salesperson does not seem to be concerned with our needs. (R)&lt;br&gt;6. The people at my firm do not trust this salesperson. (R)&lt;br&gt;7. This salesperson is not trustworthy. (R)</td>
<td>Conceptual model developed and tested by a survey</td>
</tr>
<tr>
<td>Das and Teng (1998)</td>
<td>Trust is the degree to which the trustor holds a positive attitude towards the trustee’s goodwill and reliability in a risky exchange situation (based on Nooteboom et al. (1997); Ring and Van de Ven (1992)).</td>
<td>NA</td>
<td>Framework development</td>
</tr>
</tbody>
</table>

- trust in the supplier firm and trust in the salesperson buyer’s anticipated future interaction with the supplier<br>- supplier size and supplier’s willingness to customise buyer trust<br>- trust in the salesperson trust in the selling firm<br>- trust in the selling firm trust in the salesperson
<table>
<thead>
<tr>
<th>Source</th>
<th>Definition</th>
<th>Trust Constructs</th>
<th>Method</th>
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</table>
| Geyskens et al. (1998) | The extent to which a firm believes that its exchange partner is honest and/or benevolent. Mostly including one or both aspects of trust based on its definition (honesty and benevolence). | • Trust has a strong relationship with other channel relationship constructs.  
  • trust → satisfaction  
  • trust → long-term orientation  
  • trust and economic outcomes (together) → relationship marketing success | Meta-analysis                                                                                     |
| Selnes (1998)          | NA                                                                                                   | • Trust and satisfaction have a complementary role.  
  • satisfaction → trust  
  • communication → trust  
  • trust → motivation to enhance the scope of the relationship | Case study: customers of one supplier, SEM                                                       |
| Zaheer et al. (1998)   | The expectation that an actor (1) can be relied on to fulfill obligations (Anderson and Weitz 1989), (2) will behave in a predictable manner, and (3) will act and negotiate fairly when the possibility for opportunism is present (Anderson and Narus 1990; Bromiley and Cummings 1995). This conceptualisation of trust as an expectation rather than a conviction reflects an uncertain anticipation of the referent's future behaviour. (Two principal issues are) | • Inter-personal trust and inter-organisational trust are related but distinct constructs and play different roles in affecting negotiation processes and exchange performance.  
  • inter-personal trust → inter-organisational trust → exchange performance  
  • inter-organisational trust → inter-personal trust | Conceptual model developed and tested by a survey (data collected from 2 respondents from one side of dyad) |
emphasised: 1) complex and multifaceted nature of trust, 2) levels of analysis to which trust has been applied

| Joshi and Stump (1999) | A manufacturer that expects a supplier to be benevolent, that is, to act in the manufacturer’s interest regardless of the manufacturer’s ability to monitor behaviour, trusts that supplier. | 1. If problems such as shipment delays arise, the supplier is honest about the problems.  
2. When making important decisions, this supplier is concerned about our welfare.  
3. When it comes to things that are important to us, we can depend on this supplier’s support.  
4. In terms of shortage, this supplier goes out on a limb for us. | • Trust moderates the effect of relationship-specific investments on joint action | Conceptual model developed and tested by a survey |
Goodwill trust: It refers to the expectation that some others in our social relationships have moral obligations and responsibility to demonstrate a special concern for other’s interests above their own. | NA | • Trust-building techniques and control mechanisms in strategic alliances  
→ risk and uncertainty (-) | Framework development |
| Rodriguez and Wilson (2002) | An informal form of control and a set of mutual anticipations and obligations that reduces the perceived uncertainty about the other party’s behaviour. | 1. I have full confidence in the information provided to us by our alliance partner.  
2. Our alliance partner is perfectly honest and credible.  
3. I have the expectation that the future relationship with our alliance partner will be good. | • structural bonding (i.e. economic, strategic, and organisational links)  
→ trust and commitment  
• social bonding (i.e. affective and personal)  
→ trust and commitment | Conceptual model developed and tested by a dyadic survey |
<p>| Gadde et al. (2003) | NA | NA | • Informal agreements and trust have been acknowledged by strategists | An overview of the implications for strategising offered |</p>
<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
<th>Measure</th>
<th>Findings</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narayandas and Rangan (2004)</td>
<td>Considered as an inter-personal construct</td>
<td>NA</td>
<td>• Inter-personal trust facilitates the development of inter-organisational commitment.</td>
<td>by an industrial network perspective and a comparison of this view with strategic management thinking</td>
</tr>
</tbody>
</table>
| Palmatier et al. (2006) | Confidence in an exchange partner’s reliability and integrity (Common aliases: trustworthiness, credibility, benevolence, and honesty) | NA | • trust → cooperation (considered as relationship outcome)  
• trust → word of mouth (considered as relationship outcome)  
• communication → relational mediators including trust (It has the largest positive effect.)  
• The impact of mediators on performance is more significant when the target of the relationship (marketing) is an individual person than when the target is an organisation.  
• moderator: whether the relationship is critical to the success of the exchange- (i.e. relationship marketing) is more effective when relationships are more critical to the customers.) | Clinical field research, longitudinal |
<p>| Denize and Young (2007) | The thing that opens our minds to others and in doing so, opens (4-item reflective measure, 1 = disagree strongly, 6 = agree strongly) Parties to this relationship… | (4-item reflective measure, 1 = disagree strongly, 6 = agree strongly) Parties to this relationship… | • communication and associated information exchange → trust | Conceptual model developed and tested by a survey |</p>
<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
</table>
| possibilities of leveraging business relationships and opening networks to achieve competitive advantage (based on Young (2006)) | 1. … behave in a trustworthy manner toward each other.  
2. … provide a completely truthful picture when negotiating with each other.  
3. … trust each other.  
4. … have confidence in the fairness and honesty of each other. | • more specifically: information exchange norms → trust |
| Mouzas et al. (2007)          | Trust applicable at interpersonal level and reliance at inter-organisational level | NA | • Trust and reliance are linked.  
• reliance → certainty and calculability  
• manifestation of consent → reliance | Conceptual development |
| Palmatier et al. (2007a)      | Confidence in an exchange partner’s reliability and integrity” that directly and indirectly through commitment affects exchange outcomes (based on Morgan and Hunt (1994, p. 23)). | Customer Trust: (based on Crosby et al. (1990))  
1. [Seller] is a company that stands by its word.  
2. I can rely on [Seller] to keep the promises they make to me.  
3. [Seller] is sincere in its dealings with me. | • Mediating role of trust: The effects of all antecedents (dependence asymmetry, interdependence, relational norms, communication and opportunistic behaviour) on outcomes (sales growth, overall financial performance, cooperation and conflict) are mediated by trust.  
• Trust, commitment and relationship-specific investments (RSI) are key drivers of relational outcomes; they all have direct effect. | Longitudinal analysis comparing four theoretical perspectives (1. commitment-trust, 2. dependence, 3. transaction cost economics, 4. relational norms) to study causal ordering among key inter-organisational constructs and introducing a model with a resource-based view |
| Seppänen et al. (2007)        | NA                                                                          | NA | • Trust is a complex concept and there are still major conceptual and methodological challenges to be met in studying it.  
• There are inconsistencies in conceptualisation, operationalisation, and measurement of trust | A critical review of the empirical research in 1990-2003 on measuring inter-organisational trust |
| Fang et al. (2008) | Inter-Organisational trust: Mutual trust between collaborating firms  
Agency Trust: Collaborating firm’s trust in its representatives assigned to coentity  
Intraentity Trust: Mutual trust between representatives of different firms assigned to coentity | **Inter-organisational trust:**  
1. Both partners’ parent companies trust each other.  
2. Both partners’ parent companies are always frank and truthful in dealing with each other.  
3. Both parent companies believe that the other parent company would go out of its way to make sure the relationship is not damaged or harmed.  
**Agency trust:** (Please think of “we” and “us” as senior management representing your party in this joint venture and “our partner” as the senior management representing the other joint venture party identified at the beginning of the questionnaire)  
1. Our parent company trusts us in our ability to run this joint venture.  
2. Our parent company trusts us in keeping their best interests in mind when running this joint venture.  
**Intraentity trust:** (Please think of “we” and “us” as senior management representing your party in this joint venture and “our partner” as the senior management representing the other joint venture party identified at the beginning of the questionnaire)  
1. Our partner and we can rely on each other to do our job in the joint venture.  
2. In this relationship, our partner and we are both concerned about what happens to each other.  
3. When our partner and we share our problems with each other, both of us know that the other party will respond with understanding.  
All items were measured using seven-point scales anchored by 1 = “strongly disagree” and 7 = “strongly agree.” | • inter-organisational trust and agency trust ➔ resource investment in the coentity  
• intraentity trust ➔ coordination within the coentity  
• Moderating role: inter-organisational trust magnifies the effect between the intraentity trust and coordination within the coentity | Conceptual model developed and tested by a dyadic survey |
| --- | --- | --- | --- | --- |
| Poppo et al. (2008) | An exchange partner’s expectation that the other party can be relied on, will behave as predicted, and will act fairly (based on Zaheer et al. (1998, p. 1. The relationship with this supplier can be characterised as mutually trusting.  
2. This supplier keeps the promises it makes to your company.  
3. Your firm is sure that what this supplier says is true.  
4. This supplier fulfills its commitments exactly as | **The expectations of continuity (a shadow of future) is central in generating trust**  
**Prior history (a shadow of** | Conceptual model developed and tested by a survey |
143). This definition emphasises reliability, predictability, and fairness.

This supplier is concerned about your company’s welfare. (based on Zaheer et al. (1998); Kumar et al. (1995))

past) does not directly affect trust, instead the positive relationship between the two is mediated by the shadow of future

- Trust positively moderates the influence of cooperation on knowledge transfer.

To what extent do the following statements describe the trust you have in this supplier? (1 not at all, 5 to a great extent)

1. This supplier is honest and truthful
2. Promises made by this supplier are reliable
3. This supplier is open in dealing with me
4. I have great confidence in this supplier
5. This supplier has a high degree of integrity

(based on Coote et al. 2003)

- There is a distinction between maxim-based trust and instrumental trust.
- maxim-based trust
- business performance
- This is valid in different countries with various cultures. In this case it is tested in Austria, Slovenia and the Czech Republic.

The confidence in an exchange partner’s reliability and integrity (based on Morgan and Hunt 1994)

- Trust positively moderates the influence of cooperation on knowledge transfer.

To what extent do the following statements describe the trust you have in this supplier? (1 not at all, 5 to a great extent)

1. This supplier is honest and truthful
2. Promises made by this supplier are reliable
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(based on Coote et al. 2003)

- There is a distinction between maxim-based trust and instrumental trust.
- maxim-based trust
- business performance
- This is valid in different countries with various cultures. In this case it is tested in Austria, Slovenia and the Czech Republic.

Fink and Kessler (2010)

Instrumental trust: the exogenous conformity of the other party's behaviour rules of cooperation (it is not operationalised in this study.) Maxim-based trust: intrinsically motivated. it draws its coordinative power from the actor's self-commitment to a maxim

Maxim-based trust:
(1) Self-commitment
1. Before establishing the cooperation relationship, I had heard good things about my cooperation partner.
2. I have cooperated with my present cooperation partner in the past.
3. Before establishing the cooperation relationship, I gathered information about my cooperation partner.
4. I also meet my cooperation partner in my private life.
5. With the cooperation relationship, I aim to realise noticeable success as fast as possible. (R)
6. I attune my behaviour to the aims of the cooperation relationship.
7. I am willing to take a risk.
8. I am convinced that I am able to cope with setbacks.
9. The cooperation has a strong influence on the success of my company.
10. In order to make cooperation work, one has to take a leap of faith with one's cooperation partner, even though this involves risk.
(2) Structural characteristics
1. My cooperation partners and I talk about the cooperation.
2. My cooperation partner and I take joint action in the
area of cooperation.
3. I have remained legally independent within the cooperation arrangement.
4. In decisions regarding the cooperation relationship, the opinion of each cooperation partner is equally important.
5. By behaving opportunistically, I could damage the cooperation relationship.
6. I can terminate the cooperation relationship unilaterally at any time.

(3) Interpersonal characteristics
1. I can get right to the point when speaking with my cooperation partner.
2. Discussions with my cooperation partner always result in a solution.
3. I know the internal processes in my cooperation partner's company.

Four-point scales (‘completely agree’, ‘inclined to agree’, ‘inclined to disagree’ and ‘completely disagree’) were used.

<table>
<thead>
<tr>
<th>Jiang et al. (2011)</th>
<th>Reliance (as inter-organisational aspect of trust): positive expectations held by organisation members that the focal organisation’s specific needs will be fulfilled by its exchange partner given its proven capability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. We are confident with this supplier's ability to fulfill our agreements.</td>
</tr>
<tr>
<td></td>
<td>2. We are confident that this supplier is competent at what they are doing.</td>
</tr>
<tr>
<td></td>
<td>3. The performance of this supplier can always meet our expectations.</td>
</tr>
<tr>
<td></td>
<td>4. We have faith in the supplier's ability to fulfill their promises.</td>
</tr>
</tbody>
</table>

- trust (inter-personal aspect) ⟷ long-term orientation
- reliance (inter-organisational aspect) ⟷ long-term orientation
- Trust and reliance (inter-personal and inter-organisational aspects of trust) are different constructs.
- They both are important factors in business relationships.

Conceptual model developed and tested by a survey

(R) indicates reverse items.
NA Not Applicable
Chapter 3: Research Questions

This chapter discusses the research questions. This is informed by the general research objectives and the relevant extant literature, which were presented in the previous chapter. The general research objectives, which were introduced at the beginning of the previous chapter, are developed based on the literature review and specified in this chapter.

As discussed above, trust is a cornerstone of business relationships. It is one of the major constructs for studying and understanding business-to-business exchanges (Ford 1980; Anderson et al. 1987; Anderson and Weitz 1989). Inter-organisational studies attempt to investigate this construct (Morgan and Hunt 1994; Geyskens et al. 1996). In doing so, a range of definitions, measurement scales and applications are suggested by scholars. In the previous chapter, studies that refer to trust were discussed and summarised. This study focuses on this construct and its role in business relationships.

Trust is a complex concept. There is an ambiguity in the literature with regard to the precise role of trust at its different levels (Zaheer et al. 1998). The fact that it operates at both inter-personal and inter-organisational levels is of critical importance in inter-organisational studies (Mouzas et al. 2007). Trust applications in inter-organisational relationships, focusing on a comparison of the organisational and the personal facets, deserves careful evaluation (Dwyer and Oh 1987). However, it has not been well explored within the literature (Currall and Inkpen 2002), there being a limited number of empirical studies with this focus. See the study of Fang et al. (2008) as an exception.
Therefore, there is a gap in the literature with regard to an understanding of the role of different aspects of trust, inter-personal and inter-organisational, and what role these aspects play in business relationships, particularly how they influence behavioural characteristics and outcomes of the relationship. This understanding contributes to the business-to-business marketing and inter-organisational studies as it sheds light on how these two aspects work at social (inter-personal) and structural (inter-organisational) levels. This understanding of social versus structural aspects can significantly contribute to our knowledge with regard to trust in business relationships (Madhok 1995; Jiang et al. 2011). Also it is important to understand how these two aspects of trust, as an important attitudinal concept (Cook and Wall 1980; Robinson 1996; Leonidou 2004; Ivens and Pardo 2007), work in an attitude-behaviour framework (Fishbein and Ajzen 1975) (i.e. how they influence behavioural characteristics) in business relationships. Consequently investigating how they impact on the relationship outcomes and performance (Palmatier et al. 2007a) extends the framework to an attitude-behaviour-outcome understanding.

Therefore addressing this gap is important and contributes to our knowledge of business-to-business relationships; this study attempts to fill this gap, investigating two different aspects of trust (i.e. the inter-personal and inter-organisational level operating) and shedding light on how they impact on each other, how they influence the behavioural characteristics and consequently the relationship outcomes. It conceptualises these two different aspects of inter-personal and inter-organisational trust. It is informed by existing knowledge within the literature with regard to trust and its inter-personal and inter-organisational aspects. So the first question it tries to answer is:

*What is trust at the inter-personal vis-à-vis inter-organisational level?*
The aspects of trust operating at different levels may influence each other (Doney and Cannon 1997; Currall and Inkpen 2002). Understanding how they impact on each other helps in understanding this concept within business-to-business relationships and consequently helps to understand these relationships. This study tries to understand how these two aspects of inter-personal and inter-organisational trust impact on each other. As a preliminary question it also asks whether these two different aspects of trust are distinct or not. Therefore it asks the following questions:

*Are different aspects of trust, operating at the inter-personal and inter-organisational levels, two distinct constructs?*

*What is the impact of different aspects of trust, operating at the inter-personal and inter-organisational levels, on each other?*

In model development one hypothesis will be suggested with regard to the impact of one aspect of trust on the other (i.e. the impact of inter-personal trust on inter-organisational trust). This effect is further tested. However, as will be discussed, it can be argued that there is a reciprocal effect (i.e. the two aspects influence the other). But due to methods limitations one effect that is more strongly supported within the literature and is more relevant to this study will be chosen and used for examination.

As discussed in the previous chapter, this study is informed by transaction cost analysis. This perspective emphasises the opportunistic behaviour and its role in inter-organisational relationships (Williamson 1979). This study incorporates this aspect, investigating the impact
of the other party’s opportunistic behaviour on the relationship, especially its influence on, for instance, trust-related constructs (Morgan and Hunt 1994). It tries to address:

*What is the impact of the other party’s opportunistic behaviour on the characteristics of business relationships?*

Noting the central role of commitment in business relationships (Dwyer et al. 1987; Morgan and Hunt 1994), this construct is also considered. So this study attempts to address:

*What is the relationship between trust-related constructs (inter-personal trust and inter-personal trust) and commitment?*

Businesses behave in certain ways in their relationships with other businesses. They may make significant investment in a relationship (Heide and John 1992). They may exchange information with each other (Cannon and Homburg 2001). Business relationships are characterised by these behavioural characteristics (e.g. relationship-specific investments and information sharing). Investigation of the attitude-behaviour relationships (Fishbein and Ajzen 1975) is of academic and practical relevance with regard to business relationships. There can be a relationship between trust-related constructs and behavioural attributes (Anderson and Weitz 1989). For instance a higher level of trust can result in a higher level of investment in the relationship (Fang et al. 2008).

This study tries to investigate the relationship between aspects of trust (i.e. inter-personal and inter-organisational levels) and behavioural characteristics. Therefore it examines how
businesses’ attitudes influence how they behave in the relationship. So another research question, which this study addresses, is:

What is the relationship between the aspects of trust (i.e. inter-personal trust and inter-organisational trust) and behavioural characteristics in business relationships?

Business relationship characteristics can have an association with the outcomes of the relationship (Palmatier et al. 2007a). This study examines how business relationship attributes may influence the outcomes of the relationship. These performance and outcome variables can provide an evaluation, assessing the way businesses behave in their business relationships. Therefore, they help understanding how business relationships are managed and what strategies can enhance the relationships, raising the following question:

What is the relationship between behavioural characteristics and relationship outcomes?

In addition, considering the role of dependence in inter-organisational relationships (Kumar et al. 1998), this construct’s effect is investigated. So this study also addresses the question below:

What is the impact of dependence on the relationships examined in this study?

In summary, this research attempts to understand the relationship between inter-personal and inter-organisational trust. It examines their relationship with behavioural characteristics in business relationships. It investigates how trust at its different levels is associated with companies’ behaviour in business relationships. In addition, the business-to-business
marketing and purchasing, the inter-organisational studies and the strategic management literature all emphasise the importance of understanding what influences the outcomes of business relationships. Extending the study with the consideration of the attitude-behaviour-outcome framework, this research investigates the relationship between the aspects of trust, behavioural attributes and business relationship outcomes. The impact of the other party’s opportunistic behaviour is investigated. Finally the impact of dependence on the relationships is studied. The rationale of the suggested relationships is discussed in detail in the following chapter. Although each of these questions can be expanded to a research study project itself, in this study in line with these questions, a fully integrated model is developed, which is discussed and presented in the following chapter.
Chapter 4: Model Development

The beginning of this chapter introduces the epistemological standpoint of the research; this is informed by the research questions and informs different parts of the research (e.g. model development, data collection and analysis). It argues why specific approaches and methods are undertaken in this study. This chapter also discusses the model development; the extant literature is used to develop a model, which is tested empirically in the following parts of this dissertation. Several sections contribute to this development. In these sections the model constructs are introduced, discussed and defined. Their measurement scales are reviewed and their related hypotheses are suggested. The development is based on discussions of (1) trust-related constructs (i.e. inter-personal trust and inter-organisational trust) and commitment, (2) opportunistic behaviour, (3) behavioural characteristics (i.e. information sharing and relationship-specific investments) and (4) relationship outcomes. This review results in the development of the basic model. A discussion of an additional construct (i.e. dependence) follows, which leads to the development of a model with the moderating effects. This chapter is informed by the literature review and research questions discussed in the previous chapters.

4.1 Epistemological Standpoint

The nature of social science is a matter of debate based around the philosophical aspects of ontology (reality) and epistemology (knowledge) (Holden and Lynch 2004; Walliman 2006). The methodological choice should be matched to the researcher’s philosophical view and research phenomenon (Holden and Lynch 2004). It is by its methods rather than its subject-matter that philosophy is to be distinguished from other arts or sciences (Ayer 1956). Philosophy is concerned with the nature of reality, asking what is real. This involves the
problem of man’s relationship to reality. On the other hand science investigates the nature, cause and effects of real things and processes (Winch 1958). Epistemology is concerned with how we know things and what can be considered as acceptable knowledge within a discipline; it studies how it is possible to gain knowledge of the world (Hughes and Sharrock 1997).

Ontology is the researcher’s view of and assumptions concerning reality. It is concerned with what there exists to be investigated, how it relates to the nature of the reality (Holden and Lynch 2004; Walliman 2006) and addresses the question that what things, if any, have existence or whether the reality is the product of one’s mind (Burrell and Morgan 1979). It is the cornerstone of epistemology (Collis and Hussey 2009). The researchers’ ontology affects their epistemological persuasion and their choice of methodology consequently follows these ontological and epistemological assumptions (Walliman 2006).

The following dimensions can be considered when positioning two perspectives at the extremes of a philosophical continuum: ‘positivism versus interpretivism’, ‘objectivism versus subjectivism’, ‘empiricism versus rationalism’ and ‘hypothetico-deductive method versus inductive method’, (Burrell and Morgan 1979; Hughes and Sharrock 1997; Holden and Lynch 2004; Walliman 2006). In the following paragraphs, these perspectives are briefly introduced. This introduction reveals that these perspectives may have overlaps; they may link to each other and may be each other’s consequential choice. This study is based on the philosophical standpoint of the former among each of these pairs. This choice is discussed in the following paragraphs. Positivism, which is the undertaken epistemological approach in this study, is elaborated in more detail.
Positivism can be considered as an extreme position of the philosophical continuum, and anti-positivism (phenomenology or interpretivism) considered as the other extreme. Objectivism and subjectivism (Holden and Lynch 2004) are introduced as being strongly related to positivism and interpretivism (Hughes and Sharrock 1997). Both categorisations look at the status of scientific methods and human subjectivity (Walliman 2006). Positivism emphasises that the aim of the social science is to identify causal explanations and fundamental laws that explain regularities in human social behaviour (Holden and Lynch 2004). The positivist approach to scientific investigation is based on realism, that is an attempt to find out about one real world (Hacking 1981). There is a difference between scientific theories and other kinds of belief, that is there is a unique best description of any aspect of the world that is true regardless of what people think. Introduction of realism (versus nominalism) is one of the oldest philosophical school of thoughts for studying human activities and social patterns (Turner 1985).

Positivism applies the natural sciences to the study of social reality. It is an objective approach that can test theories and establish scientific laws and aims to establish causes and effects (causality) (Walliman 2006). This is based on naturalism. On the other hand anti-naturalistic social studies are introduced. They suggest that the patterns of the society are fundamentally different from those of natural sciences, and therefore may not be studied using the same methods (Winch 1958). Scholars advocate naturalistic social studies arguing that issues raised by anti-naturalists (for instance complexity and the role of value judgements in social science) pose serious though not fatal problems for the applicability of scientific social science (Thomas 1979).
The appropriateness of the use of naturalist’s methods in social science and management studies is questioned by some scholars (e.g. Whitley 1984). Interpretivism assumes that subjective meanings play a crucial role in social actions. It aims to reveal interpretations and meanings. This is based on the philosophical doctrines of idealism and humanism. It maintains that the view of the world that we see around us is the creation of the mind (Walliman 2006). The interpretive approach has been introduced as a systematic analysis of socially meaningful action through the direct detailed observation of individuals in order to arrive at interpretations of how they create and maintain their social worlds (Neuman 2006). Qualitative research methods (e.g. Silverman 2005) are built on interpretive science approaches (Silverman 1972). Critics address the flaws of interpretive approaches and subjectivism. One of the most critical flaws is their inability to replace positivism with a better approach (Hughes and Sharrock 1997; Holden and Lynch 2004). In spite of the arguments made with regard to qualitative and quantitative methods and their differences, there is an ongoing debate with regard to their distinction (Bryman 1984). Some scholars defend the relevance of mixed methods and encourage their use in behavioural and social sciences (Johnson and Onwuegbuzie 2004). In this research these arguments with regard to different philosophical standpoints are noted. However, as will be discussed later, this study is dominantly informed by positivism and its established assumptions and methods.

Empiricism and rationalism are two ways of gaining knowledge: Knowledge can be gained by experience, using deductive reasoning (empiricism) or by logic using inductive reasoning (rationalism) (Walliman 2006). The relative merit of inductive-deductive reasoning has been argued for a long time since the Ancient Greeks Plato and Aristotle who represent the two epistemological approaches: Plato argued for deductive thinking (starting with theory to make sense of what we observe) and Aristotle for inductive thinking (starting with
observations in order to build theories) (Walliman 2006). The Popperian (Popper 1968) approach combines deductive and inductive thinking in the hypothetico-deductive method; Based on this method hypotheses and testable theories are developed inductively from observation. Observations that will demonstrate the truth or falsity of these hypotheses are deduced. The hypotheses are tested to be rejected or refined in the light of the results (Holden and Lynch 2004; Walliman 2006). The inductive approach begins with detailed observation of the world and moves toward more generalisations and ideas from evidence (Neuman and Kreuger 2003; Holden and Lynch 2004). In this research in line with the positivist school of thought, the hypothetico-deductive method is used.

Here positivism and its underlying assumptions and methodological issues are introduced in more detail. Positivism arose from a school of thought founded by Auguste Comte in the nineteenth century, primarily arguing that the social universe is amenable to the development of abstract laws that can be tested through the careful collection of data (Comte 1830-1842). Positivism assumes that problems are better understood if they are reduced to the simplest possible elements. It is concerned with the generalisation that aims to lead to prediction, explanation and understanding. It emphasises that in order to be able to generalise issues within the human and social science it is necessary to select samples of sufficient size (Holden and Lynch 2004). Positivism sees social science as an organised method for combining deductive logic with precise empirical observations to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human behaviour (Neuman and Kreuger 2003).

The positivist’s approach involves precise quantitative data and frequent use of surveys and statistics, seeking accurate and precise measures and objective research (Neuman and
Kreuger 2003; Neuman 2010). These are pursued in this study. Here causal laws are believed to be probabilistic. This is the most dominant view within positivism (Neuman 2006, p. 74); the laws permit the researchers to make predictions of how often a behaviour will occur within a large group. They cannot predict the behaviour of a specific person but it can say than under specific conditions, for instance “there is a 95 percent probability that one-half of the people will engage in a specified behaviour”. Concepts are formulated using a discipline-based language (Blaikie 1993). Positivist scientific explanation discovers causal laws; it explains that one variable is caused by the other variable because those two variables are specific instances of a causal law. A positivist explanation states the general causal law that covers specific observations. An explanation is determined true if it has no logical contradictions and is consistent with observed facts and replicated (Neuman 2006).

This research is based on the assumptions of positivism and informed by the methodological approaches established within this perspective. Positivism is well established and widely used for studies in the social sciences, influencing research into various disciplines including marketing, market research and psychology. It is associated with many specific social theories (Neuman and Kreuger 2003; Neuman 2010); it has a strong link to the exchange theory framework, which informs this research, as well as the rational choice, which is an underlying assumption of transaction-cost economics, which also influences this research significantly. This study involves introducing hypotheses and empirically testing them in an attempt to shed light on specific aspects of inter-organisational relationships (which are detailed in this dissertation) based on a positivist approach, rather than describing and interpreting this phenomenon. Based on these arguments, in this research a positivist approach is more appropriate than an interpretivist one.
This study is based on an empirical investigation and its use of empirical data (in line with the positivist school of thought (Turner 1985)): it attempts to empirically test a set of proposed hypotheses, rather than describing empirical events. This follows the positivist propositional strategy, in which a proposition is defined as “a theoretical statement that specifies the connection between two or more variables, informing us how variation in one concept is accounted for by variation in another” (Turner 1985, p. 25). This study engages the modeling strategy of drawing a picture using the symbols such as arrows to represent relationships among the variables, introducing a causal model (i.e. a model involving causal relationships between the dependent and independent variables). This is traditionally introduced by defenders of positivism (Turner 1985). The model and its underlying hypotheses are introduced in the following sections of this chapter.

### 4.2 The Model Framework

The constructs of the attitude-behaviour (Fishbein and Ajzen 1975) part of the framework is informed particularly by social exchange theory and transaction cost economics. The framework is extended by adding the outcomes based on the resource-based view of firms and further developed by incorporating the other party’s opportunistic behaviour based on transaction cost economics. Table 4-1 shows the model framework and its underlying constructs. It presents how the constructs’ selection and conceptualisation is informed by different perspectives. This study focuses on trust and particularly two aspects of it working at different levels. This incorporates ideas from social exchange theory with consideration of social and structural dimensions. These two dimensions of trust, inter-personal (Ganesan 1994; Kumar et al. 1995) and inter-organisational (Blois 1999; Mouzas et al. 2007), form the attitude block of the framework. The behavioural characteristics form the next block, which
consists of commitment, information sharing and relationship-specific investments. The two dimensions of trust and commitment are informed by social exchange theory (Anderson and Weitz 1992; Morgan and Hunt 1994; Jap and Ganesan 2000). The behavioural characteristics of information sharing (Heide and John 1992; Cannon and Homburg 2001) and relationship-specific investments (Heide and John 1990; 1992) are selected based on the emphasis on them in transaction cost economics. The role of opportunistic behaviour is included in the study due to its significance in transaction cost economics (Williamson 1975; John 1984) and to incorporate the behaviour of the other party in the model as well.

Additionally, using ideas from resource-based view with regard to its emphasis on outcomes and performance of the relationship (Palmatier et al. 2007a), the influence of various characteristics on the relationship performance is investigated. This investigation extends the framework and develops an opportunistic behaviour-attitude-behaviour-outcome model. The model framework is illustrated in Table 4-1 showing its different building blocks. Finally the impact of dependence is examined (Kumar et al. 1995), which leads to the development of a model with the moderating effects. This chapter discusses the constructs that are investigated in the study and the rationale for including them. It also presents the suggested hypotheses, which form the nomological model. The models and their underlying hypotheses are tested. The model testing and hypotheses testing are discussed in the following chapters (chapters 8 and 9).
Table 4-1: The Model Framework and Informing Perspectives

<table>
<thead>
<tr>
<th>Opportunistic behaviour</th>
<th>Attitudinal trust constructs</th>
<th>Behavioural attributes</th>
<th>Relationship outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>opportunistic behaviour</strong> (Williamson 1975; John 1984); TCE+</td>
<td><strong>inter-personal trust</strong> (Ganesan 1994; Kumar et al. 1995), SET+</td>
<td><strong>commitment</strong> (Anderson and Weitz 1992; Jap and Ganesan 2000), SET+</td>
<td><strong>financial performance</strong> (Palmatier et al. 2007a), RBV+</td>
</tr>
<tr>
<td></td>
<td><strong>inter-organisational trust</strong> (Blois 1999; Mouzas et al. 2007; Jiang et al. 2011), SET+</td>
<td><strong>information sharing</strong> (Heide and John 1992; Cannon and Homburg 2001), TCE+</td>
<td><strong>non-economic (soft) performance</strong> (Van de Ven 1976; Ruekert and Walker 1987; Selnes and Sallis 2003), SET+, RBV+</td>
</tr>
</tbody>
</table>

TCE+: Transaction Cost Economics and Relational Norms
SET+: Social Exchange Theory and Its Following Theories (i.e. Commitment-Trust Perspective, Dependence Perspective and IMP Perspective)
RBV+: Resource-Based View and Resource Dependence Theory

4.3 Inter-Personal Trust, Inter-Organisational Trust and Commitment

Studies on business relationships recommend distinguishing between different aspects of inter-organisational constructs. Commitment-trust theory tries to conceptualise central concepts in business relationships (Thibaut and Kelley 1959; Blau 1964); and characterise them in a way that allows “distinguishing social from economic exchange” (Cook and Emerson 1978, p. 728). An “exchange provides an important frame of reference for identifying the social network of individuals and institutions that participate in its formation and execution” (Dwyer et al. 1987, p. 11). It is important to clearly introduce the level of operation of constructs in organisational models (Rousseau 1985; Klein et al. 1994).

Conceptualisation of trust especially needs clear elaboration of the levels discussed including their definition and operationalisation. In the present research, one of the basic criteria for
distinguishing inter-personal and inter-organisational trust is their sources. This consideration with regard to trust has been emphasised in previous studies (e.g. Dwyer et al. 1987). The main source of inter-personal trust (i.e. a person or a group of persons in the focal company trusting a person or a group of persons in the partner company) is emotions, whereas the main source of inter-organisational trust (i.e. a focal company relying on the partner company) is rationality. This conceptualisation is based on the anthropocentric notion of trust (Mouzas et al. 2007), which is linked to human beliefs, sentiments, or intentionality (Blau 1964; Rotter 1967; Pruitt 1981; Fukuyama 1995; Solomon and Flores 2001). A social network is identified as a critical aspect of inter-organisational networks (Cook 1977), and is identified as a flow of sentiments (Mitchell 1969). Social psychology is considered as a good reference theory for reviewing inter-personal trust, in which it is believed that trust encompasses two essential elements: trust in the partner's honesty and trust in the partner's benevolence (e.g. Larzelere and Huston 1980; Rempel et al. 1985).

These two elements (i.e. honesty and benevolence) have also been conceptualised in inter-organisational studies as two main aspects of trust: Honesty refers to the belief that one's partner stands by his/her word, fulfills promised role obligations, and is sincere (Scheer and Stern 1992; Morgan and Hunt 1994). Benevolence reflects the belief that one's partner is interested in the firm's welfare and will not take unexpected actions that will negatively impact the firm (Anderson and Weitz 1989; Anderson and Narus 1990).

Table 4-2 summarises the definitions of trust3. As it can be seen in this table honesty is an important dimension of trust (Kumar et al. 1995; Jap and Anderson 2003; Leonidou 2004). In some cases, as presented in the summary table, although honesty is not explicitly introduced

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3 Please note that the tables of current sections of this chapter are presented at the end of each section with the purpose of improving the readability (and due to the page “landscape” setting).
as a trust dimension, it is used when measuring trust (Doney and Cannon 1997; Jap 1999; Van Bruggen et al. 2005; del Bosque Rodríguez et al. 2006; Wang et al. 2008). Table 4-2 also lists the scales used for measuring trust. The selection of items measuring trust, using this table, is discussed in Chapter 5: Measurement and Pretest. Considering the scales summarised in this table (and their corresponding definitions), it will be explained which measurement items will be used and why they are chosen.

As seen in Table 4-2, benevolence is another dominant aspect of trust considered by many scholars (Kumar et al. 1995; Doney and Cannon 1997; Siguaw et al. 1998; Jap and Anderson 2003; Leonidou 2004; Van Bruggen et al. 2005; del Bosque Rodríguez et al. 2006; Zhao and Cavusgil 2006; Wang et al. 2008). In addition to honesty and benevolence, there are some other trust dimensions that have been introduced. For instance Doney and Cannon (1997), Siguaw et al. (1998) and del Bosque Rodríguez et al. (2006) add credibility to benevolence. However, in this research, as discussed in the following paragraph, honesty and benevolence are chosen as the most appropriate dimensions for inter-personal trust.

Trust is defined referring to honesty and benevolence in traditional as well as recent studies investigating inter-organisational relationships: Trust is the extent to which partners believe the other partner to be honest and benevolent (Kumar et al. 1995; Geyskens et al. 1996). Specifically these two aspects are chosen when investing trust at the inter-personal level in the literature (Jap 1999; Jap and Anderson 2003). This study emphasises the source of different aspects of trust. The source of inter-personal trust is emotions and fits best with honesty and benevolence in comparison to the other dimensions introduced in the literature (e.g. credibility, competence). Honesty and benevolence are related to individual-level characteristics (Jiang et al. 2011), well-rooted in psychology as personal attributes (Seppänen
et al. 2007). In line with the literature suggestion and considering the source of the inter-personal trust versus that of the inter-organisational trust (i.e. emotions versus rationality) this study chooses these two dimensions for defining and measuring inter-personal trust.

*Inter-personal trust is defined as the extent to which the employee/employees of one company perceives/perceive the employee/employees of the other company to be honest and benevolent* (adapted from Kumar et al. 1995; Geyskens et al. 1996). In the definitions provided below the trustee and the trustor are also clarified.

All definitions are provided at both buyer-side and supplier-side as they will be used in the pretest (discussed in section 5.3.2); definition of inter-personal trust at the buyer-side:

*The extent to which the employee/employees of the buyer perceives/perceive the employee/employees of the supplier to be honest and benevolent*

Definition of inter-personal trust at the supplier-side:

*The extent to which the employee/employees of the supplier perceives/perceive the employee/employees of the buyer to be honest and benevolent*

Inter-organisational trust is studied with a consideration of reliability of the other party (i.e. trustee) (Mohr and Spekman 1994; Morgan and Hunt 1994; Palmatier et al. 2007a) or the degree to which one party (i.e. the trustor) can rely on the other party (i.e. the trustee) (Moorman et al. 1992; Ganesan 1994; Farrelly and Quester 2005; Zhao and Cavusgil 2006; Ivens and Pardo 2007). For instance Moorman et al. (1993) argue that trust refers to a
willingness to rely on another. See Table 4-2 for a summary of these studies investigating trust in inter-organisational relationships.

Inter-organisational trust is strongly relevant to business relationships. While “psychologists tend to study inter-personal trust, business firms are concerned just as much with inter-organizational trust” (Sako and Helper 1998, p. 389). Business relationships can exist mainly based on objective rational elements of trust (i.e. the inter-organisational aspect) (Jiang et al. 2011). It is inter-organisational trust that can survive even a breakdown of working relationships between two parties. For instance if inter-personal relationships fails due to labour turnover or a personality clash, inter-organisational trust provides the necessary stability for firms to pursue the relationship (Sako and Helper 1998).

Blois (1999) introduces the notion of reliance, trying to distinguish different levels of operation of trust-related constructs in inter-organisational relationships. He explains that there is a difference between trusting a party and relying on that party to do something. He further develops this argument by introducing reliance as a complementary construct to trust. Both reliance and trust contribute significantly to building of long-term business relationships (Jiang et al. 2011). Reliance operates at the inter-organisational level. It is the confidence that one company can rely on the other company, ensuring the expected performance. It also includes the belief that the other company has the competency to do what is expected (Blois 1999).

Here the differences between trusting and relying on somebody to do something are emphasised. Trust involves depending on the other party’s goodwill and not just their dependable habits. So trust has an emotional essence, which becomes evident when someone
is let down. “If we are let down by those we trust we feel hurt, perhaps even resentful, while when we are let down by those on whom we only rely we might be annoyed but are not hurt” (Blois 1999, p. 199) and “although we are prepared to forgive mistakes and unintended consequences, the intended betrayal of our trust is a cause for enormous pain and distrust” (Misztal 1996, p. 24). This emphasises that, as discussed in the previous section, the source of inter-personal trust is emotions. On the other hand inter-organisational trust (similar to reliance) rests on (proven) capabilities (Blois 1999).

Mouzas et al. (2007) introduce reliance as one possible complementary construct to trust in order to stress a non-person based, rational standard within inter-organisational relationships. They emphasise that the source of reliance is rationality, whereas the source of trust is emotions. As discussed in the case of M&S-Baird (Blois 2003) in the introductory chapter, inter-personal trust can be complemented by the inter-organisational trust; the trustor in a successful business-to-business relationship is convinced that the people at the other company “have their interests at heart” (emotions-based) “yet at the same time pursues the company’s agenda” (rationality-based) (Tjosvold and Wong 1994, p. 308). Reliance is “based on the conviction that a business partner can be relied upon to fulfil the focal firm’s specific needs” in the relationship (Jiang et al. 2011, p. 319).

In this study, the inter-organisational trust concept is considered similar to the notion of reliance presented in the previous studies. There is a controversy in the literature with regard to the use and relevance of these specific terms (i.e. (inter-organisational) reliance, inter-personal trust and inter-organisational trust). These arguments were discussed in the section reviewing trust in the literature review chapter of this thesis. In this study, the controversy with regard to the relevant term is noted. It can be more appropriate to use the term “reliance”
instead of “trust” when investigating the degree to which a company can rely on another company. In spite of this awareness, in this study it is chosen to use the term “inter-organisational trust”, because it saves the terminological link between the trust-related concept examined in this study and trust concept explored in the literature of marketing, inter-organisational studies, channel relationships, strategic marketing, etc.

The inter-organisational aspect of trust is believed to be built upon objective criteria such as expected benefits and proven capability (Jiang et al. 2011). The emphasis on the expectations built on capability is similar to the construct of ‘competence trust’ proposed by Sako and Helper (1998). The conceptualisation of and distinction between inter-personal and inter-organisational aspects of trust is based on the recognition that inter-personal aspect is related to the “confidence placed in the people who are believed to be trustworthy with mutual interest in mind”, while the inter-organisational aspect is related to the “confidence placed in the capability of the partner firm to fulfil the focal firm’s needs”. This brings social (inter-personal) and structural (inter-organisational) dimensions (Jiang et al. 2011, p. 321) into consideration when studying trust in business relationship in line with the extant literature of business-to-business relationships (Wilson 1995) and particularly trust in inter-organisational relationships (Madhok 1995).

\textit{Inter-organisational trust is defined as the extent to which one company holds positive expectations that it can rely rationally on the other company to fulfill the focal company’s specific needs given its proven capability} (adapted from Blois 1999; Mouzas et al. 2007; Jiang et al. 2011). In the following definitions the trustee and trustor are distinguished.

Definition of inter-organisational trust at the buyer-side:
The extent to which the buyer holds positive expectations that it can rely rationally on the supplier, to do what has been expected to fulfill the buyer’s specific needs given its proven capability

Definition of inter-organisational trust at the supplier-side:

The extent to which the supplier holds positive expectations that it can rely rationally on the buyer, to do what has been expected to fulfill the supplier’s specific needs given its proven capability

Trust is broadly identified as a positive attitude (Cook and Wall 1980; Robinson 1996). Two dimensions of trust (i.e. inter-personal and inter-organisational) represent the attitudes in this study, based on the broad conceptualisation of trust. This is also in line with the conceptualisation of attitudes in the attitude-behaviour framework, which emphasises that attitude is a function of beliefs about the consequences of performing a behaviour (Fishbein and Ajzen 1975). In the case of trust it is the belief that the response of the other party to the behaviour of the focal party is in consent to the focal party’s trust (i.e. with honesty and benevolence (inter-personal trust) and reliability and capability to fulfill what is expected (inter-organisational trust)).

The commitment-trust perspective, based on social exchange theory, proposes that commitment is central in business relationships (Thibaut and Kelley 1959; Blau 1964). Trust-commitment theory emphasises on commitment as an important construct strongly related to
trust (Morgan and Hunt 1994). In this study commitment is also considered noting its relevance in inter-organisational studies and its link to the concept of trust.

Table 4-3 summarises definitions of commitment in addition to its measurement scales\(^4\). As seen in this table, commitment has been conceptualised as a basis for willingness to make short-term sacrifices (Anderson and Weitz 1992; Jap and Ganesan 2000; Leonidou 2004; Van Bruggen et al. 2005). It is a desire to maintain the relationship (Mohr et al. 1996; Siguaw et al. 1998; Jap and Ganesan 2000; Selnes and Sallis 2003; Palmatier et al. 2007a). The measurement scales listed in this table are used for operationalisation of commitment, which is discussed in the following chapters. Using this table, it will be explained which measurement items (relevant to which definition) will be used.

Anderson and Weitz (1992) incorporate both behavioural and attitudinal aspects when conceptualising commitment. Commitment reflects the desire to continue a relationship (Kumar et al. 1995). It embraces a temporal characteristic, which highlights the fact that commitment means something only over the long term and suggests a future orientation (Mohr and Spekman 1994), enforcing the relational continuity (Dwyer et al. 1987). Therefore commitment refers to an ‘enduring intention’ by the parties to develop and maintain a stable long-term relationship (Anderson and Weitz 1992). Commitment precludes switching to alternative partners who could provide similar offerings (Dwyer et al. 1987) (see Table 4-3 for a summary of these studies defining and conceptualising commitment).

On the other hand there are some researchers who emphasise on the attitudinal aspect of commitment (Allen and Meyer 1990; Ivens and Pardo 2007) (e.g. affective commitment).

\(^4\) Again this table is presented at the end of the section for better readability.
Cook and Emerson (1978) conceive of commitment between exchange partners as an attachment leading to exchanging repeatedly with the same partner (see Table 4-3). They argue that “this phenomenon can be measured in two ways: (1) at a behavioural level, in terms of partner choices in a field of alternative partners; and (2) at an attitudinal level through sentiments of loyalty, attraction, liking, etc” (p. 734). However, they measure it entirely at the behavioural level.

This study also looks at commitment as a concept involving both behavioural and attitudinal aspects with an emphasis on the behavioural aspect due to two main reasons, (1) the significance of the behavioural focus of the definition (i.e. the desire to develop the relationship and willingness to make sacrifices) and (2) the underlying emphasis on ‘intention’ to maintain the relationship and continue the relationship (Anderson and Weitz 1992; Mohr and Spekman 1994) versus an attempt to look for and replace it with another partner (Cook and Emerson 1978; Anderson and Weitz 1992). Such intention matches the ‘behavioural intention’ focus of the theory of reasoned action (attitude-behaviour framework) (Fishbein and Ajzen 1975). In that theory the behavioural intention refers to the relative strength of intention to perform a behaviour, which matches with the conceptualisation of commitment here. Additionally there is a dominance of behavioural measurement items in the operationalisation of commitment (e.g. defending the other company when others criticise them; the relationship is a long-term alliance) (Anderson and Weitz 1992).

Therefore this study uses the definition introduced by Anderson and Weitz (1992): A desire to develop a stable relationship and a willingness to make short-term sacrifices to maintain the relationship. In the literature, more recent studies adapt this definition. For instance
Farrelly and Quester (2005) define commitment as a willingness of the parties in the relationship to make short-term investments in an effort to realise long-term benefits.

*Commitment is defined as the extent to which one company has the desire to develop a stable relationship, has the willingness to make short-term sacrifices to maintain the relationship, and has the confidence in the stability of the relationship with the other company* (adapted from Anderson and Weitz 1992; Jap and Ganesan 2000).

Definition of commitment at the buyer-side:

*The extent to which the buyer has the desire to develop a stable relationship, has the willingness to make short-term sacrifices to maintain the relationship, and has the confidence in the stability of the relationship with the supplier.*

Definition of commitment at the supplier-side:

*The extent to which the provider has the desire to develop a stable relationship, has the willingness to make short-term sacrifices to maintain the relationship, and has the confidence in the stability of the relationship with the buyer.*
<table>
<thead>
<tr>
<th>References</th>
<th>Construct</th>
<th>Definition</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Wang et al. (2008) IJRM     | Trust     | A belief that a trustor is concerned with a trustee's welfare (benevolence); will reliably fulfill its commitments (integrity); and has the skills, competencies, and knowledge to fulfill its obligations (expertise) | Adapted from Doney and Cannon (1997)  
1. Both firms keep promises made to each other.  
2. Both firms are very honest in dealing with each other.  
3. Both firms would go out of their way to help each other out.  
4. Both firms consider each other’s interest when problems arise.  
5. Both firms can depend on each other.  
(5-point scales anchored by 1: strongly disagree and 5: strongly agree)  
(Cronbach’s alpha: .89) |
| Van Bruggen et al. (2005) IJRM | Trust     | Trust is the perceived credibility and benevolence of the partner. Trust in the partner’s credibility is the belief that the partner stands by its word, fulfills promised role obligations, and is sincere. Trust in the partner’s benevolence is the belief that the partner is interested in the firm’s welfare and will not take unexpected actions that will negatively affect the firm. | Customer trust  
1. This distributor is open and honest with us  
2. This distributor is knowledgeable about its products  
3. In difficult times this distributor will support us  
4. This distributor is trustworthy  
(5-point scales anchored by 1: completely disagree and 5: completely agree)  
(Cronbach’s alpha: .81) |
| Kumar et al. (1995) JMR     | Trust     | Trust encompasses two essential elements: (1) trust in the partner's honesty, that is, the belief that the partner stands by its word, fulfills promised role obligations, and is sincere, and (2) trust in the partner's benevolence, that is, the belief that the partner is interested in the firm's welfare and will not take unexpected actions that will negatively affect the firm. Trust, therefore, exists when a firm believes its partner is honest | **Trust in partner's honesty**  
1. Even when the supplier gives us a rather unlikely explanation, we are confident that it is telling the truth.  
2. The supplier has often provided us information that has later proven to be inaccurate. (R)  
3. The supplier usually keeps the promises that it makes to our firm.  
4. Whenever the supplier gives us advice on our business operations, we know that it is sharing its best judgment.  
5. Our organisation can count on the supplier to be sincere.  
**Trust in partner's benevolence**  
1. Though circumstances change, we believe that the supplier will be ready and willing to offer us assistance and support.  
2. When making important decisions, the supplier is concerned about our welfare.  
3. When we share our problems with the supplier, we know that it will respond |
and benevolent.

<table>
<thead>
<tr>
<th>Morgan and Hunt (1994)</th>
<th>Trust</th>
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<tbody>
<tr>
<td><strong>JM</strong></td>
<td><strong>Trust is conceptualised as existing when one party has confidence in an exchange partner's reliability and integrity.</strong></td>
</tr>
<tr>
<td>1. In our relationship, my major supplier cannot be trusted at times. (R)</td>
<td></td>
</tr>
<tr>
<td>2. In our relationship, my major supplier can be counted on to do what is right</td>
<td></td>
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<tr>
<td>3. In our relationship, my major supplier has high integrity.</td>
<td></td>
</tr>
<tr>
<td>(7-point scales anchored by 1: strongly disagree and 7: strongly agree)</td>
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<tr>
<td>(Reliability:.91)</td>
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<thead>
<tr>
<th>Anderson and Narus (1990)</th>
<th>Trust</th>
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<tbody>
<tr>
<td><strong>JM</strong></td>
<td><strong>Trust in a working relationship and its implications for a firm’s actions have been defined as the firm’s belief that another company will perform actions that will result in positive outcomes for the firm, as well as not take unexpected actions that would result in negative outcomes for the firm.</strong></td>
</tr>
<tr>
<td><strong>Trust for distributor firms</strong> (Example Measure)</td>
<td></td>
</tr>
<tr>
<td>Based upon your past and present experience, how would you characterise the level of trust your firm has in its working relationship with Manufacturer X?</td>
<td></td>
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<tr>
<td>(7-point scales: don’t trust Manufacturer X/trust Manufacturer X completely)</td>
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<tr>
<td><strong>Trust for manufacturer firms</strong> (Example Measure)</td>
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<tr>
<td>Based upon your past and present experience, how would you characterise the level of trust your company has in its working relationship with Firm X?</td>
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<tr>
<td>(7-point scales: don’t trust Firm X/trust Firm X completely)</td>
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<tr>
<th>Ganesan (1994)</th>
<th>Trust</th>
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<tr>
<td><strong>JM</strong></td>
<td><strong>Trust is the willingness to rely on an exchange partner in whom one has confidence. An important aspect of this definition is the notion of trust as a belief, a sentiment, or an expectation about an exchange partner that results from the partner's expertise, reliability, and intentionality. The definition of trust proposed here reflects two distinct components: (1) credibility, which is based on the extent to which the retailer believes that the vendor has the required</strong></td>
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<tr>
<td><strong>Retailer’s trust in vendor</strong></td>
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<tr>
<td><strong>vendor’s credibility</strong></td>
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<td>1. This resource's representative has been frank in dealing with us.</td>
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<tr>
<td>2. Promises made by this resource's representative are reliable.</td>
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<tr>
<td>3. This resource's representative is knowledgeable regarding his/her products.</td>
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<tr>
<td>4. This resource's representative does not make false claims.</td>
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<tr>
<td>5. This resource's representative is not open in dealing with us. (R)</td>
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<tr>
<td>6. If problems such as shipment delays arise, the resource's representative is honest about the problems.</td>
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<tr>
<td>7. This resource's representative has problems answering our questions.</td>
<td></td>
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<tr>
<td>(Cronbach's alpha:.90)</td>
<td></td>
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<tr>
<td><strong>vendor’s benevolence</strong></td>
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<tr>
<td>1. This resource's representative has made sacrifices for us in the past.</td>
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<tr>
<td>2. This resource's representative cares for us.</td>
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<tr>
<td>3. In times of shortages, this resource's representative has gone out on a limb for us.</td>
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<tr>
<td>Doney and Cannon (1997)</td>
<td>Trust</td>
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<td><strong>Expertise</strong> to perform the job effectively and reliably and (2) benevolence, which is based on the extent to which the vendor has intentions and motives beneficial to the retailer when new conditions arise, conditions for which a commitment was not made.</td>
<td>4. This resource's representative is like a friend. 5. We feel the resource's representative has been on our side. (Cronbach's alpha: .88) <strong>Vendor's trust in retailer</strong> retailer's credibility 1. The buyer representing this retailer has been frank in dealing with me. 2. Promises made by the buyer representing this retailer are reliable. 3. The buyer representing the retailer is knowledgeable about the product. 4. The buyer representing this retailer has problems understanding our position. (R) (Cronbach's alpha: .80) retailer's benevolence 1. The buyer representing this retailer has made sacrifices for us in the past. 2. The buyer representing this retailer cares for my welfare. 3. In times of delivery problems, the buyer representing this retailer has been very understanding. (7-point scales anchored by 1: strongly disagree and 7: strongly agree) (Cronbach's alpha: .76)</td>
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<tr>
<td>Source</td>
<td>Category</td>
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<tr>
<td>Siguaw et al. (1998)</td>
<td>Trust</td>
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<td></td>
<td>Trust: Credibility</td>
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<td></td>
<td>Trust: Benevolence</td>
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<td>Selnes and Sallis, (2003)</td>
<td>Trust</td>
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<tr>
<td>Palmatier et al. (2007a)</td>
<td>Trust</td>
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<tr>
<td>Moorman et al. (1992)</td>
<td>Trust</td>
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<tr>
<td>Jap (1999)</td>
<td>Beliefs in</td>
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<td>Source</td>
<td>Dimension</td>
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<tr>
<td>JMR</td>
<td>Interpersonal</td>
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<td>Ivens and Pardo, (2007) IMM</td>
<td>Trust</td>
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<td>Zhao and Cavusgil (2006) IMM</td>
<td>Trust</td>
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<td>del Bosque Rodriguez et al. (2006) IMM</td>
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and support.
4. Generally [the counterpart company] does not adopt decisions, neither actions that they damage us.
(Reliability: .84)
(7-point scales anchored by 1: strongly disagree and 7: strongly agree)

<table>
<thead>
<tr>
<th>Trust</th>
<th>IMM</th>
<th>Trust</th>
<th>IMM</th>
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</thead>
<tbody>
<tr>
<td>Farrelly and Quester (2005)</td>
<td>NA</td>
<td>1. Our firm can rely on X in this sponsorship relationship.</td>
<td>1. These customers have so far been very frank in dealing with our company.</td>
</tr>
<tr>
<td>IM</td>
<td>Trust</td>
<td>2. X is knowledgeable about this sponsorship relationship.</td>
<td>2. These customers always keep a trade secret concerning our business venture.</td>
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<tr>
<td></td>
<td>Trust</td>
<td>3. X understands our position in this sponsorship relationship.</td>
<td>3. Several times these customers were caught making false claims. (R)</td>
</tr>
<tr>
<td></td>
<td>Trust</td>
<td>4. X cares for our welfare in this sponsorship relationship.</td>
<td>4. These customers are engaged in a behaviour characterised by deceit and fraud. (R)</td>
</tr>
<tr>
<td></td>
<td>Trust</td>
<td>5. X is open in dealing with us in this sponsorship relationship.</td>
<td>5. These customers are honest about problems caused by them in the working relationship.</td>
</tr>
<tr>
<td></td>
<td>Trust</td>
<td>6. We trust that X will serve our best interests.</td>
<td>(7-point scales anchored by 1: strongly disagree and 7: strongly agree)</td>
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<td></td>
<td>Trust</td>
<td>7. X is well known for their fair dealing with sponsorship partners.</td>
<td>(Coefficient alpha: .92)</td>
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Leonidou, (2004) IMM

Trust is a fundamental dimension, which denotes a belief by one party in a working relationship that the behaviour of the other party is honest and fair, leading it to perform actions that will result in positive outcomes or prevent actions that will result in negative outcomes. Trust signifies an attitude by the one party of having confidence in, attracting credibility to, and showing benevolence toward the other party in the working relationship.

1. These customers have so far been very frank in dealing with our company.
2. These customers always keep a trade secret concerning our business venture.
3. Several times these customers were caught making false claims. (R)
4. These customers are engaged in a behaviour characterised by deceit and fraud. (R)
5. These customers are honest about problems caused by them in the working relationship.
(7-point scales anchored by 1: strongly disagree and 7: strongly agree)

Zaheer and Venkatraman, (1995) SMJ

Trust between the focal carrier and the agency

1. The focal carrier and our agency have a high level of mutual trust.
2. The focal carrier is well known for fair dealing.
3. The focal carrier stands by its word.
(7-point scales anchored by 1: totally disagree and 7: totally agree)
(Cronbach's alpha: .81)

Mohr and Spekman (1994) SMJ

The belief that a party’s word is reliable and that a part will fulfill its obligation in an exchange

1. We trust that the manufacturer’s decisions will be beneficial to our business.
2. We feel that we do not get a fair deal from this manufacturer.
3. This relationship is marked by a high degree of harmony.
<table>
<thead>
<tr>
<th>Source</th>
<th>Type</th>
<th>Description</th>
<th>Scale</th>
<th>Reliability</th>
</tr>
</thead>
</table>
| Jap and Anderson (2003) | Inter-Personal Trust | Trust is the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party (Mayer et al. 1995). This matches empirical operationalisations, which emphasise the honesty (the reliability of the partner’s actions) and benevolence (looks out for the focal firm’s interests) aspects of trust (Geyskens et al. 1998). | Adapted from Jap (1999)  
1. Our promises to each other are reliable.  
2. We are very honest in dealing with each other.  
3. We trust each other.  
4. We would go out of our way to help each other out.  
5. We consider each other’s interests when problems arise.  
For this scale, “Our” and “We” refer to the individual representatives.  
(7-point scales anchored by 1: totally disagree and 7: totally agree)  
(Cronbach’s alpha: .91) | .75           |
| Jiang et al. (2011)    | Reliance      | Positive expectations held by organisation members that the focal organisation’s specific needs will be fulfilled by its exchange partner given its proven capability.                                                                                                                                 | 1. We are confident with this supplier's ability to fulfill our agreements.  
2. We are confident that this supplier is competent at what they are doing.  
3. The performance of this supplier can always meet our expectations.  
4. We have faith in the supplier's ability to fulfill their promises.  
(Cronbach's alpha: .86)  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree) | .86           |
| Norman (2002)          | Trust         | Willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party.                                                                 | 1. We can rely on our partner to abide by the alliance agreement.  
2. There is a high level of trust in the working relationship with our partner.  
3. We trust that our partner’s decisions will be beneficial to the alliance.  
4. We trust that our partner’s decisions will be beneficial to our firm.  
(Cronbach's alpha: .89)  
(7-point scales anchored by 1: totally disagree and 7: totally agree) | .89           |
| Blois (1999)           | Trust versus Reliance | Trust is about the other’s dependable goodwill as distinct from reliance on their actions.                                                                                                                                                                                                 | NA                                                                                                                                  |               |
dependable habits and proven capability. A firm might rely on a particular supplier because of its proven technical competence and the nature of the contract plus its reputation for fair dealing. However, it will be its employees who actually trust the supplier and who determine whether or not the supplier is trustworthy.

<p>| Mouzas et al. (2007) | Trust versus Reliance | Trust constitutes an emotive state that operates at an interpersonal level, while reliance sets a rational standard that operates at the inter-organisational level. | NA |</p>
<table>
<thead>
<tr>
<th>References</th>
<th>Construct</th>
<th>Definition</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morgan and Hunt (1994) <em>JM</em></td>
<td>Commitment</td>
<td>An exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it; that is, the committed party believes the relationship is worth working on to ensure that it endures indefinitely.</td>
<td>The relationship that my firm has with my major supplier: 1. is something we are very committed to. 2. is something my firm intends to maintain indefinitely. 3. deserves our firm’s maximum effort to maintain. (7-point scales anchored by 1: strongly disagree and 7: strongly agree) (Reliability: .89)</td>
</tr>
<tr>
<td>Van Bruggen et al. (2005) <em>IJRM</em></td>
<td>Commitment</td>
<td>A desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and a confidence in the stability of the relationship</td>
<td>Customer commitment 1. We are constantly looking for another distributor to buy our materials from. (R) 2. We have a good relationship with this distributor and want to keep buying from them. 3. We will continue buying our paints from this distributor. 4. The quantity of paints we buy from this distributor will grow in the coming years. (5-point scales anchored by 1: completely disagree and 5: completely agree) (Cronbach’s alpha: .66)</td>
</tr>
<tr>
<td>Mohr et al. (1996) <em>JM</em></td>
<td>Commitment</td>
<td>The desire to maintain membership in the dyadic relationship.</td>
<td>1. We are very committed to carrying this manufacturer’s products. 2. We would like to discontinue carrying this manufacturer’s product. (R) 3. We have a minimal commitment to this manufacturer. (R) (5-point scales anchored by 1: strongly disagree and 5: strongly agree) (Reliability: .75)</td>
</tr>
<tr>
<td>Siguaw et al. (1998) <em>JM</em></td>
<td>Commitment</td>
<td>Commitment is defined as a desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and a confidence in the stability of the relationship. 1. We defend this supplier when outsiders criticise the company. 2. We are continually on the lookout for another supplier to replace or to add to our current supplier. (R) 3. If another supplier offered us better coverage, we would most certainly take them on, even if it meant dropping this supplier. 4. We are patient with this supplier when they make mistakes that cause us trouble. 5. We are willing to dedicate whatever people and resources it takes to grow sales for this supplier. (Item 3 deleted)</td>
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<tr>
<td>Author(s)</td>
<td>Dimension</td>
<td>Commitment</td>
<td>Source</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Palmatier et al. (2007a)</td>
<td>Customer Commitment</td>
<td>Commitment is an enduring desire to maintain a valued relationship</td>
<td>Adapted from Kumar et al. (1994)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. We continue to represent [Seller] because it is pleasant working with them.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. We intend to continue representing [Seller] because we feel like we are part of the [Seller] family.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. We like working for [Seller] and want to remain a [Seller] agent.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7-point scales anchored by 1: strongly disagree and 7: strongly agree)</td>
<td></td>
</tr>
<tr>
<td>Kumar et al. (1995)</td>
<td>Affective commitment</td>
<td>As a dimension of commitment, affective commitment is the desire to continue a relationship because of positive affect toward the partner.</td>
<td>1. Even if we could, we would not drop the supplier because we like being associated with it.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. We want to remain a member of the supplier’s network because we genuinely enjoy our relationship with it.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Our positive feelings towards the supplier are a major reason we continue working with it.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7-point scales anchored by 1: strongly disagree and 7: strongly agree)</td>
<td></td>
</tr>
<tr>
<td>Mohr and Spekman (1994)</td>
<td>Commitment</td>
<td>Commitment refers to the willingness of trading partners to exert effort on behalf of the relationship. It suggests a future orientation in which partners attempt to build a relationship that can weather unanticipated problems.</td>
<td>1. We’d like to discontinue carrying this manufacturer’s product. (R)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. We are very committed to carrying this manufacturer’s products.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. We have a minimal commitment to this manufacturer. (R)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(5-point scales anchored by 1: strongly disagree and 5: strongly agree)</td>
<td></td>
</tr>
<tr>
<td>Selnes and Sallis (2003)</td>
<td>Collaborative Commitment</td>
<td>Commitment is defined as an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it.</td>
<td>1. To what degree do you discuss company goals with the other party in this relationship?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. To what degree are these goals developed through joint analysis of potentials?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. To what degree are these goals formalised in a joint agreement or contract?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. To what degree are these goals implemented in day-to-day work?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. To what degree have you developed measures that capture performance related to these goals?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7-point scales anchored by 1: strongly disagree and 7: strongly agree)</td>
<td></td>
</tr>
<tr>
<td>Anderson and Weitz (1992)</td>
<td>Commitment</td>
<td>Commitment to a relationship entails a desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and a confidence in the stability of the</td>
<td>1. We defend this supplier when others criticise the company.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distributor’s commitment</td>
<td>2. We have a strong sense of loyalty to this supplier.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. We are continually on the lookout for another product to add to or replace this supplier for this product type. (R)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. We expect to be distributing this supplier’s products for some time.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. If another company offered us a better product line, we would most certainly</td>
</tr>
<tr>
<td>Anderson and Weitz (1992) JMR</td>
<td>Distributor's/Manufacturer's Commitment</td>
<td>Commitment to a relationship entails a desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and a confidence in the stability of the relationship.</td>
<td>Distributor’s perception of manufacturer’s commitment</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>1. We defend this distributor when others criticise them.</td>
<td>take them on, even if it meant dropping this supplier. (R)</td>
<td>1. This supplier defends us when others criticise us.</td>
</tr>
<tr>
<td></td>
<td>2. We have a strong sense of loyalty to this distributor.</td>
<td>6. We are not very committed to this supplier. (R)</td>
<td>2. This supplier has a strong sense of loyalty to us.</td>
</tr>
<tr>
<td></td>
<td>3. We are continually on the lookout for another distributor to replace or to add in this distributor’s territory. (R)</td>
<td>7. We are quite willing to make long-term investments in selling this supplier’s line.</td>
<td>3. This supplier is continually on the lookout for a distributor to replace us. (R)</td>
</tr>
<tr>
<td></td>
<td>4. We expect to be using this distributor for some time.</td>
<td>8. Our relationship with this supplier is a long-term alliance.</td>
<td>4. This supplier expects us to be distributing their products for a long time.</td>
</tr>
<tr>
<td></td>
<td>5. If another distributor offered us better coverage, we would most certainly take them on, even if it meant dropping this distributor. (R)</td>
<td>9. We are patient with this supplier when they make mistakes that cause us trouble.</td>
<td>5. If another distributor offered better sales effort, this supplier would most certainly take them on, even if it meant dropping us. (R)</td>
</tr>
<tr>
<td></td>
<td>6. We are not very committed to this distributor. (R)</td>
<td>10. We are willing to dedicate whatever people and resources it takes to grow sales of this supplier’s products.</td>
<td>6. This supplier is not very committed to us. (R)</td>
</tr>
<tr>
<td></td>
<td>7. We are quite willing to make long-term investments in this distributor.</td>
<td>(7-point scales anchored by 1: strongly disagree and 7: strongly agree) (Cronbach’s alpha: .83)</td>
<td>7. This supplier is quite willing to make a long-term investment in helping us.</td>
</tr>
<tr>
<td></td>
<td>8. This supplier sees our relationship as a long-term alliance.</td>
<td></td>
<td>8. This supplier sees our relationship as a long-term alliance.</td>
</tr>
<tr>
<td></td>
<td>9. This supplier is patient with us when we make mistakes that cause us trouble.</td>
<td></td>
<td>9. This supplier is patient with us when we make mistakes that cause them trouble.</td>
</tr>
</tbody>
</table>
| Jap and Ganesan (2000) | Commitment | The supplier's desire to develop a stable relationship with the retailer, a willingness to make short-term sacrifices to maintain the relationship, and a confidence in the stability of the relationship. | **Manufacturer’s perception of distributor’s commitment**  
1. This supplier is willing to dedicate whatever people and resources it takes to grow our sales.  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree)  
(Cronbach's alpha: .90)  

**Supplier’s commitment to the retailer**  
(Adapted from Anderson and Weitz (1992))  
1. X is quite willing to dedicate whatever people and resources it takes to grow our sales.  
2. X spends a higher amount of time and effort with us relative to other businesses that it works with.  
3. X is quite willing to make sacrifices to help us out from time to time.  
4. X is continually on the lookout for other customers to replace us. (R)  
5. It takes too much time, effort, and energy to get X's attention to our problems. (R)  
6. X is more interested in doing business with our competitors than with us. (R)  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree)  
(Cronbach's alpha: .73) |
| Cook and Emerson (1978) | Commitment | Commitment between exchange partners is an attachment leading persons to exchange repeatedly with the same partners. | A measure of commitment is \([C_i]_t\), for person I after \(t\) transactions having a maximum value of 1.0 when (a) I completes a transaction at every opportunity, and (b) has done so always with the same partner. The minimum value of \([C_i]_t = 0\) should be obtained when I's transactions have been equally distributed among potential partners. |

**JMR**

**ASR**
<table>
<thead>
<tr>
<th>Source</th>
<th>Commitment</th>
<th>Definition</th>
<th>Indicators</th>
</tr>
</thead>
</table>
| Ivens and Pardo (2007) IMM    | Commitment                                      | Relationship commitment (just like trust) is mainly being interpreted as an attitude, defined as “an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it; that is, the committed party believes the relationship is worth working on to ensure that it endures indefinite”. | 1. We intend to maintain our relationship with this supplier as long as possible  
2. We do all we can not to threaten the relationship with this supplier  
3. We are ready to invest more as usual into this relationship  
4. Our cooperation with this supplier is frictionless  
5. From time to time we seek for alternatives to the products we buy from this supplier  
(7-point scales anchored by 1: totally disagree and 7: totally agree)  
(Cronbach’s alpha: .83) |
| Farrelly and Quester (2005) IMM | Commitment                                      | A willingness of the parties in the sponsorship relationship to make short-term investments in an effort to realise long-term benefits from the relationship | 1. We have developed formal sponsorship objectives for this sponsorship relationship with X.  
2. Sponsorship objectives are integrated into our corporate or marketing plan.  
3. We have, together with X, jointly established sponsorship objectives.  
4. We intend to allocate greater resources to this sponsorship relationship with X in the future.  
5. We have a strong sense of loyalty to this relationship with X.  
6. We are committed to the sponsorship relationship with X.  
(Coefficient alpha: .81) |
| Leonidou (2004) IMM           | Commitment                                      | The effort made by one party to accept short-term sacrifices, costs, or restrictions required by the working relationship, to obtain common results with the other party and realise long-term benefits | 1. Feeling of very little loyalty and commitment to these customers. (R)  
2. Preserving a long-lasting working relationship with these customers.  
3. Investing lot of time in learning the “ins and outs” of these customers.  
4. Willingness to make any effort in making the working relationship function well.  
5. Dedication of whatever people/ resources are necessary to develop working relationship.  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree) |
| Dwyer et al. (1987) JM        | Commitment                                      | An implicit or explicit pledge of relational continuity between exchange partners | NA |
4.3.1 Hypotheses for Inter-Personal Trust, Inter-Organisational Trust and Commitment

This study attempts to understand how two aspects of trust (i.e. inter-personal and inter-organisational) influence each other. It will be discussed why the impact of one aspect on the other is hypothesised and examined. Although it can be suggested that these two aspects of trust have a reciprocal effect (each influencing the other), due to the method limitations, one effect is chosen based on its stronger support within the literature and its relevance in this study. This choice is elaborated in this section. In previous studies there are some propositions and evaluation of such influence. Doney and Cannon (1997) distinguish between the trust at personal and organisational levels, and measure their impact on other relationship characteristics. The results of their research indicate that trust in the supplier’s salesperson has a positive effect on trust in the selling firm. They also show that trust in the supplier firm has a positive effect on its trust in the salesperson. Currall and Inkpen (2006) posit that there exists a bi-directional and reciprocal relationship among trust at different levels, including inter-personal and inter-organisational levels. It is noted that in the literature there are advocates that support the impact of these two aspects of trust (i.e. inter-personal and inter-organisational) on each other. However, for the purpose of presentability in a nomological model and testability by statistical model-testing techniques, it is their influence in one direction that is more appropriate, and which is selected and discussed. In the following paragraphs, it is argued that the impact of inter-personal trust on inter-organisational trust is suggested as the first hypothesis in this study.

Narayandas and Rangan (2004) focus specifically on different levels of operation of trust and commitment. They suggest that inter-personal dynamics affect inter-organisational orientations, whereas the opposite is not necessarily true. Business relationships “which
feature personal trust” (i.e. an inter-personal operating factor) will survive greater stress and display greater adaptability (i.e. an inter-organisational operating factor) (Williamson 1979, p. 241). In line with these arguments, this study suggests that inter-personal factors influence the inter-organisational ones.

In business relationships, inter-personal trust positively affects inter-organisational reliance (Mouzas et al. 2007). The existence or lack of trust at the inter-personal level in two companies (i.e. between the employees of the two companies) affects how these two companies rely rationally on each other at the inter-organisational level. “While trusting someone implies being willing to rely on them, the opposite is not necessarily the case” (Blois 1999, p. 199).

An individual whistleblower can have a dramatic impact on an organisation as a whole (Johns 2001). Trust can have its origins in one-to-one relationships between managers but, over time it may diffuse within an organisation; when individual managers trust each other, the strength of their relationship can lead to inter-organisational trust because these managers influence other managers and inter-organisational dynamics (Currall and Inkpen 2006) and consequently shift this impact to organisational level. Based on these arguments it is suggested that inter-personal trust impacts on inter-organisational trust positively.

Furthermore, trust is a key determining factor for commitment in business relationships (Dwyer et al. 1987; Morgan and Hunt 1994). Where the parties have trust in one another, there will be ways by which the two parties can work out difficulties (Sullivan and Peterson 1982). It may also be unnecessary to try to cover all contingencies in a formal contract, which is almost impossible (Dwyer et al. 1987). Narayandas and Rangan (2004) argue that “the
presence (or absence) of inter-personal trust in buyer-seller relationships in mature industrial markets facilitates the development (or destruction) of inter-organisational commitment” (p. 73). Therefore it is suggested that inter-personal trust influences commitment positively.

In more recent studies it has been posited that rational aspects of trust enhance commitment (e.g. Palmatier et al. 2007a). This supports the impact of inter-organisational trust (as a rationally-based dimension of trust) on commitment in addition to the inter-personal aspect. “The existence of inter-organisational commitment facilitates only the formation of new inter-personal relationships, not the subsequent development of trust” (Narayandas and Rangan 2004, p. 73). This argument supports the directionality of the impact from trust to commitment. Therefore, the first three hypotheses are:

**H1: Inter-personal trust positively affects inter-organisational trust.**

**H2: Inter-personal trust positively affects commitment.**

**H3: Inter-organisational trust positively affects commitment.**

### 4.4 Opportunistic Behaviour

Either party in an inter-organisational relationship can engage in opportunism and behave opportunistically (Jap and Anderson 2003). Opportunism is one of the key behavioural variables inherent in the exchange between organisations (Kelley et al. 1989). “Opportunism is a central concept in the study of transaction costs, it is especially important for economic activity that involves transaction-specific investments in human and physical capital” (Williamson 1979, p. 234). See Table 4-4 for a summary of studies defining and
conceptualising opportunism (or opportunistic behaviour). Due to various reasons, such as differing firm goals, environmental characteristics, or risk preferences, there will always be circumstances that encourage a certain degree of opportunistic behaviour in business relationships (Dutta et al. 1994; Wathne and Heide 2000; Deligonul et al. 2006). Examples of opportunistic behaviour are acts such as lying, misinformation and deception (see Table 4-4). Other examples include shirking or failing to fulfill promises or obligations (John 1984).

Opportunistic behaviour usually serves short-term benefits (Parkhe 1993).

Opportunistic behaviour is different from honesty (and other dimensions of trust mentioned in the literature such as integrity). Opportunistic behaviour is a behavioural characteristic; particularly, as mentioned before, it is a behaviour that involves self-interest-seeking with guile. This characteristic is measured by items that focus on observable behaviours, such as lying, altering the facts, and not doing what has been promised. On the other hand, honesty, and integrity, are qualities such as being sincere, and fulfilling promised role obligations. Therefore, in this conceptualisation, opportunistic behaviour (of the other party) is considered as a factor influencing trust, while honesty is considered as a dimension of trust. Other dimensions of trust, studied in the literature, such as integrity are conceptualised similarly to honesty (i.e. the degree to which the other party is perceived to possess these qualities indicates the level of trust). These different qualities, when used for measurement purposes, are considered as reflective or formative measures (depending on whether those measures cause trust or trust causes them). For instance integrity is considered as a formative measure, as it is introduced as an antecedent to trust (Huemer 1998), while honesty is considered as a reflective measure, suggesting that the level of (overall) trust causes the level of trust in the other party’s honesty (see Kumar et al. 1995).

\[5\] The table is presented at the end of this section.
Opportunistic behaviour has played an important role in inter-organisational studies. It has been noted in channel relationships (John 1984), business-to-business marketing (Morgan and Hunt 1994), inter-organisational relationship management (Provan and Skinner 1989; Jap and Anderson 2003), inter-organisational strategy (Parkhe 1993) and business marketing research (Kelley et al. 1989). A list of the definition and measurement scales used in these studies is presented in Table 4-4. The measurement scales are used for operationalisation of this construct, which is discussed in the following chapter. As seen in this table, opportunistic behaviour is frequently defined as a behaviour that involves self-interest-seeking with guile.

In this study it is decided to keep opportunistic behaviour of the other party within the constructs of the model. First, because as discussed above this is a key factor in studies with a transaction cost perspective. Second, because including this construct allows incorporating the behaviour of the other side of the relationship as well. In this study opportunistic behaviour of the other party is examined, while all other constructs are measured with regard to the focal company. Opportunistic behaviour captures to what extent behaviour of the other party entails opportunism, in other words involving self-seeking with guile. This characteristic helps us to understand the impact of the other party’s behaviour on the focal company’s level of trust in the other party and consequently on other characteristics and relationship outcomes. Opportunistic behaviour of the other party is measured by items examining how the other company behaves. For instance it measures the degree to which the other company alters the facts in order to get what they need and the degree to which they promise to do things without actually doing them later. This is in line with the belief that relationships are reciprocal, dyadic and bi-directional (Anderson and Weitz 1989). Therefore the attitudes and actions of one side of the relationship are influenced by the ones of the other
side of the relationship. It is important to emphasise that, in this study, ‘the other party’s’ opportunistic behaviour is incorporated.

*Opportunistic behaviour is defined as the extent to which one company’s behaviour in the relationship with the other company involves self-seeking with guile. The perceived opportunistic behaviour of the other party is defined as the extent to which one company perceives the other company’s behaviour involves self-interest-seeking with guile* (adapted from Williamson 1975; John 1984).

Definition of perceived opportunistic behaviour at the buyer-side:

*The extent to which the buyer perceives the supplier’s behaviour involves self-interest-seeking with guile*

Definition of perceived opportunistic behaviour at the supplier-side:

*The extent to which the supplier perceives the buyer’s behaviour involves self-interest-seeking with guile*
<table>
<thead>
<tr>
<th>References</th>
<th>Construct</th>
<th>Definition</th>
<th>Measures</th>
</tr>
</thead>
</table>
| John (1984) *JMR*          | Opportunism             | It is defined as self-interest seeking with guile. Examples of opportunistic behaviour are such acts as withholding or distorting information and shirking or failing to fulfill promises or obligations. Breach of contract, lying, misinformation, and deception are all relevant aspects of this variable. | 1. On occasion, I have to lie to my supplier about certain things in order to protect my interests.  
2. Sometimes I have to aggregate my needs in order to get what I really need for my supplier.  
3. Complete honesty does not pay when dealing with my supplier.  
4. I have always provided my supplier a completely truthful picture of my business. (R)  
5. Sometimes I have to alter the facts slightly in order to get what I need.  
6. My supplier isn’t always truthful with me, so I am not always completely candid with them.  
7. I carry out my duties even if my supplier does not check up to me. (R)  
8. I have sometimes promised to do things without actually doing them later.  
9. Sometimes I present facts to my supplier in such a way that I look good.  
10. I feel that it is OK to do anything within my means that will help further my own interests. (5-point scales anchored by 1: totally disagree and 5: totally agree) |
| Morgan and Hunt (1994) *JM* | Opportunistic Behaviour | The concept of opportunistic behaviour from the transaction cost economics literature is defined as self-interest seeking with guile. Adapted from John (1984) To accomplish his own objectives, sometimes my supplier  
1. ...alters the facts slightly.  
2. ...promises to do things without actually doing them later. (7-point scales anchored by 1: strongly disagree and 7: strongly agree) | (Sample items)                                                                                                                                                                                          |
| Jap and Anderson (2003) *MS* | Ex Post Opportunism    | Opportunism is self-interest seeking with guile. Either party in an exchange can engage in opportunism after the transaction is underway. When a problem occurs, how often will the buyer (supplier) do the following?  
1. They make hollow promises.  
2. They are aloof toward us.  
3. They “window dress” their efforts to improve.  
4. They expect us to pay for more than our fair share of the costs to correct the problem.  
5. They are unwilling to accept responsibility.  
6. They make false accusations.  
7. They provide false information.  
8. They fail to provide proper notification. (Cronbach's alpha: .90) (7-point scales anchored by 1: hardly ever and 7: very often) |                                                                                                                                                                                                       |
1. I have always provided my primary supplier a completely truthful picture of my business.  
2. I feel that it is OK to do anything within my means that will help further my own interests. (R)  
3. Sometimes I have to alter the facts slightly in order to get what I need. (R)  
4. I have sometimes promised to do things without actually doing them later. (R)  
5. Complete honesty does not pay when dealing with my primary supplier. (R)  
6. Sometimes I present facts to my primary supplier in such a way that I look good. (R)  
7. On occasion, I have to lie to my primary supplier about certain things in order to protect my interests. (R)  
8. My primary supplier isn't always truthful with me, so I am not always completely candid with them. (R)  
9. Sometimes I have to exaggerate my needs in order to get what I really need from my supplier. (R)  
(6-point scales anchored by 1: definitely agree and 6: definitely disagree) (Cronbach's alpha: .82) |
| Parkhe (1993) *AMJ* | Perception of Opportunistic Behaviour | Cooperative relationships are sometimes subject to 'opportunistic' behaviour. That is, one firm may not abide by the terms of the agreement in order to exploit the other for short-term gain. Examples of opportunistic behaviour are withholding or distorting information, shirking or failing to fulfill promises or obligations, appropriation of the partner firm's technology or key personnel, late payments, and delivery of substandard products. 'As you know, cooperative relationships are sometimes subject to 'opportunistic' behaviour. That is, one firm may not abide by the terms of the agreement in order to exploit the other for short-term gain. Examples of opportunistic behaviour are withholding or distorting information, shirking or failing to fulfill promises or obligations, appropriation of the partner firm's technology or key personnel, late payments, and delivery of substandard products.' With respect to your partner firm in the present alliance:  
1. They have always provided us a completely truthful picture of their business. (R)  
2. Complete honesty does not pay when dealing with my partner.  
3. Sometimes my partner alters the facts slightly in order to get what they need.  
4. My partner carries out their duties even if we do not check up on them (R)  
5. My partner has sometimes promised to do things without actually doing them later.  
6. They seem to feel that it is OK to do anything within their means that will help further their firm's interests  
(5-point scales anchored by 1: strongly disagree and 5: strongly agree) (Cronbach's alpha: .88) |
| Kelley et al (1989) *JBR* | Opportunism | Opportunism is one of the key behavioural variables inherent in the exchange between | Adapted from John (1984)  
1. I feel that it is OK to do anything within my means that will help further my own interests. (R) |
Organisational opportunistic behaviour or opportunism is defined as self-interest seeking with guile, and involves making threats and promises, which are self-disbelieved in hope of gaining an advantage over others (Williamson 1975). It involves deceit with the intent to enhance one’s position at the expense of the other party involved in the exchange.

<table>
<thead>
<tr>
<th>Joshi and Arnold (1997)</th>
<th>Opportunism</th>
</tr>
</thead>
<tbody>
<tr>
<td>According to Williamson (1985) opportunism refers to self-interest seeking with guile which includes but is scarcely limited to more blatant forms, such as lying, stealing, and cheating. Opportunism involves subtle forms of deceit. Opportunistic behaviour is distinguishable from self-interested behaviour in that whereas a party behaving in the latter manner makes their intentions and objectives clear to their partner, an opportunistic party strives to keep their intentions and objectives opaque to their partner.</td>
<td></td>
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</table>

| | According to John (1984); Items are Listed Full in Provan and Skinner (1989) |
| | 1. I would alter the facts slightly to drive a better deal for myself. |
| | 2. I would not be completely honest with this supplier. |
| | 3. I would provide this supplier a completely truthful picture of my intentions. (R) |
| | 4. I would exaggerate my needs in an attempt to force the supplier to deliver on schedule. |
| | 5. I would lie to this supplier (e.g. other suppliers are offering lower prices) in order to protect my own interests. |
| | 6. I would present the facts to this supplier in such a way that I look good. |
| | 7. I would do anything within my means to further my interests in this situation. (item dropped from final scale) |
| | 8. If I felt that this supplier was not truthful to me, I would not be completely candid with them in this situation. (item dropped from final scale) |

(Cronbach’s alpha: .84)

(7-point scales anchored by 1: strongly disagree and 7: strongly agree)
4.4.1 Hypotheses for Opportunistic Behaviour

There exists a negative relationship between opportunistic behaviour and trust (Morgan and Hunt 1994). Morgan and Hunt (1994, p. 25) argue that “when a party believes that a partner engages in opportunistic behaviour, such perceptions will lead to decreased trust. Rather than positing a direct effect from opportunistic behaviour to relationship commitment, we postulate that such behaviour results in decreased relationship commitment because partners believe they can no longer trust their partners”.

Opportunistic behaviour is included in the overall model in order to consider the dyadic characteristic of buyer-supplier behaviour. Studying business relationships as discrete events neglects the dyadic influence of partners’ behaviour. Opportunistic behaviour on one side of the relationship plays an important role as an antecedent to trust on the other side of the relationship affecting it in a negative way. The study of inter-organisational relationships should incorporate the role of both parties involved in the relationship. This study attempts to do so by including the opportunistic behaviour of the other party.

Direct experience is likely to be the principal basis for judging trustworthiness (Dwyer et al. 1987) and therefore has been introduced as a key factor in the conceptual framework for the development of customer trust in salespersons (Swan and Nolan 1985; Swan et al. 1985). Currall and Judge (1995) explore predictors of trust: the perceived past trustworthiness of the trustee was the most significant determinant of intentions to engage in trusting behaviour. So trustors are especially sensitive to evidence regarding a trustee’s behaviour and its impact on the assessment of the trustees’ trustworthiness.
Recalling the notions introduced by Frazier (1983a, p. 69), the firm that receives the primary evaluation can be called the “source” and the other firm referred to as the “target”. In this study the “source” would be the buyer and the “target” is the supplier. The negative impact of opportunistic behaviour on trust is proposed at both personal and organisational level. It is suggested that the other party’s opportunistic behaviour impacts on how much the buyer trusts the supplier’s people. Additionally it impacts on how much the buyer believes it can rely on the other company at the organisational level. The next hypotheses are, thus:

\[ H4: \text{The (supplier's) opportunistic behaviour negatively affects (the buyer's) inter-personal trust.} \]

\[ H5: \text{The (supplier's) opportunistic behaviour negatively affects (the buyer's) inter-organisational trust.} \]

### 4.5 Information Sharing and Relationship-Specific Investments

Studies of inter-organisational exchange identify the flow of resources and flow of information as being critical in business relationships. Various kinds of networks are emphasised (Cook 1977). Mitchell (1969) identifies three kinds of networks: (1) exchange networks (flow of resources), (2) communication networks (flow of information) and (3) social networks (flow of sentiments). Based on these primary discussions of inter-organisational relationships, in this study, behavioural attributes examined are information sharing and relationship-specific-investments. These two behavioural characteristics cover the two forms (i.e. flow of resources and flow of information) mentioned above. The third and final form is flow of sentiments, which is relevant to social networks. This study has covered this dimension by consideration of trust at the inter-personal level in addition to
inter-organisational level, as discussed previously. This consideration includes the sentimental and emotional notions in the study of business relationships.

“The efficient processing of information is an important and related concept” in transaction cost studies (Williamson 1979, p. 234). This includes open sharing of information that may be useful to both parties, which can be indicated by the willingness of sharing important information, involving the other party in the early stages of product design, discussing future product development plans, or jointly providing supply and demand forecasts (Cannon and Perreault 1999). This may include private and confidential information (Doney and Cannon 1997). It is measured as the degree to which each party discloses information that may facilitate the other party’s activities, as opposed to keeping all information proprietary (Heide and Miner 1992).

There is a degree of overlap between information sharing and communication. The conceptualisation of information sharing and communication are strongly linked to each other. In Table 4-5 a summary of these concepts’ definitions is presented in addition to their measurement scales, which are used in the following chapter⁶. It will be discussed which measurement items (corresponding their relevant definition) are selected using this table. Cannon and Homburg (2001) define information sharing as a component of communication. However, it is the most important aspect of communication. The other components introduced by them are the frequency of face-to-face communication, frequency of telephone communication and frequency of written communication. In these other components, the frequency of information sharing by different means is investigated. Although these different means can illustrate how information is shared, the most important component is information

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⁶ The table is presented at the end of this section.
sharing, which includes the amount and usefulness of it. In other studies, information sharing (exchange) is introduced as an important attribute in inter-organisational relationships (Heide and Miner 1992; Mohr and Spekman 1994; Cannon and Perreault 1999; Jap and Ganesan 2000). Information sharing is introduced with an emphasis on confidential information sharing (Doney and Cannon 1997). Additionally it is investigated as a component of relationship norms (i.e. the norm of information sharing) (Heide and John 1992; Denize and Young 2007). Knowledge-sharing routines are also particularly introduced (Wang et al. 2008) emphasising information sharing.

As mentioned above, there is an overlap in the literature between information sharing and communication. Communication is defined as the formal and informal sharing of meaningful and timely information (Morgan and Hunt 1994; Leonidou 2004) or as the amount, frequency, and quality of information shared between exchange partners (Palmatier et al. 2007a). In addition to information sharing, communication is a well-established construct in inter-organisational studies (Anderson and Narus 1990). Communication is introduced as a bi-directional (Mohr et al. 1996) and two-way (Anderson and Weitz 1992) concept. See Table 4-5 for a summary of conceptualisation of communication in addition to information sharing.

In this study, among these two behavioural (Mohr and Spekman 1994) constructs (i.e. information sharing and communication), information sharing is chosen. This decision is made because of the particular characteristic of information sharing with regard to directionality. As discussed before, referring to the attitude-behaviour framework (Fishbein and Ajzen 1975), in this study the impact of a company’s attitude on its own behaviour is investigated. Communication is bi-directional (Mohr et al. 1996). Information sharing can
better be conceptualised and measured uni-directionally. It can be argued that company A shares information with company B, while company B does or does not share information with company A. But communication beholds a bi-directional nature. Company A and B do or do not communicate with each other. Therefore, presenting a uni-directional concept, information sharing can better serve this study.

*Information sharing is defined as the extent to which one company openly shares information with the other company that may be useful to the relationship* (adapted from Cannon and Homburg 2001).

Definition of information sharing at the buyer-side:

*The extent to which the buyer openly shares information with the supplier that may be useful to the relationship*

Definition of information sharing at the supplier side:

*The extent to which the supplier openly shares information with the buyer that may be useful to the relationship*

This study investigates the companies’ behaviour in business relationships. It particularly tries to find out the relationship between trust dimensions (as attitudinal characteristics) and behavioural characteristics. Companies make investments in their relationships with other companies. They make investments in personnel, equipment, tools, and procedures (Heide and John 1992). These investments are a key part of adaptations (Håkansson 1982; Cannon
and Perreault 1999). Table 4-6 presents a summary of the definitions and measurement scales of relationship-specific investments\(^7\). The measurement scales presented in this table are used later for operationalisation of this construct in this study. Why specific measurement items (corresponding relevant definitions) are selected will be discussed in the following chapter.

The role of relationship-specific investments in inter-organisational exchanges is emphasised. These investments are considered in transaction cost economics (Williamson 1975; 1979; 1985). This consideration is further evident in studies with a transaction cost analysis basis (Heide and John 1992) investigating strategic alliances (Heide and John 1990). Transaction-specific investments, asset specificity and relationship-specific adaptations are also defined similarly to relationship-specific investments (see Table 4-6). Relationship-specific investments are introduced as a critical characteristic in studies of channel relationships (Anderson and Weitz 1992), inter-organisational collaboration (Jap 1999), coordination (Jap and Ganesan 2000) and business strategy (Zaheer and Venkatraman 1995). Investments can also play a role for relationship learning purposes (Selnes and Sallis 2003). The consideration of relationship-specific investments in inter-organisational relationships proves to be relevant in more recent studies (Palmatier et al. 2007a; Poppo et al. 2008).

The relevance and importance of relationship-specific investments is one of the reasons why it is included in model development in this study. Additionally this construct can be conceptualised uni-directionally, which is of importance as argued in this section previously with regard to information sharing (see page 153 and 154). This characteristic (i.e. the potential for being conceptualised uni-directionally) has played a role in relationship-specific investments conceptualisation and operationalisation in the literature. For instance, Ganesan

\(^7\) The table is presented at the end of this section.
(1994) defines relationship-specific investments as an exchange partner’s idiosyncratic investments. He emphasizes that those are the investments that are specialized to a relationship and not easily recoverable. Palmatier et al. (2007a) measure relationship-specific investments at the buyer and the supplier separately. They introduce buyer relationship-specific investments and supplier relationship-specific investments as two distinct constructs, supporting its use as a uni-directional characteristic (versus a bi-directional one) in this study.

*Relationship-specific investments are defined as the extent to which one company has made sunk, unredeployable asset allocation decisions in the relationship with the other company* (adapted from Heide and John 1990).

Definition of relationship-specific investments at the buyer-side:

*The extent to which the buyer has made sunk, unredeployable asset allocation decisions in the relationship with the supplier*

Definition of relationship-specific investments at the supplier-side:

*The extent to which the supplier has made sunk, unredeployable asset allocation decisions in the relationship with the buyer*
<table>
<thead>
<tr>
<th>References</th>
<th>Construct</th>
<th>Definition</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heide and John (1992)</td>
<td>Norm of Information Exchange</td>
<td>A bilateral expectation (concerning the information exchange behaviour) that parties will proactively provide information useful to the partner.</td>
<td>1. In this relationship, it is expected that any information that might help the other party will be provided to them. 2. Exchange of information in this relationship takes place frequently and informally, and not only according to a prespecified agreement. 3. It is expected that the parties will provide proprietary information if it can help the other party. 4. It is expected that we keep each other informed about events or changes that may affect the other party. (7-point scales anchored by 1: strongly disagree and 7: strongly agree)</td>
</tr>
<tr>
<td>Cannon and Perreault (1999)</td>
<td>Information Exchange</td>
<td>It is defined as expectations of open sharing of information that may be useful to both parties. More open sharing of information is indicated by the willingness of both parties to share important, even proprietary, information. In practice, this might include involving the other party in the early stages of product design, and sharing cost information, discussing future product development plans, or jointly providing supply and demand forecasts.</td>
<td>Information Exchange [In this relationship it is expected that...] 1. Proprietary information is shared with each other. 2. We will both share relevant cost information. 3. We include each other in product development meetings 4. We always share supply and demand forecasts. (7-point scales anchored by 1: very inaccurate description and 7: very accurate description ... of this relationship) (Coefficient alpha: .79)</td>
</tr>
<tr>
<td>Cannon and Homburg (2001)</td>
<td>Information Sharing</td>
<td>As a component of communication, information sharing is the extent to which the supplier openly shares information about the future that may be useful to the customer relationship.</td>
<td>1. This supplier rarely talks with us about its business strategy. (R) 2. This supplier frequently discusses strategic issues with us. 3. This supplier openly shares confidential information with us.</td>
</tr>
<tr>
<td>Doney and Cannon (1997)</td>
<td>Confidential Information Sharing</td>
<td>Supplier Firm Confidential Information Sharing: Confidential information sharing involves the extent to.....</td>
<td>1. This supplier shares proprietary information with our firm. 2. This supplier will share confidential information to help us. (7-point scales anchored by 1: strongly disagree and 7: strongly agree)</td>
</tr>
</tbody>
</table>
which suppliers share private information with their customers.  

**Jap and Ganesan (2000) JMR**

Information Exchange

Information exchange is the expectation that the parties will freely and actively provide useful information to each other.

Adapted from Dwyer and Oh (1988); Heide and John (1992)
1. In this relationship, it is expected that any information that might help the other party will be provided to them.
2. Information is informally exchanged in this relationship.
3. It is expected that we keep each other informed about events or changes that may affect the other party.
4. Exchange of information in this relationship takes place frequently.
5. It is expected that the parties will provide proprietary information if it can help the other party.
(7-point scales anchored by 1: strongly disagree and 7: strongly agree)

**Denize and Young (2007) IMM**

Information Exchange Norms

They are joint expectations concerning information exchange behaviours within the relationship and incorporate actors acting to create and exchange resources through time.

Parties to this relationship...
1. Rely on each other to be informed.
2. Keep the other informed about the things they ought to know.
3. Are informed about all useful information by the other.
4. Have confidence in the accuracy of information from each other.
5. Search for solutions to any joint problems they might have.
(6-point scales anchored by 1: strongly disagree and 6: strongly agree)

**Wang et al. (2008) IJRM**

Knowledge-Sharing Routines

The systematic patterns of interaction between organisations that permit the transfer, recombination or creation of specialised knowledge

1. Budgets for information sharing are assigned in a regular basis.
2. Both firms have set up rules for information sharing activities.
3. Both firms have a procedure for sharing information.
(5-point scales anchored by 1: strongly disagree and 6: strongly agree)

**Heide and Miner (1992) AMJ**

Information Exchange

The degree to which each party discloses information that may facilitate the other party’s activities, as opposed to keeping all information proprietary

1. In this relationship, it is expected that any information that might help the other party will be provided to them.
2. Exchange of information in this relationship takes place frequently and informally and not only according to a prespecified agreement.
3. It is expected that the parties will provide proprietary information if it can help the other party.
4. It is expected that we keep each other informed about events or changes that may affect the other party.
(7-point scales anchored by 1: completely inaccurate description and 7:...
<table>
<thead>
<tr>
<th>Author(s) and Year</th>
<th>Topic</th>
<th>Description</th>
<th>Sample Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mohr and Spekman (1994) <em>SMJ</em></td>
<td>Information Sharing</td>
<td>Information sharing refers to the extent to which critical, often proprietary, information is communicated to one’s partner.</td>
<td>1. We share proprietary information with this manufacturer. 2. We inform the manufacturer in advance of changing needs. 3. In this relationship, it is expected that any information which might help the other party will be provided. 4. The parties are expected to keep each other informed about events or changes that may affect the other party. (5-point scales anchored by 1: strongly disagree and 5: strongly agree) (Reliability: .68)</td>
</tr>
</tbody>
</table>
| Anderson and Narus (1990) *JM* | Communication | Meaningful communication between firms in a working partnership | *Communication for distributor firms* (Example Measure) Manufacturer X lets out firm know as soon as possible of any unexpected problems with things such as lead times, delivery schedules, or product quality (7-point scales anchored by 1: strongly disagree and 7: strongly agree)  
*Communication for manufacturer firms* (Example Measure) Firm X lets our company know as soon as possible of any unexpected problems they are experiencing with such things as poor cash flow or other financial difficulties. (7-point scales anchored by 1: strongly disagree and 7: strongly agree) |
| Morgan and Hunt (1994) *JM* | Communication | Defined broadly as the formal as well as informal sharing of meaningful and timely information between firms. | 1. In our relationship, my major supplier keeps us informed of new developments. 2. In our relationship, my major supplier communicates well his expectations for our firm's performance. (7-point scales anchored by 1: strongly disagree and 7: strongly agree) (Sample items) |
| Mohr et al. (1996) *JM* | Collaborative Communication | It can be viewed in terms of a specific combination of intensive, relationship-building communication facets; these facets include frequency, bi-directionality, formality, and content of influence attempts. Frequency refers to the amount of contact between channel members. Bi- | *Frequency* (very infrequently/very frequently) For each of the following modes, over a typical four-week period, please estimate the frequency with which communication is spent in: 1. your providing information to the manufacturer via face-to-face interaction with salespeople 2. Telephone interaction with salespeople Technical support Written letters, correspondence Computer link Trade shows |
directionality refers to two-way (as opposed to one-way, or unidirectional) vertical flows of communication in the channel. Formality of communication refers to the extent to which contacts between channel members are routinised, planned, or structured, as opposed to unplanned, or ad hoc in nature. Noncoercive content refers to the use of influence strategies based on information sharing, in which compliance is not mediated by the other party.

Dealer councils
seminars
(Summed and divided by 8)
2. the manufacturer providing information to you via Face-to-face interaction with salespeople
Telephone interaction with salespeople
Technical support
Written letters, correspondence
Computer link
Trade shows
Dealer councils
Seminars
Advertising
Sales literature
Newsletters
(Summed and divided by 11)

**Bidirectionality**
(none/a lot):
How much feedback:
Do you provide to this manufacturer about their product, market conditions, etc.?
Does this manufacturer provide to you?
(negative feedback)
(positive feedback)

**Formality**
(strongly disagree/strongly agree):
In coordinating our activities with this manufacturer, formal communication channels are followed (i.e. channels are regularised, structured modes versus casual, informal, word-of-mouth modes).
The terms of our relationship have been written down in detail.
The manufacturer's expectations of us are communicated in detail.
The terms of our relationship have been explicitly verbalised and discussed.

**Noncoercive influence attempts**
In their interactions with you, manufacturers often try to influence your attitudes and behaviours. Estimate the frequency with which this manufacturer’s sales representatives or district managers employ each of the following methods to influence you. How frequently did the representative (very infrequently/very frequently):
Make a recommendation that by following these suggestions, your dealership would be more profitable?
<table>
<thead>
<tr>
<th>Source</th>
<th>Type</th>
<th>Description</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palmatier et al. (2007a)</td>
<td>Communication</td>
<td>Communication refers to the amount, frequency, and quality of information shared between exchange partners.</td>
<td>Adapted from Greenbaum et al. (1983) 1. Communications are prompt and timely. 2. Communications are complete. 3. The channels of communication are well understood. 4. Communications are accurate. (5-point scales anchored by 1: strongly disagree and 5: strongly agree)</td>
</tr>
<tr>
<td>Anderson and Weitz (1992)</td>
<td>Two-Way Communication</td>
<td>The manufacturer’s and distributor’s perceptions of the degree to which the relationship are characterised by open communications and sharing of information.</td>
<td>Two-way communication perceived by distributor 1. We keep this supplier well informed about what is going on in this distributorship and with customers. 2. This distributorship and this supplier make it a point to keep each other well informed. 3. We hesitate to give this supplier too much information. (R) 4. We are quite involved in the marketing and planning efforts of this supplier. 5. This supplier seeks our advice and counsel concerning their marketing efforts. 6. This supplier is willing to let us see their weaknesses as well as their strengths. (Cronbach's alpha: .84) Two-way communication perceived by manufacturer 1. We keep this distributor well informed about our products and what is going on in our company. 2. Our company and this distributor make it a point to keep each other well informed. 3. We hesitate to give this distributor too much information. (R) 4. We are quite involved in the marketing and planning efforts of this distributor. 5. This distributor seeks our advice and counsel concerning their marketing efforts. 6. This distributor is willing to let us see their weaknesses as well as their strengths. (Cronbach's alpha: .83) (7-point scales anchored by 1: strongly disagree and 7: strongly agree)</td>
</tr>
<tr>
<td>Leonidou (2004)</td>
<td>Communication</td>
<td>The formal and informal exchange of information and meaning between the parties in a working relationship, concerning day-to-day,</td>
<td>1. Relationship with these customers suffers from inadequate communication procedures. (R) 2. Existence of communication failures between company and these customers. (R) 3. These customers often do not inform early enough about critical problems. (R)</td>
</tr>
</tbody>
</table>
|   |   | tactical, or strategic issues. | 4. These customers keep company informed about tactical/strategic issues of the relationship.  
5. These customers communicate their expectations of our company’s performance.  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree) |
<table>
<thead>
<tr>
<th>References</th>
<th>Construct</th>
<th>Definition</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heide and John (1992)</td>
<td>Transaction-Specific Assets</td>
<td>Transaction-specific assets are the investments in equipment, tools, and procedures that are specialised to the requirements of a particular supplier relationship. 1. We have made significant investments in tooling and equipment dedicated to our relationship with this supplier. 2. This supplier has some unusual technological norms and standards, which have required adaptation on our part. 3. Training and qualifying this supplier has involved substantial commitments of time and money. 4. Our production system has been tailored to using the particular items bought from this supplier. 5. Our production system has been tailored to meet the requirements of dealing with this supplier. 6. Gearing up to deal with this supplier required highly specialised tools and equipment. (7-point scales anchored by 1: strongly disagree and 7: strongly agree)</td>
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<tr>
<td>Palmatier et al. (2007a)</td>
<td>Customer RSI</td>
<td>RSI represent sunk, unredeployable assets in an exchange relationship Adapted from Heide and John (1988) In terms of the time spent learning, the following are unique to [Seller]: 1. The [Seller]’s way of doing things in order to become a [Seller] agent. (Item Loadings: .79/.79) 2. Specialised knowledge about the product lines offered by [Seller]. (Item Loadings: .78/.79) 3. Special procedures used by [Seller]. (Item Loadings: .82/.83) 4. Special needs of [Seller]’s customers. (Item Loadings: .86/.87) (5-point scales anchored by 1: strongly disagree and 5: strongly agree) (Item Loadings indicated for Year 1/Year 2)</td>
<td></td>
</tr>
<tr>
<td>Palmatier et al. (2007a)</td>
<td>Seller RSI</td>
<td>RSI represent sunk, unredeployable assets in an exchange relationship Adapted from Zaheer and Venkatraman (1995) 1. [Seller] has invested significant resources in providing me ongoing training. (Item Loadings: .79/.78) 2. [Seller] has invested significant resources in providing me customised support. (Item Loadings: .80/.77) 3. [Seller] has invested significant resources in improving personal relations between us. (Item loadings: .88/.83 indicated for Year 1/Year 2)</td>
<td></td>
</tr>
<tr>
<td>Ganesan (1994)</td>
<td>RSI</td>
<td>Relationship-specific investments are an exchange partner’s Retailer transaction specific investments 1. We have made significant investments in displays, trained salespeople, etc. dedicated to our relationship with this vendor.</td>
<td></td>
</tr>
<tr>
<td>Heide and John (1990)</td>
<td>RSI</td>
<td>RSI represent sunk, unredeployable assets in an exchange relationship</td>
<td>Buyer's specific investments</td>
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</tbody>
</table>
| **Sample Items:**
1. We have made significant investments in displays, training salespeople etc. dedicated to our relationship with this retailer.
2. If we switched to a competing retailer, we would lose a lot of the investment we have made in this retailer.
3. We have invested substantially in personnel dedicated to this retailer.
4. If we decided to stop working with this retailer, we would be wasting a lot of knowledge regarding their method of operation. |

(Cronbach's alpha: .76)

**Vendor transaction specific investments**
1. We have made significant investments in displays, training salespeople etc. dedicated to our relationship with this retailer.
2. If we switched to a competing retailer, we would lose a lot of the investment we have made in this retailer.
3. We have invested substantially in personnel dedicated to this retailer.
4. If we decided to stop working with this retailer, we would be wasting a lot of knowledge regarding their method of operation. |

(Cronbach's alpha: .71)

<table>
<thead>
<tr>
<th>Anderson and Weitz (1992)</th>
<th>Idiosyncratic Investments</th>
<th>Idiosyncratic investments are Investments specific to a channel relationship: They are difficult or impossible to redeploy to another channel relationship; therefore, they lose substantial value unless the relationship continues.</th>
</tr>
</thead>
</table>
| **Sample Items:**
1. If we switched to a competitive line, we would lose a lot of the investment we've made in this supplier's line.
2. It would be difficult for us to recoup investments made in this supplier's line if we switched to a competitive line.
3. If we decided to stop representing this supplier, we would have a lot of trouble redeploying our people and facilities presently serving this supplier's line.
4. If we decided to stop representing this supplier, we would be wasting a lot of knowledge regarding their method of operation. |

(Cronbach's alpha: .81)

**Supplier's specific investments**
Sample Items:
1. The procedures and routines developed by this supplier as part of their relationship with our company are tailored to our particular situation.
2. Our company has some unusual technological standards and norms that have required extensive adaptation by the supplier. |

(Cronbach's alpha: .90)
Some examples of idiosyncratic investments in channel relationships are training and/or dedicating personnel to servicing a specific manufacturer's products, adopting a common order processing system, building specialised facilities to handle a specific manufacturer's product line, and linking the manufacturer and distributor in the customer's mind through promotions.

5. We have made a substantial investment in personnel dedicated to this supplier's product line.
6. We give extensive training to our customers on how to use this supplier's product.
7. We have gone out of our way to align ourselves with this supplier in the customer's mind.
8. We have invested a great deal in building up this supplier's business.
9. We have made a substantial investment in facilities dedicated to this supplier's product line.
10. We have made a substantial investment to create a reporting system that is similar to this supplier's.
11. We get a significant advantage from being located near this supplier's facility.

We have made a substantial investment in personnel dedicated to this supplier's product line.

We give extensive training to our customers on how to use this supplier's product.

We have gone out of our way to align ourselves with this supplier in the customer's mind.

We have invested a great deal in building up this supplier's business.

We have made a substantial investment in facilities dedicated to this supplier's product line.

We have made a substantial investment to create a reporting system that is similar to this supplier's.

We get a significant advantage from being located near this supplier's facility.

(7-point scales anchored by 1: strongly disagree and 7: strongly agree) (Cronbach's alpha: .81)

**Supplier's idiosyncratic investment**

1. If we switched to a competitive distributor, we would lose a lot of the investment we've made in this distributor.
2. It would be difficult for us to recoup investments made in this distributor if we switched to a competitive distributor.
3. If we decided to stop using this distributor, we would have a lot of trouble redeploying our people and facilities presently serving this distributor.
4. If we decided to stop representing this distributor, we would be wasting a lot of knowledge that's tailored to their method of operation.
5. We have made a substantial investment in personnel dedicated to this distributor.
6. NA (The distributor item 6 has no conceptual equivalent on the supplier side.)
7. We have gone out of our way to align ourselves with this distributor in the customer's mind.
8. We have invested a great deal in building up this distributor's business.
9. We have made a substantial investment in facilities dedicated to this distributor.
10. We have made a substantial investment to create a reporting system that is similar to this distributor's.
11. We get a significant advantage from being located near this distributor's facility.

(7-point scales anchored by 1: strongly disagree and 7: strongly agree) (Cronbach's alpha: .80)

**Distributor's perception of manufacturer's idiosyncratic investments**

<table>
<thead>
<tr>
<th>Anderson and</th>
<th>Distributor's/</th>
<th>Similar to above</th>
<th><strong>Distributor's perception of manufacturer's idiosyncratic investments</strong></th>
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</thead>
<tbody>
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</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Description</td>
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</tbody>
</table>
| Weitz (1992) | Manufacturer’s Perception of Manufacturer’s/Distributor’s Idiosyncratic Investments | 1. This supplier has gone out of its way to link us with their product line.  
2. This supplier has made significant investments in training our people.  
3. It would be difficult for this supplier to recoup its investment in us if they switched to a new distributor.  
4. This supplier does a lot to help us become a more effective distributor, such as providing management training.  
5. This supplier puts on helpful programs that are designed to enhance our overall business.  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree) (Cronbach’s alpha: .80) |
| Jap (1999) | Idiosyncratic Investments | Idiosyncratic investments are nonfungible investments that uniquely support the buyer-supplier relationship  
1. If this relationship were to end, they would be wasting a lot of knowledge that’s tailored to their relationship.  
2. If either company were to switch to a competitive buyer or vendor, they would lose a lot of the investments made in the present relationship.  
3. They have invested a great deal in building up their joint business. (“They” refers to the two firms.)  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree) (Reliability for buyers: .75; for suppliers: .62) |
| Cannon and Perreault (1999) | Relationship-Specific Adaptations | Relationship-specific adaptations are investments in adaptations to process, product, or procedures specific to the needs or capabilities of an exchange partner.  
1. Just for us, this supplier changed its product's features.  
2. Just for us, this supplier changed its personnel.  
3. Just for us, this supplier changed its inventory and distribution.  
4. Just for us, this supplier changed its marketing.  
5. Just for us, this supplier changed its capital equipment and tools.  
(7-point scales anchored by 1: not at all and 7: very much) (Coefficient alpha: .83) |
| Cannon and Perreault (1999) | Seller Adaptations | Just for us, we changed our product's features. |
| Cannon and Perreault (1999) | Bayer Adaptations | Just for us, this supplier changed its product's features. |
| Selnes and Sallis (2003) | Transaction-Specific Assets | In some relationships, one or both of the parties can enhance their rewards from focal relationships through the investment of dedicated resources. However, these investments may have value only within the relationship. | 1. We have made significant investments dedicated to this relationship.  
2. We have made several adjustments to adapt to the other party’s technological norms and standards.  
3. Our systems and processes can easily be adjusted to a new relationship.  
(7-point scales anchored by 1: not at all and 7: very much)  
(Coefficient alpha: .82) |
| Jap and Ganesan (2000) | Transaction-Specific Investments (TSI) | NA | Retailer’s TSI  
(Adapted from Cannon 1992)  
Your firm may have made investments in time, energy, and/or money specifically to accommodate manufacturer X and its products. These investments would be lost if your firm switched to another manufacturer. Please indicate the extent to which your firm has made investments or changes specifically to accommodate X.  
Just for X, we have changed our ...  
1. Product requirements.  
2. Sales personnel.  
3. Inventory and distribution procedures.  
5. Retailing strategy.  
6. Information systems.  
7. Capital equipment and tools.  
(7-point scales anchored by 1: none and 7: a great deal)  
(Cronbach’s alpha: .90)  
Supplier’s TSI (Retailer’s perception)  
(Adapted from Anderson and Weitz 1992)  
1. X has invested a great deal in this relationship.  
2. If X were to switch to a competitive customer, it would lose a lot of investments made in the present relationship.  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree)  
(Cronbach’s alpha: .61)
| Zaheer and Venkatraman (1995) SMJ | Asset Specificity | Business process asset specificity incorporates components of both human asset specificity and procedural asset specificity. | Procedural asset specificity  
1. Please indicate the extent to which the following are relatively similar to other carriers or are significantly different from other carriers (e.g. unique or customised to suit the requirements of the focal carrier).  
2. The focal carrier’s workflows and routines.  
3. The use of rating and other manuals of the focal carrier.  
4. The forms needed for the focal carrier.  
(7-point scales anchored by 1: significantly customised and 7: relatively similar to other carriers)  
Human asset specificity  
1. Please indicate the extent to which the following are relatively similar to other carriers or are significantly different from other carriers (e.g. unique or customised to suit the requirements of the focal carrier).  
2. The skill levels of our employees working on the focal carrier’s business.  
3. The extent of training needed for staff.  
4. The focal carrier’s unwritten norms, expectations, guidelines, etc.  
(7-point scales anchored by 1: significantly customised and 7: relatively similar to other carriers)  
(Cronbach’s alpha:.86) |
| --- | --- | --- | --- |
| Poppo et al (2008) OS | Asset Specificity | Asset specificity refers to transaction-specific assets that are not redeployable to alternative uses (Williamson 1985). Because highly specific assets represent a high level of dependence and switching costs should the exchange partner need to find an alternative source of supply, they operationalise it as parties’ dependence in the relationship and switching costs to alternative partners. | Buyer side:  
1. It would be difficult for your firm to replace this supplier’s products with another supplier’s product line.  
2. The total costs of switching to another comparable supplier would be prohibitive for your firm.  
3. It would be costly for your firm to lose this supplier.  
(Cronbach’s alpha:.737)  
Supplier side:  
1. It would be difficult for this supplier to replace the sales and profits realised from your firm with another customer.  
2. The total costs of switching to another comparable customer would be prohibitive for this supplier.  
3. It would be costly for this supplier to lose your firm.  
(Cronbach’s alpha:.792)  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree) |
| Williamson (1975; 1985) | Asset Specificity | Asset specificity refers to transaction-specific assets that are not redeployable to alternative uses. | NA |
4.5.1 Hypotheses for Information Sharing and Relationship-Specific Investments

Information sharing is one of the important behavioural characteristics of business relationships (Mohr and Spekman 1994). The lack of trust will be deleterious to information exchange (Zand 1972; Mohr and Spekman 1994). Information exchange and trust are seen as being positively related to each other (Denize and Young 2007). Trust is the mechanism that opens our minds to others and in doing so, opens possibilities of leveraging business relationships and opening networks to achieve competitive advantage (Young 2006; Denize and Young 2007). Trust gives the exchange partners the confidence to be open with each other, knowing that the information shared will not be used against them (Zaheer et al. 1998). When firm employees perceive high levels of mutual trust in their business relationships, they are more willing to share information with their partners. Information sharing is unlikely to occur in the absence of trust (Cannon and Perreault 1999). Businesses share strategic information with each other according to the level of risk involved in doing so (Frazier et al. 2009). Trust decreases the level of risk (Das and Teng 2001), and therefore makes partners less concerned and more willing to share information.

Communication and information sharing are defined similarly to some extent. Their similarity was discussed in detail in the previous section. In the literature there is evident support for communication acting as a consequence of trust, which supports the antecedent role of trust with regard to information sharing as well. Morgan and Hunt (1994) hypothesise that there is a positive relationship between communication and trust. They define communication “broadly as the formal as well as informal sharing of meaningful and timely information between firms” based on Anderson and Narus’s (1990, p. 44) definition.
Etgar (1979) and Moorman et al. (1993) also consider communication, especially timely communication as both a consequence and antecedent of trust. It is an antecedent to trust as it promotes trust by assisting in resolving disputes and aligning perceptions and expectations. Anderson and Narus (1990) note that “in subsequent periods... this accumulation of trust leads to better communication” (p. 45). They find that past communication is positively related to trust. Anderson and Weitz (1989) also find that communication is positively related to trust in business relationships. Palmatier et al.’s (2006) meta-analysis confirms this as well. Business partners are unwilling to share valuable, proprietary information with their business partners if they are not credibly assured that this knowledge will not be shared with competitors (Dyer and Singh 1998).

As apparent in the discussion above, in the literature there is also support for the reverse order (i.e. communication acting as the antecedent to trust) (Anderson and Weitz 1989). However this study emphasises the direct impact of trust on “cooperative behaviour” (Morgan and Hunt 1994, p. 22). It looks at the role of attitudinal characteristics on behavioural characteristics (Fishbein and Ajzen 1975) in business relationships and focuses on the antecedent role of trust on information sharing. This issue is also considered for the research instrument design, which is discussed in the following chapters.

When individuals get to know each other, in many cases, information is shared informally over time through inter-firm interactions including direct, intimate and extensive face-to-face interactions (Dyer and Singh 1998); in addition inter-firm routines are designed to “facilitate information-sharing and socio-technical interactions” (p. 665). Parties choose to cooperate in value-sharing activities that are difficult to specify contractually, such as sharing private information or tacit knowledge (Poppo et al. 2008), because “they have credible assurances
that they will be rewarded for them” (Dyer and Singh 1998, P. 671). This supports the impact of trust at both the inter-personal and inter-organisational levels (i.e. with both emotion and rational origins) on information sharing. Therefore:

H6: Inter-personal trust positively affects information sharing.

H7: Inter-organisational trust positively affects information sharing.

Trust encourages companies to view potentially high-risk actions as “prudent because of the belief that their partners will not act opportunistically” (Morgan and Hunt 1994, p. 22). Relationship-specific investments are the investments in capital equipment and procedures that are particular to a specific relationship; it is introduced as a consequence of trust (Nielson 1998). Trust leads to cooperative behaviours (Palmatier et al. 2006) such as investing in the relationship. Trust, playing a role as an informal safeguard (Dyer and Singh 1998), is suggested as the most effective and least costly means of safeguarding specialised investments by many scholars (Sako 1991; Hill 1995; Uzzi 1997).

Trust, as an effective governance, may allow a business partner to make greater investments in specialised assets (Dyer and Singh 1998). Trust reduces perceived risk and uncertainty (Das and Teng 2001; Rodriguez and Wilson 2002). With less perceived risk and uncertainty involved, a business partner would consider its future investments less endangered. Therefore firms would be more willing to make investments with the existence of trust. When inter-organisational trust in relationships increases, parties are more certain regarding the outcomes of the relationship and invest more in the relationship. Fang et al. (2008) suggest that inter-organisational trust between collaborating firms positively affects each firm’s resource investment in the relationship as it serves as a rational risk mitigation mechanism. Therefore:
H8: Inter-organisational trust positively affects relationship-specific investments.

The hypotheses in this section (i.e. H6, H7 and H8) in addition to two hypotheses suggested earlier (H2: Inter-personal trust positively affects commitment; H3: Inter-organisational trust positively affects commitment) develop the attitude-behaviour (Fishbein and Ajzen 1975) part of the opportunistic behaviour-attitude-behaviour-outcome framework. Relationship-specific investments and information sharing characterise how companies behave in the relationship. Commitment is considered with an emphasis on its behavioural aspects in this study as discussed earlier as well. Inter-personal trust and inter-organisational trust represent the attitudinal characteristics as two dimensions of trust as a positive attitude (Cook and Wall 1980; Robinson 1996). Based on the extant literature some additional hypotheses with regard to the relationship between the model constructs are developed below.

Relationship-specific investments can make exchange partners irreplaceable or replaceable only at a cost (Heide 1994). One way of creating a self-enforcing agreement (Telser 1980; Klein and Leffler 1981; Kreps 1990) is by means of investments dedicated to the relationship. Relationship-specific investments are positively related to commitment (Anderson and Weitz 1992). Parties make separate but concurrent investments (Williamson 1983; 1985) crafted by means of a reciprocal “hostage exchange” (Williamson 1983, p. 532). Such mutual investments increase the value of continuing the relationship and decrease the gain in terminating it. Such a self-enforcing agreement leads to a commitment, which creates a locked-in condition (Katz 1989) and encourages behaviour that enhances the likelihood of continuance of the relationship. Thus:
H9: *Relationship-specific investments positively affect commitment.*

If a party behaves in an opportunistic way, it is likely to provoke retaliatory behaviour.

“Opportunism begets opportunism. With trust and confidence in the relationship undermined, the parties involved will seek to withdraw or limit their commitments over time” (Gundlach et al. 1995, p. 82). “The more an alliance partner sees the other party as likely to behave opportunistically, the greater will be such perceived vulnerability, and the greater will be the first partner's aversion toward making non-recoverable investments” (Parkhe 1993, p. 805). Therefore:

H10: *(The supplier's) opportunistic behaviour negatively affects relationship-specific investments.*

4.6 Relationship Outcomes (i.e. Financial Performance and Non-Economic (Soft) Performance)

Studies in business marketing attempt to understand the impact of different relationship characteristics on relationship outcomes (Crosby et al. 1990; Morgan and Hunt 1994; Palmatier et al. 2006). They attempt to evaluate the outcomes of the relationship with particular focus on the relationship performance. This includes a range of relationship outcomes. Financial performance can be evaluated by profitability or profit growth (Palmatier et al. 2007a). Performance can also be evaluated by non-financial measures such as the degree to which the relationship helps the companies involved in it to detect changes in end-user needs and preferences (Selnes and Sallis 2003). This study, considering the attitude-behaviour-outcome relationships, investigates the impact of relationship characteristics on relationship outcomes.
Profit performance can be measured to evaluate inter-organisational relationship outcomes (Jap 1999). The sales volume of a dealer can be measured to evaluate a dealer-manufacturer relationship (Mohr and Spekman 1994). Relationship outcomes can also be investigated by focusing on the satisfaction of the parties involved in the relationship with regard to financial aspects of the relationship. Siguaw et al. (1998) use a formative measure, constituted by seven items, to capture the satisfaction with financial performance. Jap and Ganesan (2000) use satisfaction with financial returns as a factor to capture the relationship outcome, adapting it from Ruekert and Churchill (1984).

Ivens and Pardo (2007) measure economic satisfaction to evaluate the relationship. del Bosque Rodríguez et al. (2006) also measure economic satisfaction to evaluate relationship performance, focusing on economic aspects such as turnover. Economic satisfaction is referred to the positive evaluation of the rewards that flow from the relationship (Farrelly and Quester 2005). Financial satisfaction is considered as the difference between the rewards and costs of the relationship (Leonidou 2004). In more recent studies a financial aspect of relationship performance is used, considering aspects such as cash flow and sales (Fink and Kessler 2010). Palmatier et al. (2007a) measure the overall financial performance of the relationship focusing on three aspects, sales growth, profit growth, and overall profitability.

Table 4-7 summarises how financial performance is conceptualised in different studies looking at inter-organisational relationships. It also provides the scales for measuring this construct, which are used in the following chapter. Which measurement items (among the scales presented in this table) are selected and why will be discussed. In summary, the

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8 The table is presented at the end of this section.
financial dimension of the relationship outcome is considered by many scholars. Some capture financial performance by objective measures (e.g. Siguaw et al. 1998; Palmatier et al. 2007b). However, most of them measure financial performance subjectively (e.g. Jap 1999; Leonidou 2004; del Bosque Rodríguez et al. 2006). There are also a few studies in which both objective and subjective measures are used (Palmatier et al. 2007a). Most of the measurement models used for operationalisation of performance are reflective. Fink and Kessler (2010) exemplify an exception, introducing a formative index for performance.

Therefore, as discussed above, inter-organisational studies investigate financial performance of business relationships, measuring it using different scales. In this study subjective financial performance is included in the model. This is discussed in the following chapter. The main reasons for this choice are first, availability of data. Objective data is not feasible in this study because, as will be explained in the following chapters, data collection is done by means of a questionnaire-based survey filled in by a research company’s panel members. They evaluate the constructs subjectively by filling in the questionnaires, but there is no access to their companies’ data in an objective manner. The identity of their companies and their supplier counterpart is not explored due to confidentiality concerns. Therefore, the focus is on subjective and perceptual constructs.

Second, as evident in the review of the literature, this method is well-established and developed in previous studies. Financial performance can refer to the evaluation of profit (Jap 1999), sales volume (Mohr and Spekman 1994) or generally economic rewards (Farrelly and Quester 2005; del Bosque Rodríguez et al. 2006) resulting from the relationship. It can also focus on several dimensions (e.g. sales growth, profit growth, and overall profitability) (Palmatier et al. 2007a).
Third, studies show that subjective data can be used as substitute for objective measures of business economic performance (Dess and Robinson 1984) and there is a strong degree of convergence between measurement of business economic performance through (1) perceptual assessment of senior managers and (2) objective secondary data sources. Due to the strong correlation between these two methods, perceptual data from managers can be employed as acceptable operationalisations of business economic performance (Venkatraman and Ramanujam 1987). In this study, three dimension, sales growth, profit growth, and overall profitability are considered. Using Palmatier et al.’s (2007a) conceptualisation, financial performance is perceptually evaluated. It focuses on the extent to which these three dimensions are perceived to be high.

*The financial performance dimension of relationship outcomes is defined as the extent to which the financial performance of a relationship with another company is perceived to be high by a company, in terms of sales growth, profit growth, and overall profitability* (adapted from Palmatier et al. 2007a)

Definition of financial performance dimension of relationship outcome at the buyer-side:

*The extent to which the financial performance of a relationship with the supplier is perceived to be high by the buyer, in terms of sales growth, profit growth, and overall profitability*

Definition of financial performance dimension of relationship outcome at the supplier-side:
The extent to which the financial performance of a relationship with the buyer is perceived to be high by the supplier, in terms of sales growth, profit growth, and overall profitability

Companies can also benefit from a relationship via non-economic dimensions. Different dimensions of relationship performance are considered when studying inter-organisational relationships. It is insightful to investigate the impact of relationship characteristics on them. In addition, studies attempt to understand the impact of performance dimensions on each other (Palmatier et al. 2007a). Relationship performance can be categorised into two key dimensions that are those related to aspects like turnover and profit (i.e. the financial dimension), and those concerned with the non-economic aspects (Kingshott 2006; Beugelsdijk et al. 2009).

In this study, the two dimensions discussed above (i.e. financial and non-economic) are considered when examining relationship performance. The first dimension, financial performance, was introduced previously. The second dimension is non-economic performance (also here called as the soft performance), which includes aspects such as learning and innovation (Selnes and Sallis 2003; Beugelsdijk et al. 2009). In previous studies, considering the non-economic dimension of performance, relationship performance is defined as the extent to which the partners consider the relationship worthwhile, equitable, productive, or satisfying (Van de Ven 1976; Ruekert and Walker 1987; Selnes and Sallis 2003; Beugelsdijk et al. 2009). Table 4-8 presents an overview of these studies showing how non-economic performance is conceptualised and measured in the literature. The measurement scales are discussed in the following chapter.
The non-economic (soft) performance dimension of relationship outcome is defined as the extent to which a company considers its relationship with the other company worthwhile, productive, and satisfying in non-financial terms (adapted from Van de Ven 1976; Ruekert and Walker 1987; Selnes and Sallis 2003).

Definition of non-economic (soft) performance at the buyer-side:

The extent to which the buyer considers its relationship with the supplier worthwhile, productive, and satisfying in non-financial terms

Definition of non-economic (soft) performance at the supplier-side:

The extent to which the supplier considers its relationship with the buyer worthwhile, productive, and satisfying in non-financial terms
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<th>References</th>
<th>Construct</th>
<th>Definition</th>
<th>Measures</th>
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<tbody>
<tr>
<td>Palmatier et al. (2007a) JM</td>
<td>Overall Financial Performance (Perceptual Format Reported by Customers)</td>
<td>NA</td>
<td>Adapted from Lusch and Brown, 1996 [For this Seller’s products], our performance is very high in terms of (sales growth, profit growth, and overall profitability). (Item loadings: .85/.98/.88)</td>
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<tr>
<td>Palmatier et al. (2007a) JM</td>
<td>Sales Growth (Objective)</td>
<td>NA</td>
<td>Sales growth measured over two years that the seller provided for each customer</td>
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| Palmatier et al. (2007b) JMR | Selling-Firm Financial Outcomes              | 1) **Customer willingness to pay a price premium**  
A manifest variable that measures the average premium (as a percentage) that the buyer would pay to deal with this selling firm as opposed to another firm with similar products.  
2) **Selling effectiveness**  
The extent to which the customer has been persuaded to purchase more (both quantity and variety) from the selling firm.  
3) **Sales growth to the customer**  
A manifest variable calculated as the natural log of relative sales performance | 1) **Customer willingness to pay a price premium**  
What price premium (average) would you pay to deal with this rep firm versus another rep firm with similar products? (%)  
2) **Selling effectiveness**  
The sales at this customer are growing faster than the overall sales of the rep firm.  
(Item loadings: .81)  
The number of different part numbers this customer bought from my rep firm increased last year.  
(Item loadings: .85)  
3) **Sales growth to the customer**  
natured log of relative sales performance (e.g. sales to customer increased by 20% (sales performance index = 120) and the customer’s overall growth was 12% (customer growth index = 112), relative sales performance is 120/112, and sales growth is ln(120/112). 
[One-year (2001 to 2002) sales growth index was calculated as the natural log of the ratio of (1) the selling firm’s sales growth rate to the customer (source: sales manager) and (2) that customer’s overall base growth rate (source: buyer), each indexed to 0% growth = 100.] |
| Jap (1999) JMR               | Profit Performance                           | Profit performance refers to the profits that result from the dyadic collaboration effort, as opposed to those profits earned by the efforts of one firm alone. It is not merely a summation of the two firms’ individual profits but instead | 1. They have achieved a high level of joint profits between them.  
2. They have generated a lot of profits together.  
3. They have increased joint profits shared between them.  
(“They” refers to the two firms.)  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree)  
(Reliability for buyers: .85; for suppliers: .83) |
refers to the financial outcomes that result from the interdependence of effort and investments that reside within the dyad.

Mohr and Spekman (1994) *SMJ*

| Mohr and Spekman (1994) *SMJ* | Sales Volume of the Referent Manufacturer’s Product | They used dealer sales volume of the referent manufacturer’s product as one indicator of partnership success. | Two objective measures of sales volume:

**Direct measure**
What is your approximate volume of sales of this manufacturer’s product, on a monthly basis? (seven categories)

**Indirectly computed measure**
What are the total monthly sales of your dealership? (seven categories);

*Multiplied by:*
Of the total sales of your dealership, what percent comes from this manufacturer’s product? (0%/100% in 10% increments)

Siguaw et al. (1998) *JM*

| Siguaw et al. (1998) *JM* | Satisfaction with Financial Performance | A formative measure that calls for respondents to indicate their degree of satisfaction with seven items; the items constituting the scale were averaged to create the overall performance scale. | 1. Cash flow
2. Return on shareholder equity
3. Gross profit margin
4. Net profit from operations
5. Profit to sales ratio
6. Return on investment
7. Ability to fund business growth from profits (the degree of the respondents’ satisfaction with these items is asked)

Jap and Ganesan, (2000) *JMR*


How satisfied are you with ...
1. The income received from the sale of X’s products?
2. The margins on X’s products?
(7-point scales anchored by 1: very dissatisfied and 7: very satisfied)
(Cronbach’s alpha: .82)

Ivens and Pardo (2007) *IMM*

| Ivens and Pardo (2007) *IMM* | Economic Satisfaction | Whenever an individual compares her/his perceptions of reality with her/his expectations, she/he answers the question whether or not she/he is satisfied with a given good or service. Hence, satisfaction judgments express how positively or negatively a | How satisfied are you with …
1. The supplier’s order handling?
2. The quality of the supplier’s products?
3. The price-quality-ratio of the supplier’s products?
4. The supplier’s service orientation?
(7-point scales anchored by 1: very dissatisfied and 7: very satisfied)
(Cronbach’s alpha: .87)
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<th>Author(s)</th>
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<th>Definition</th>
<th>Items</th>
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| del Bosque Rodríguez et al.     | Economic Satisfaction| Economic satisfaction is the evaluation performed by a channel member of the economic results derived from his relationship with his partner, such as turnover, margins and discounts. | 1. We obtain more sales than the ones that would be able to obtain with other suppliers of this product type.  
2. We attract more clients than the ones that would be able to obtain with other suppliers of this product type.  
3. We obtain better margins than the ones that would be able to obtain with other suppliers of this product type.  
4. We arrange of complete one more assortment than with other suppliers of the same product category.  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree)  
(Reliability: .81) |
| Farrelly and Quester (2005)     | Economic Satisfaction| Economic satisfaction is defined by the positive affective response to economic rewards that flow from the relationship. | 1. The relationship with X has resulted in initiatives we can implement.  
2. This relationship with X has produced results that enable us to increase the value of our brand.  
3. This relationship with X has produced results that enable us to increase the value of their brand. |
| Leonidou (2004)                 | Financial Satisfaction| Financial satisfaction is the difference between the rewards and costs in a business association measured in terms of financial exchanges between the parties involved. | 1. Satisfaction with the sales volume achieved from the relationship with these customers.  
2. Satisfaction with the profits obtained from the relationship with these customers.  
3. Satisfaction with market share gained from the working relationship with these customers.  
4. Satisfaction with the return on the investment made in the relationship with these customers.  
5. Satisfaction with growth of assets engaged in the working relationship with these customers.  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree) |
| Fink and Kessler (2010)         | Performance: Financial Perspective | NA- formative index | 1. Since the establishment of the cooperation relationship, I have boosted my cash flow.  
2. Since the establishment of the cooperation relationship, I have boosted my sales.  
3. Since the establishment of the cooperation relationship, I have boosted my investments. |
(4-point scales ‘completely agree’, ‘inclined to agree’, ‘inclined to disagree’ and ‘completely disagree’)

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| Sælnes and Sallis (2003)            | Relationship Performance                      | The extent to which the partners consider their relationship worthwhile, equitable, productive, and satisfying                            | 1. The relationship with the other company has resulted in lower logistics costs.  
2. Flexibility to handle unforeseen fluctuations in demand has been improved because of the relationship.  
3. The relationship with the other company has resulted in better product quality.  
4. Synergies in joint sales and marketing efforts have been achieved because of the relationship.  
5. The relationship has a positive effect on our ability to develop successful new products.  
6. Investments of resources in the relationship, such as time and money, have paid off very well.  
7. The relationship helps us to detect changes in end-user needs and preferences before our competitors do.  
(7-point scales anchored by 1: strongly disagree and 7: strongly agree) |
| Ruekert and Walker (1987)           | Perceived Effectiveness of the Relationship    | It is defined as the perception of personnel who interact with people in another functional area that their relationship is worthwhile, equitable, productive, and satisfying. | 1. Prior to the past six months, to what extent have you had effective working relationships with this other unit?  
2. To what extent has this unit carried out its responsibilities and commitments in regard to you during the past six months?  
3. To what extent have you carried out your responsibilities and commitments in regard to this other unit during the past six months?  
4. To what extent do you feel the relationship between you and this other unit is productive?  
5. To what extent is the time and effort spent in developing and maintaining the relationship with this other unit worthwhile?  
6. Overall, to what extent were you satisfied with the relationship between your unit and this other unit during the past six months?  
(5-point scales anchored by 1: to no extent and 5 great extent) |
| Van de Ven (1976)                   | Perceived effectiveness                        | It includes the belief that the relationship is worthwhile, equitable, productive, and satisfying.                                        | NA                                                                                                                                                                                                       |
| Fink and Kessler (2010)             | Performance: Endogenous Perspective and Exogenous Perspective | NA- formative index                                                                                                                        | Endogenous perspective:  
1. Since the establishment of the cooperation relationship, the qualifications of my employees have improved.  
2. Since the establishment of the cooperation relationship, fewer employees have left my company.  
Exogenous perspective:  

1. My customers are always satisfied with my products and services.
2. Most of my customers are regular customers.
3. Since the establishment of the cooperation relationship, I have enlarged my market share.
4. Most of my suppliers are regular suppliers.
(4-point scales ‘completely agree’, ‘inclined to agree’, ‘inclined to disagree’ and ‘completely disagree’)

| Beugelsdijk et al. (2009) IMM | Relationship Performance | It is defined as the extent to which the relationship is perceived to be productive and rewarding. | 1. Our organisation learnt a lot from the cooperation with this partner.
2. By cooperating with this partner we considerably improved our competitiveness.
3. By cooperating with this partner our organisation gained valuable contacts.
4. The cooperation with this partner helps us in the achievement of innovations.
5. The cooperation with this partner yields new clients. |
4.6.1 Hypotheses for Relationship Outcomes

Heide and John (1990) argue that relationship-specific investments impact the performance of inter-organisational relationships. Palmatier et al. (2007a) argue that relationship-specific investments are one of the key drivers and immediate antecedents of relationship performance. Based on the findings of their research, they recommend that “when developing financial strategies, managers should build commitment and promote relationship-specific investments” (p. 189). Relationship-specific investments drive both financial and relationship outcomes (Dyer and Singh 1998; Palmatier et al. 2007a). Relationship-specific investments can make the exchange valuable. They create sustainable competitive advantage and better outcomes (Wernerfelt 1984).

Focusing on strategic alliances, scholars argue that relationship-specific investments affect performance positively (Smith and Aldrich 1991; Parkhe 1993). “The implied pledge of non-defection may in turn reduce the frictional effects of perceived opportunism, acting as a lubricant in lowering transaction costs and raising the efficiency of the governance structure of an alliance” (Parkhe 1993, p. 806).

Relationship-specific investments improve financial and relationship outcomes by increasing the efficacy or effectiveness of the exchange itself because of the exchange’s improved ability to create value by either increasing benefits or reducing costs. For example, when partners invest in training, customised procedures, or specialised interfaces, they improve the functional capabilities of the exchange relationship, which creates value (e.g. lower interaction costs and improved product innovation) and this potentially results in higher performance. Productivity achievements in the supply chain are probable when business
partners are willing to make relationship-specific investments and combine resources in a unique way (Asanuma 1989; Dyer 1996). Dyer (1996) also suggests and shows that there is a positive relationship between relationship-specific investments and performance. Relationship-specific investments in inter-organisational relationships may be a source of competitive advantage (Dyer and Singh 1998). It can therefore be expected that:

**H11**: Relationship-specific investments positively affect financial performance.

**H12**: Relationship-specific investments positively affect non-economic (soft) performance.

Parties collaborate with one another to facilitate adaptation (Heide and Miner 1992). Learning relational routines, such as information sharing, facilitates adaptation to unexpected requests or changes and focuses outcomes on the mutual interests of both parties (Poppo et al. 2008). The enhancement of mere transactional value (Zajac and Olsen 1993) through cooperation in the exploration of new information and coordination technologies, new market opportunities, and product and process innovation, can account for the link between inter-organisational trust and relationship performance (Zaheer et al. 1998). Inter-organisational learning is critical to competitive success (Dyer and Singh 1998), organisations often learn by collaborating with other organisations (March and Simon 1958; Levinson and Asahi 1996; Powell et al. 1996). An additional hypothesis therefore posits:

**H13**: Information sharing positively affects non-economic (soft) performance.

Anderson and Weitz (1992) argue that commitment mediates the effect of relationship-specific investments on performance. Commitment is also introduced as a key driver of relationship performance in dominant theories of inter-organisational relationships (e.g.
Morgan and Hunt 1994). Palmatier et al.’s (2006) extensive meta-analysis shows that performance is influenced by commitment. Palmatier et al. (2007a) also show that commitment has a strong effect on relationship outcomes, including overall financial performance. Therefore:

**H14: Commitment positively affects financial performance.**

**H15: Commitment positively affects non-economic (soft) performance.**

Different dimensions of relationship performance impact on each other (Palmatier et al. 2007a). The non-economic (soft) performance dimension of relationship outcome concerns ultimate issues that involve wider effects, including the up-stream and down-stream impact. Such effects indicate the interdependencies of a demand chain (Jüttner et al. 2007); they focus on the influence on end-users and on relationships with other companies involved in the demand chain (i.e. incorporating the network effect). They include systemic aspects of ties and capabilities within business networks (Anderson et al. 1994; Stabell and Fjeldstad 1998; Evans and Berman 2001). Financial and direct outcomes of one particular relationship results in improvement of non-economic (soft) performance (Henneberg et al. 2009). Therefore:

**H16: Financial performance positively affects non-economic (soft) performance.**

Previous sections of this chapter discussed the constructs of this research and the underlying logic for their selection. The constructs were defined and their relevant hypotheses were suggested. These conceptualised constructs and suggested hypotheses contribute to the development of the research model, based on the framework. The building blocks of the framework, presented previously in Table 4-1 include the trust-related constructs, relationship
behavioural attributes and relationship outcomes. The opportunistic behaviour of the other party is introduced as an antecedent to the trust dimensions. Figure 4-1 summarises how the blocks of the model introduced are filled with constructs based on the discussions in the previous sections. As shown in this figure, the attitudinal trust-related constructs consist of inter-personal and inter-organisational trust; relationship behaviours consist of information sharing, relationship-specific investments and commitment; relationship outcomes consist of financial performance in addition to non-economic (soft) performance.

![Figure 4-1: The Model Overview](image)

### 4.7 The Basic Model

Figure 4-2 shows the basic model of this research. All the hypotheses suggested are presented in the model illustrated in this figure. As seen in the model, it is suggested that inter-personal trust affects inter-organisational trust positively (H1). The relationship between trust (at both inter-personal and inter-organisational levels) and commitment is suggested: both dimensions of trust affect commitment positively (H2 and H3).

The opportunistic behaviour of the other side of the relationship (the supplier) is incorporated in the model; the (other side’s: supplier’s) opportunistic behaviour negatively affects (the buyer’s) inter-personal and inter-organisational trust (H4 and H5). The impact of trust dimensions on behavioural characteristics is suggested: inter-personal trust positively affects information sharing (H6); inter-organisational trust positively affects both information...
sharing and relationship-specific investments (H7 and H8). It is suggested that relationship-specific investments positively affect commitment (H9). (The supplier’s) opportunistic behaviour negatively affects (the buyer’s) relationship-specific investments (H10).


Figure 4-2: The Basic Model

4.8 Dependence

Dependence is another factor in business relationships, which is emphasised by many researchers in the area. The relationships suggested previously in this chapter can be moderated by the existence or lack of this factor. In this study, in an attempt to consider such a moderating effect on the relationships discussed above, dependence is chosen. In this
section, the reason why dependence is selected as a moderator is presented and the hypotheses are suggested. Before that an introduction to dependence and a summary of its conceptualisation is presented.

Studies of inter-organisational relationships often include an investigation of dependence (Anderson and Narus 1990; Noordewier et al. 1990; Hallén et al. 1991; Van Bruggen et al. 2005). An overview of these studies is listed in Table 4-9 and discussed here. A firm's dependence on a partner is defined as the firm's need to maintain a relationship with that partner to achieve its goals (Ganesan 1994; Kumar et al. 1995; Leonidou 2004; Palmatier et al. 2007a).

Looking at the power-dependence role in channel relationships, dependence is introduced with an emphasis on the replaceability of that relationship and the availability of other options outside the relationship (Emerson 1962; El-Ansary 1975). Replaceability of a firm's existing partner is often used as a measure of the firm's dependence (Kumar et al. 1995; Geyskens et al. 1996). Therefore its assessment may include measuring the degree to which one partner finds it difficult to replace the other partner, and find a good alternative, in the event that the relationship is terminated (Jap and Ganesan 2000). Table 4-9 also lists the measurement scales for dependence, which are used in the following chapter. Which measurement items are selected (corresponding to the relevant definition) will be discussed.

*Dependence is defined as the extent to which a company needs to maintain the relationship with the other company to achieve its goals* (adapted from Kumar et al. 1995; Jap and Ganesan 2000; Palmatier et al. 2007a).
Definition of dependence at the buyer-side:

*The extent to which the buyer needs to maintain the relationship with the supplier to achieve its goals*

Definition of dependence at the supplier-side:

*The extent to which the supplier needs to maintain the relationship with the buyer to achieve its goals*
<table>
<thead>
<tr>
<th>References</th>
<th>Construct</th>
<th>Definition</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Van Bruggen et al. (2005)</td>
<td>Dependence</td>
<td>Total interdependence is defined as the sum of both parties’ dependencies on each other while interdependence asymmetry refers to the difference between each party’s dependence on the other.</td>
<td>Dependence of industrial distributor (customer perception)</td>
</tr>
<tr>
<td><em>IJRM</em></td>
<td></td>
<td></td>
<td>1. This distributor is dependent on us.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. It is difficult for this distributor to replace us.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. It would be costly for this distributor to lose us as a customer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(5-point scales anchored by 1: completely disagree and 5: completely agree)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Cronbach's alpha: .85)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Dependence of organisational customer</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. We are dependent on this distributor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. It is difficult to replace this distributor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. It would be costly to lose this distributor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(5-point scales anchored by 1: completely disagree and 5: completely agree)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Cronbach's alpha: .75)</td>
</tr>
<tr>
<td>Palmatier et al. (2007a)</td>
<td>Dependence (Interdependence and Dependence Asymmetry)</td>
<td>Dependence refers to the need to maintain a relationship to achieve goals.</td>
<td>Adapted from Kumar et al. (1995)</td>
</tr>
<tr>
<td><em>JM</em></td>
<td></td>
<td></td>
<td><strong>Customer dependence</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>If for some reason, our relationship with [Seller] ended ...</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. The loss would hurt our sales of non-[Seller] lines as well.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. It would be relatively easy for us to diversify into selling new product lines.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(R)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. We would suffer a significant loss of income despite our best efforts to replace the lost income.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. The loss would seriously damage our reputation in this area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Seller dependence</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>If for some reason, we ended our relationship with [Seller] ...</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Such a loss would seriously hurt the sales of [Seller] lines in this area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. [Seller] could easily compensate for it by appointing another agent in this area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(R)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Such a loss would significantly damage [Seller]’s reputation in this area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Such a loss would negatively affect the service [Seller]’s customers have come to expect in this area.</td>
</tr>
<tr>
<td>Kumar et al. (1995)</td>
<td>Dependence</td>
<td>A firm’s dependence on a partner traditionally has been defined in channels as the firm’s need to maintain a relationship with the partner to</td>
<td><strong>Supplier dependence</strong></td>
</tr>
<tr>
<td><em>JMR</em></td>
<td></td>
<td></td>
<td>1. In our trade area, there are other firms that could provide the supplier with comparable distribution.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. In our trade area, the supplier would incur minimal costs in replacing our firm with another dealer.</td>
</tr>
<tr>
<td>Jap and Ganesan (2000)</td>
<td>Dependence</td>
<td>JMR</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>------------</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>Dependence measure assesses the degree to which the retailer (supplier) found it difficult to replace the supplier (retailer), find a good alternative, and make up the sales volume in the event that the relationship is terminated.</td>
<td>The retailer's (supplier's) dependence on the supplier measures the degree to which the retailer (supplier) found it difficult to replace the supplier (retailer), find a good alternative, and make up the sales volume in the event that the relationship is terminated.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dealer dependence**
1. There are other suppliers who could provide us with comparable product lines.
2. Our total costs of switching to a competing manufacturer’s line would be prohibitive.
3. It would be difficult for our firm to replace the sales and profits generated from this supplier’s line.

(7-point scales anchored by 1: strongly disagree and 7: strongly agree)

**Retailer's perception of the supplier's dependence**
1. If we discontinued our relationship with X, it would have difficulty making up the sales volume in our trading area.
2. It would be difficult for X to replace us.
3. X is quite dependent on us.
4. X does not have a good alternative to us in our trading area.

(Cronbach's alpha: .88)

**Retailer's dependence on the supplier**
1. If our relationship was discontinued with X, we would have difficulty making up the sales volume in our trading area.
2. It would be difficult for us to replace X.
3. We are quite dependent on X.
4. We do not have a good alternative to X in our trading area.

(7-point scales anchored by 1: strongly disagree and 7: strongly agree)

(Cronbach's alpha: .92)

**Dependence of retailer on vendor**

*Measure 1*
1. If our relationship was discontinued with this resource, we would have difficulty in making up the sales volume in our trading area.
2. This resource is crucial to our future performance.
3. It would be difficult for us to replace this resource.
4. We are dependent on this resource.
5. We do not have a good alternative to this resource.
6. This resource is important to our business.
7. This resource’s product lines are essential to round out our product offering.
8. If our relationship was discontinued, we would have difficulty replacing this resource.

(Cronbach's alpha: .94)

*Measure 2*
| Anderson and Narus (1990) | Dependence of vendor on retailer | 1. What percentage of the volume in this category is accounted for by this resource? ----- %
Measure 1
1. If our relationship was discontinued with this retailer, we would have difficulty in making up the sales volume in this trading area.
2. This retailer is crucial to our future performance.
3. It would be difficult for us to replace this retailer in this trading area.
4. We are dependent on this retailer for sales in this region.
5. We do not have a good alternative to this retailer.
6. This retailer generates high sales volume for us.
(Cronbach's alpha: .85)
Measure 2
1. What percentage of the volume in this category is accounted for by this retailer? ----- %

| Geyskens et al. (1996) | Relative Dependence for distributor firms | It is defined as a firm’s difference between its own and its partner firm’s dependence on the working partnership.
Relative dependence for distributor firms
Computed as the difference between:
a) In your judgment, the total costs to your firm in switching to a competing manufacturer’s product line would be ____ and b) In your judgment, the total costs to Manufacturer X in replacing your firm with another distributor in your trade area would be ____
(5-point scales anchored by 1: prohibitive and 5: negligible)

| Geyskens et al. (1996) | Relative dependence for manufacturer firms | Computed as the difference between:
a) There are other manufacturers available to Firm X who sell product lines comparable to those of our company, and b) There are other distributors in Firm X’s trading area who could provide comparable distribution for our company’s products.
(7-point scales anchored by 1: strongly disagree and 7: strongly agree)
<table>
<thead>
<tr>
<th>Supplier’s replaceability</th>
<th>In our trade area, there are other firms who could provide the supplier with comparable distribution.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noordewier et al. (1990)</td>
<td>Dependence</td>
</tr>
<tr>
<td>JM</td>
<td>NA</td>
</tr>
<tr>
<td>Buyer's dependence on supplier</td>
<td>In purchasing bearings from this supplier, what is your assessment of the following:</td>
</tr>
<tr>
<td></td>
<td>How dependent are you on this supplier for bearings?</td>
</tr>
<tr>
<td>Dependence of supplier on buyer</td>
<td>In purchasing bearings from this supplier, what is your assessment of the following:</td>
</tr>
<tr>
<td></td>
<td>How dependent is this supplier on you as a customer?</td>
</tr>
<tr>
<td>Leonidou (2004) IMM</td>
<td>Dependence</td>
</tr>
<tr>
<td></td>
<td>The degree to which one party in a working relationship needs to maintain its association with another to achieve its desired goals and materialise its expectations.</td>
</tr>
<tr>
<td></td>
<td>1. Continuation of relationship with these customers is important to our company.</td>
</tr>
<tr>
<td></td>
<td>2. Termination of working relationship with these customers will bring a significant loss.</td>
</tr>
<tr>
<td></td>
<td>3. Relative ease of substitution of these customers by others. (R)</td>
</tr>
<tr>
<td></td>
<td>4. These customers are crucial to company’s future business performance.</td>
</tr>
<tr>
<td></td>
<td>5. These customers make a significant contribution to company sales/profits.</td>
</tr>
<tr>
<td></td>
<td>(7-point scales anchored by 1: strongly disagree and 7: strongly agree)</td>
</tr>
<tr>
<td>El-Ansary (1975) JR</td>
<td>Dependence</td>
</tr>
<tr>
<td></td>
<td>The dependence of actor P over actor O is (1) directly proportional to P’s motivational investment in goals mediated by O, and (2) inversely proportional to the availability of those goals to P outside of the O-P relationship (based on Emerson 1962).</td>
</tr>
<tr>
<td></td>
<td>Wholesaler dependence (on a dealer)</td>
</tr>
<tr>
<td></td>
<td>1. Percent of total sales of all products bought from the wholesaler in relation to wholesaler’s total sales in volume</td>
</tr>
<tr>
<td></td>
<td>2. Percent of the special product bought from the wholesaler in relation to the wholesaler’s sales in volume of that specific product.</td>
</tr>
<tr>
<td></td>
<td>3. Dealer’s contribution to wholesaler’s profits</td>
</tr>
<tr>
<td></td>
<td>The importance of the following elements of the dealer’s marketing strategy to the wholesaler:</td>
</tr>
<tr>
<td></td>
<td>4. Quality of salesmen and salesmanship</td>
</tr>
<tr>
<td></td>
<td>5. Nature and extent of advertising</td>
</tr>
<tr>
<td></td>
<td>6. Price charged to customer</td>
</tr>
<tr>
<td></td>
<td>7. Quality of workmanship in installations</td>
</tr>
<tr>
<td></td>
<td>8. Quality of maintenance service</td>
</tr>
<tr>
<td></td>
<td>9. Influence on other dealers to buy from wholesaler</td>
</tr>
<tr>
<td></td>
<td>10. Participation in dealers association</td>
</tr>
<tr>
<td></td>
<td>11. Participation in home builders association</td>
</tr>
<tr>
<td></td>
<td>12. Available alternative dealers to carry brand</td>
</tr>
<tr>
<td></td>
<td>13. Cost to wholesaler of using alternative dealer outlets</td>
</tr>
<tr>
<td></td>
<td>Dealer dependence (on a wholesaler)</td>
</tr>
<tr>
<td></td>
<td>1. Percent of total purchase from the wholesaler in relation to total purchases</td>
</tr>
<tr>
<td>Hallén et al. (1991)</td>
<td>Dependence</td>
</tr>
<tr>
<td>---------------------</td>
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</tr>
</tbody>
</table>

**Suppliers Dependence**
- Customer importance: estimate of the supplier's sales of the selected product to the selected customer as a percentage share of the supplier's global sales of this product
- Buyer concentration: estimate of the supplier's sales of the selected product to its three largest customers in the selected customer's country as a percentage share of its total sales of the product in this customer's country

**Customer Dependence**
- Supplier importance: estimate of the customer's purchases of the selected product from the selected supplier as a percentage share of the customer's global purchases of this product
- Market share: estimate of the supplier's market share for the selected product in the selected customer's country
- Product complexity: 5-level scale based on detailed description of product and product use
4.8.1 Hypotheses for Dependence

Hibbard et al. (2001) hypothesise that as the level of dependence in the relationship increases, one partner is more likely to respond with constructive discussion and venting and less likely to respond with disengagement and passive acceptance. As suggested in dependence theory (Emerson 1962) and emphasised in other studies (Frazier 1983a; Buchanan 1992) when one partner is dependent on the other partner it needs to maintain the relationship to achieve its goals, therefore it is unlikely to behave in a way that may result in escalation or, ultimately, the dissolution of the relationship (Kumar et al. 1998). It has been suggested that firms that are in a high dependence situation and lack alternatives have less equity concerns than those in low dependence situations (Blalock and Wilkin 1979).

In line with the arguments above, here it is suggested that if one partner is dependent on another, it will make investments in the relationship in spite of whether they have strong (inter-organisational) trust in the partner or not. On the other hand, in a high degree of dependence, a firm will take precautions to limit its vulnerability (Bucklin and Sengupta 1993). Therefore even if they trust their partner, they will not invest in the relationship unless it is necessary. Thus, an increase in dependence has a diminishing effect on the relationship between these two constructs (i.e. inter-organisational trust and relationship-specific-investment).

Another moderating effect of dependence is with regard to the association between relationship-specific investments and commitment. The level of relationship-specific investments influences the level of commitment (Anderson and Weitz 1992). But based on a high level of dependence it is difficult to replace a partner (Emerson 1962; El-Ansary 1975;
Kumar et al. 1995; Geyskens et al. 1996) and one party needs to maintain the relationship in order to achieve its goals (Ganesan 1994; Kumar et al. 1995; Leonidou 2004; Palmatier et al. 2007a). So it is willing to continue the relationship and is committed to the other party even if it has not invested highly in the relationship. It is suggested that in high degrees of dependence, a party tries to save the continuation of the relationship in spite of the level of its investment in the relationship. Therefore the level of dependence moderates the relationship between relationship-specific investments and commitment. So the final hypotheses are:

\[ H17: \text{The positive effect of inter-organisational trust on relationship-specific investments decreases as dependence increases.} \]
\[ H18: \text{The positive effect of relationship-specific investments on commitment decreases as dependence increases.} \]

4.9 The Model with the Moderating Effects

These hypotheses, suggesting the moderating effect of dependence on these two relationships (i.e. inter-organisational trust-relationship-specific investments and relationship-specific investments-commitment relationships) are added into the initial model (which was illustrated in Figure 4-2) and illustrated in Figure 4-3.
This model and the initial (basic) model represent the underlying hypotheses, which will be empirically tested in this study. The basic model suggests the relationships between different constructs included in this study. It consists of relationships between different aspects of trust, behavioural characteristics, performance dimensions and the opportunistic behaviour (of the other party) in business relationships. The second model adds the moderating effects of dependence and suggests its impact on some of the relationships introduced in the basic model. These models show the constructs that are used in this study with the purpose of investigating business relationships and the role of trust (at different levels) in these relationships. The following chapters explain how these constructs are operationalised and how the suggested hypotheses and these models are tested.
5 Chapter 5: Measurement and Pretest

This chapter discusses the selection of measurement scales, used for analysing and testing the nomological model. This section is informed by discussions in the previous chapter, where the study constructs were discussed and their measurement scales were reviewed. Reflective measurement models are introduced as this study’s measurement scales are specified and introduced as reflective (rather than formative). This chapter also details two preliminary stages implemented for testing these scales, which consist of a qualitative and a quantitative pretest. This chapter also informs the data collection, which is discussed in the following chapter. This chapter relates to the epistemological standpoint of this research, which was discussed previously in section 4.1.

5.1 Selection of the Measurement Scales

In this study, the suggested nomological model, presented in Figure 4-2, and its underlying hypotheses are tested statistically. For this purpose, appropriate scales are selected for measuring the model constructs. In this section, selection of the constructs’ measurement items is discussed.

Scales used in the literature for measuring trust are summarised in Table 4-2. Trust is measured referring to different dimensions such as honesty (Ganesan 1994; Kumar et al. 1995), benevolence (Ganesan 1994; Kumar et al. 1995), credibility (Ganesan 1994) and expertise (Wang et al. 2008). First, inter-personal trust is considered: as discussed in the model development chapter, inter-personal trust is considered as referring to honesty and benevolence. It is defined as the extent to which the employee/employees of one company
perceives/perceive the employee/employees of the other company to be honest and benevolent (adapted from Ganesan 1994; Kumar et al. 1995). The available scales for trust, referring to honesty and benevolence (Kumar et al. 1995) were selected for inter-personal trust. The first three scales refer to honesty and the last four to benevolence.

These items are listed below. The items are introduced with a minor adaptation, which was implemented into the scales after the first stage of testing, also with the purpose of adjusting them to this study’s setting. This testing stage is discussed in the following chapter of this dissertation.

1. Even when the people we deal with at this supplier give us a rather unlikely explanation, we are confident that they are telling the truth.
2. Whenever the people we deal with at this supplier give us advice on our business operations, we know that they are sharing their best judgment.
3. We can count on the people we deal with at this supplier to be sincere.
4. Though circumstances change, we believe the people we deal with at this supplier will be ready and willing to offer us assistance and support.
5. When making important decisions, the people we deal with at this supplier are concerned about our welfare.
6. When we share our problems with the people we deal with at this supplier, we know that they will respond with understanding.
7. When it comes to things that are important to us, we can depend on the support of the people that we deal with at this supplier.
These items are presented using a seven-point Likert format. This is the most common method used in the literature as evident in Table 4-2 (Anderson and Narus 1990; Ganesan 1994; Morgan and Hunt 1994; Kumar et al. 1995; Zaheer and Venkatraman 1995; Doney and Cannon 1997; Siguaw et al. 1998; Jap 1999; Norman 2002; Selnes and Sallis 2003; Leonidou 2004; del Bosque Rodríguez et al. 2006; Ivens and Pardo 2007). There are also some studies that use a five-point Likert format (Mohr and Spekman 1994; Van Bruggen et al. 2005; Palmatier et al. 2007a; Wang et al. 2008). The seven-point Likert scaling is also used for the other items measuring other constructs. The scales are anchored by strongly disagree (1) and strongly agree (7). The scales for the remaining constructs are anchored in the same way. Here the items are introduced in the questionnaire designed for the buyer (i.e. customer)-side of the relationship, evaluating the relationship with one of their particular suppliers. This is later complemented by introduction of the questionnaire items for the supplier-side. These two questionnaires are used as a part of pretesting the scales. Later the customer-side questionnaire is used with the main data, which is used to test the model. The following chapters of this dissertation elaborate this in more detail.

Inter-organisational trust is measured by four items developed by Jiang et al. (2011). They developed these items for measuring inter-organisational reliance. As discussed in the previous chapters, inter-organisational trust in this study is very similar to reliance introduced by Blois (1999), Mouzas et al. (2007) and Jiang et al. (2011). Inter-organisational trust, is defined here as the extent to which one company holds positive expectations that it can rely rationally on the other company, to do what has been expected to fulfill the focal company’s specific needs given its proven capability (adapted from Blois 1999; Mouzas et al. 2007; Jiang et al. 2011), and is measured using the four items presented below:
1. Our company is confident that this supplier is competent at what it is doing.
2. The performance of this supplier always meets our company's expectations.
3. Our company believes in this supplier’s ability to fulfill its promises.
4. Our company is confident with this supplier’s ability to fulfill our agreements.

As discussed in the previous chapter, commitment is defined as the extent to which one company has the desire to develop a stable relationship, has the willingness to make short-term sacrifices to maintain the relationship, and has the confidence in the stability of the relationship with the other company (adapted from Anderson and Weitz 1992; Jap and Ganesan 2000). The items for measuring commitment are selected from among the ones introduced by Anderson and Weitz (1992), presented in Table 4-3. As is evident from this table, these items are repeatedly used in the literature and sometimes adapted to some extent (e.g. Siguaw et al. 1998; Jap and Ganesan 2000; Van Bruggen et al. 2005). Seven items are selected, which are:

1. Our company defends this supplier when others criticise them.
2. Our company has a strong sense of loyalty to this supplier.
3. Our company is continually on the lookout to add to or replace this supplier. (R)
4. Our company is not very committed to this supplier. (R)
5. Our company is quite willing to make long-term investments to keep this supplier.
6. Our company's relationship with this supplier is a long-term alliance.
7. Our company is patient with this supplier when they make mistakes that cause us trouble.
“R” indicates that the reverse of the item measures the degree of commitment. In the following items “R” identifies any reverse item.

Opportunistic behaviour was discussed and defined as the extent to which one company’s behaviour in the relationship with the other company involves self-seeking with guile. The perceived opportunistic behaviour of the other party is defined as the extent to which one company perceives that the other company’s behaviour involves self-interest-seeking with guile (adapted from Williamson 1975; John 1984). The items used for measuring this construct are listed in Table 4-4. In this study, six items are selected from the ones developed by John (1984). These items are used in many other studies as well in order to measure opportunistic behaviour (e.g. Kelley et al. 1989; Provan and Skinner 1989; Morgan and Hunt 1994; Joshi and Arnold 1997). These items are:

1. On occasion, this supplier lies to our company about certain things in order to protect their interests.
2. This supplier has always provided our company with a completely truthful picture of their business. (R)
3. Sometimes this supplier alters the facts in order to get what they need.
4. This supplier carries out its duties even if our company does not check up on them. (R)
5. This supplier has sometimes promised to do things without actually doing them later.
6. This supplier feels that it is OK to do anything within their means that will help further their own interests.
Information sharing is defined as the extent to which one company openly shares information with the other company that may be useful to the relationship (adapted from Cannon and Homburg 2001). As mentioned, this construct is incorporated in the model with a focus of behavioural characteristics of one side of the relationship. This study tries to understand how company A shares information with company B (uni-directionally), instead of how companies A and B share information with each other (bi-directionally). This issue influenced which measurement scales were used and how they were modified. For instance, “in this relationship, it is expected that any information that might help the other party will be provided to them” (Heide and John 1992) is modified to “our company provides this supplier with any information that might help them”. The items in previous studies are presented in Table 4-5. This table includes communication items as well. The similarity and overlap between information sharing and communication was discussed previously. Six items are used in total for measuring information sharing. Four items are chosen from Heide and John’s (1992) study, and two items from Cannon and Homburg’s (2001). They are presented below in the same sequence as mentioned above.

1. Our company provides this supplier with any information that might help them.
2. Our company exchanges information with this supplier frequently and informally, and not only according to a pre-specified agreement.
3. Our company provides this supplier with proprietary information if it can help them.
4. Our company keeps this supplier informed about events or changes that may affect them.
5. Our company rarely talks with this supplier about our business strategy. (R)
6. Our company openly shares confidential information with this supplier.
Table 4-6 lists the items used for measuring relationship-specific investments and similar constructs (such as asset specificity). Relationship-specific investments are defined as the extent to which one company has made sunk, unredeployable asset allocation decisions in the relationship with the other company (adapted from Heide and John 1990; 1992). The measurement items developed by Heide and John (1992) are selected, which consist of six items. These are well-established in the literature. In addition they present general items that are not specific to any industry. The relevance of this is better explained when the study design in discussed in following chapters. These items represent uni-directional items, which allow investigate investments of one side of the relationship. They are:

1. Our company has made significant investment in capabilities dedicated to our relationship with this supplier (for example people, systems, processes and tools).
2. This supplier has some unusual technological norms and standards, which have required adaptation on our company's part.
3. Training and qualifying this supplier has involved substantial commitments of our company's time and/or money.
4. Our company's processes have been tailored to use the particular items provided by this supplier.
5. Our company's business system has been tailored to meet the requirements of dealing with this supplier.
6. Gearing up to deal with this supplier required highly specialised capabilities (for example people, systems, processes and tools).
Table 4-7 lists the items for financial performance and similar constructs such as economic satisfaction. As discussed in the previous chapter, financial performance is defined referring to Palmatier et al. (2007a), as the extent to which the financial performance of a relationship with another company is perceived to be high by a company, in terms of sales growth, profit growth, and overall profitability and measured by three items listed below:

1. The relationship with this supplier contributes to our company's achieving a higher sales growth.
2. The relationship with this supplier contributes to our company's achieving a higher profit growth.
3. The relationship with this supplier contributes to our company's achieving a higher overall profitability.

In this study, non-economic (soft) performance is defined as the extent to which a company considers its relationship with the other company worthwhile, productive, and satisfying in non-financial terms (adapted from Van de Ven 1976; Ruekert and Walker 1987; Selnes and Sallis 2003). The items used for non-economic (soft) performance are selected among the items presented in Table 4-8. As discussed previously, these items look at issues such as the learning outcomes of the relationship. Four items are selected from the study of Beugelsdijk et al. (2009) (listed as the first four items below) and two items from Selnes and Sallis’s (2003) study (listed as the last two items), resulting in six measures in total which are:

1. Our company learns a lot from the relationship with this supplier.
2. By cooperating with this supplier our company considerably improves its competitiveness.
3. By cooperating with this supplier our company gains valuable contacts.
4. The relationship with this supplier helps our company to be more innovative.
5. The relationship with this supplier helps our company to detect changes in end-user needs and preferences before our competitors do.
6. The relationship with this supplier has a positive effect on our company's ability to develop successful new offerings.

As discussed in the previous chapter, dependence is also considered in this study. Here dependence is defined as the extent to which a company needs to maintain the relationship with the other company to achieve its goals (adapted from Kumar et al. 1995; Jap and Ganesan 2000; Palmatier et al. 2007a). The measurement items used in the literature are listed in Table 4-9. For measuring dependence three items, introduced by Palmatier et al. (2007a), are used. These items ask “If for some reason, your relationship with this supplier ends,”...

1. Our company could easily compensate for it by appointing another supplier of similar offerings. (R)
2. Such a loss would significantly damage our company's reputation in this market.
3. Such a loss would negatively affect the service our customers have come to expect in this area.

So the existing item banks were used for measuring the constructs. The measures consist of seven items for inter-personal trust (Kumar et al. 1995), four items for inter-organisational trust (Jiang et al. 2009), seven items for commitment (Anderson and Weitz 1992), six items for opportunistic behaviour (John 1984), six items for information sharing (Heide and John
six items for relationship-specific investments (Heide and John 1992), three items for financial performance (Palmatier et al. 2007a) and six items for non-economic performance (Selnes and Sallis 2003; Beugelsdijk et al. 2009) and three items for dependence (Palmatier et al. 2007a).

5.2 Reflective Measurement Models

All these constructs’ measures are treated as reflective in line with the main body of the literature. The items have been selected from the existing items in the literature and have been introduced, measured and tested as reflective measures. The following two paragraphs introduce reflective versus formative scales briefly.

Measurement items (i.e. observed variables) are perceived as reflective when they act as (effect) indicators of an underlying construct (i.e. latent variables). An alternative measurement perspective is based on the use of formative (cause/causal) indicators; with this approach an index rather than a scale is created. Formative indicators are observed variables that are assumed to cause a latent variable, whereas, to the effect indicators the latent variable causes the observed variables (Diamantopoulos and Winklhofer 2001; Hair et al. 2010). In formative models the error in measurement is an inability to fully explain the construct. In reflective models the measurement error results in an inability to fully explain the measures (Hair et al. 2010). When a latent variable is defined as a linear sum of a set of measurements or when a set of measures of a dependent variable is determined by a linear combination of measures of independent variables, the measures are termed formative indicators, so the measures produce the constructs (Bagozzi 1994).
A typical example of formative indicators, which cause rather than being caused by the latent variable, are the indicators of Socio-Economic Status (SES), which are known to be education, income, occupation, and residence (Hauser 1973; Hair et al. 2010). If any of these measures increases, SES would increase (even if the other measures did not change); and if a person’s SES increases, this would not necessarily happen in tandem with an increase in all four measures (Diamantopoulos and Winklhofer 2001). A reflective measure assumes that all measurement items are caused by the same latent construct; therefore they are highly correlated with each other (Hair et al. 2010).

Tables 4-2 through to 4-8 include existing measurement items for constructs used in this study. Most of them use reflective measures. As an exception, see the scales introduced by Fink and Kessler (2010) in Table 4-7. Fink and Kessler (2010) introduce a formative index for performance. In line with Kaplan and Norton (1996), they include several perspectives including endogenous perspective, exogenous perspective and financial perspective. Most of the other measurement models used for operationalisation of performance are reflective. In summary the measurement models used for operationalising the constructs, used in this study, are demonstrated as reflective in the extant literature, the approach adopted in this research.

5.3 Pretesting the Measurement Scales

This section discusses two stages that were implemented for pretesting the measurement items. The first stage involved a set of qualitative interviews with senior managers and the second stage was based on a quantitative analysis with use of survey data collected involving executive MBA students.
Pretesting is considered as an essential part of the questionnaire design process (Reynolds and Diamantopoulos 1996). A pretest is a small pilot study to determine how a questionnaire can be improved to minimise response errors. Pretesting questionnaires has been recommended with the purpose of identifying and improving defective questions. The resultant questionnaire revisions may involve structural changes (e.g. question order) and changes in phrasing (Bolton 1993). Pretests are carried out in order to test the cognitive processes when a respondent answers a survey question (Bolton 1993). The main two approaches undertaken for pretesting are (1) using personal interviews and (2) using the final survey method (Reynolds and Diamantopoulos 1996).

When using personal interviews four pretesting methods are suggested: the conventional pretest, behaviourial interaction coding, cognitive interviews and expert panels. In a conventional pretest a small sample of the target population is interviewed using the procedures planned for the main survey. The behaviourial interaction coding consists of observing the respondents’ behaviour when reading the questionnaire and noting when this behaviour differs from an ideal set of behaviours. In cognitive interviews, respondents are asked to report on how they arrive at their answers to each question. The interviewer monitors what difficulties the respondents have in recalling relevant information and formulating their answers and any other obstacles that respondents face. An expert panel involves survey research experts; panel members are asked to use their judgement to identify problems with the questionnaire (Blair and Presser 1992). On the other hand it is suggested to use quantitative pretesting techniques to predict the performance of the survey items in a confirmatory factor analysis and test their validity (Anderson and Gerbing 1991).
When pretesting, a researcher needs to decide about which method to conduct (the quantitative final survey method or using qualitative personal interviews). Also the researcher should decide on the number of respondents required to conduct the pretest and the desirable characteristics of respondents (Reynolds and Diamantopoulos 1996). Researchers conduct pretests to detect problematic items and improve their surveys using various approaches. A summary of the pretests conducted in recent similar studies (i.e. survey-based in the area of business-to-business marketing and inter-organisational relationships) is presented in Table 5-1. These studies have used pretesting as a part of research design. Table 5-1 summarises the techniques used for pretesting in these studies. It presents the number of respondents for different pretests and introduces the results of the pretest analysis and the modifications and adaptations made based on this analysis.

As shown in this table, some studies have used qualitative interviews to pretest the survey items (see Sirdeshmukh et al. 2002; Hult et al. 2007b; Reuer and Ariño 2007) and some have only used quantitative pretests (see Ulaga and Eggert 2006; Fang et al. 2008; Skarmeas et al. 2008). However most of the studies have used both qualitative and quantitative techniques for pretesting (see Norman 2002; Teo et al. 2003; Cavusgil et al. 2004; Claycomb et al. 2005; Ivens 2005; Palmatier et al. 2007b; Poppo et al. 2008). Most quantitative pretests involve respondents at similar position to the respondents in the final survey. This includes executives, managers and decision makers. However, executive MBA students have also been involved in pretests (see Cavusgil et al. 2004). Qualitative pretests have involved respondents similar to the final survey as well. In addition panel of judges (e.g. professors, doctoral students) have been interviewed (see Teo et al. 2003; Cavusgil et al. 2004).
As seen in the table, the qualitative (see Norman 2002) and quantitative (see Cavusgil et al. 2004) pretests may consist of several stages. The number of the respondents for qualitative pretests may be relatively small (e.g. 2 and 3) or bigger (e.g. 35 and 37). In quantitative pretests also a small number of respondents may be involved. However, in order to be able to conduct rigorous statistical tests of discriminant validity and reliability, such as EFA and computing Cronbach’s alpha, a larger number of respondents are needed (see Teo et al. 2003; Claycomb et al. 2005).

As seen in the last column of the Table 5-1, based on the pretest analysis (especially following qualitative pretests), questionnaires are revised and modified to improve the items and their instructions. Quantitative pretests are also used for improving the survey (e.g. eliminating items) and ensuring the quality of the survey. In this study both qualitative and qualitative pretests were implemented to improve the questionnaire and ensure its quality. These two pretest stages are discussed in detail in the following sections.

Table 5-1: The Pretests Conducted in Previous Studies

<table>
<thead>
<tr>
<th>Reference</th>
<th>Method*</th>
<th># Res.</th>
<th>Results /Adaptation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poppo et al. (2008)</td>
<td>Qualitative: in-depth interviews</td>
<td>3</td>
<td>A small number of questionnaire items were revised to enhance clarity.</td>
</tr>
<tr>
<td></td>
<td>Quantitative</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Fang et al. (2008)</td>
<td>Quantitative</td>
<td>30 (15 dyads)</td>
<td>Results revealed a high degree of internal consistency between the paired managers (Guttman split-half R &gt; .86).</td>
</tr>
<tr>
<td>Skarmeas et al. (2008)</td>
<td>Quantitative: a small mail pretest</td>
<td>NA</td>
<td>No particular problems were identified with the interpretability of the measures, instructions, and response formats.</td>
</tr>
<tr>
<td>Reuer and Ariño (2007)</td>
<td>Qualitative for testing the translated questionnaire</td>
<td>6</td>
<td>Several changes were made.</td>
</tr>
<tr>
<td>Palmatier et al. (2007b)</td>
<td>Qualitative: interviews</td>
<td>8</td>
<td>They refined theoretically based items through interviews.</td>
</tr>
<tr>
<td></td>
<td>Quantitative</td>
<td>31</td>
<td>They refined the initially developed items through pretests.</td>
</tr>
<tr>
<td>Hult et al. (2007b)</td>
<td>Qualitative</td>
<td>35</td>
<td>It resulted in modest modifications to the wording of the questionnaire, ten additional items, and revisions to parts of the instructions.</td>
</tr>
<tr>
<td>Study</td>
<td>Methodology</td>
<td>Number of Items</td>
<td>Changes Made</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------</td>
<td>-----------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ulaga and Eggert (2006)</td>
<td>Quantitative: mail survey</td>
<td>4</td>
<td>Few items were slightly modified.</td>
</tr>
<tr>
<td>Claycomb et al. (2005)</td>
<td>Qualitative: interviews</td>
<td>NA</td>
<td>The scale format was retained, but two changes were made to the items. Reliability of the items was tested using Cronbach’s alpha (.78).</td>
</tr>
<tr>
<td></td>
<td>Quantitative: mail survey</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Ivens (2005)</td>
<td>Qualitative</td>
<td>NA</td>
<td>Items were adapted and some small modifications were made.</td>
</tr>
<tr>
<td></td>
<td>Quantitative</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Cavusgil et al. (2004)</td>
<td>Qualitative</td>
<td>10</td>
<td>They modified several items.</td>
</tr>
<tr>
<td></td>
<td>Quantitative: with executive MBA students</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quantitative (second round)</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Teo et al. (2003)</td>
<td>Qualitative (with judges, faculty members or graduate students)</td>
<td>4</td>
<td>There were no major problems, indicating that the constructs possess adequate conceptual validity.</td>
</tr>
<tr>
<td></td>
<td>Quantitative</td>
<td>105</td>
<td>Cronbach’s alphas computations and factor analyses were performed and confirmed the stability and validity of these constructs in the survey instrument.</td>
</tr>
<tr>
<td>Sirdeshmukh et al. (2002)</td>
<td>Qualitative with judges</td>
<td>5</td>
<td>The judges evaluated the wording/meaning and consistency with corresponding definitions. On the basis of this feedback, items were either modified or dropped.</td>
</tr>
<tr>
<td>Norman (2002)</td>
<td>Qualitative with judges (five professors, four doctoral students, and a consultant)</td>
<td>10</td>
<td>Items were rewritten until the judges believed that the items represented each construct being measured.</td>
</tr>
<tr>
<td></td>
<td>Qualitative</td>
<td>2</td>
<td>Some changes were made: The survey was reduced in size.</td>
</tr>
</tbody>
</table>

# Res.: number of respondents
* If not mentioned, the pretest has been conducted with the respondents at a position similar to the respondents in the final survey (e.g. executives, managers and decision makers).

### 5.3.1 Stage One: Qualitative Pretest

Qualitative pretests are recommended (Blair and Presser 1992; Reynolds and Diamantopoulos 1996) and implemented in the literature (see Table 5-1) in order to improve and test the quality of the survey questionnaires. As a part of testing the questionnaire, sixteen interviews were conducted. The interviewees were senior managers working in UK companies, operating in various industries such as consulting, IT and manufacturing. Ten of these interviews were conducted face-to-face in the managers’ offices, and six conducted by telephone. Using ideas from the pretesting techniques discussed above (Blair and Presser...
1992) and examples of qualitative pretests implemented in the literature (see Table 5-1), a combination of conventional pretest and behavioural interaction coding was used to monitor the response procedure. The questionnaire was discussed with each interviewee question by question. The participants were asked to raise any comments or questions that they might have with regard to each question. They were asked whether they found each question relevant and clear, or if they noted any ambiguity. A list of comments with regard to each question was developed and some minor changes were applied to the questions according to the feedback received. Then four follow-up interviews were carried out in a similar way to test the modified version of the questionnaire. Additionally the questionnaire was sent to two scholars who were experts in the field (expert panel method (Blair and Presser 1992)) (see examples of using this method: Teo et al. 2003; Cavusgil et al. 2004). On the basis of this feedback the instrument items were modified slightly. The items presented in the previous section of this chapter are introduced after this modification. Therefore a minor variance is seen between these items and the ones presented in Table 4-2, Table 4-3, Table 4-4, Table 4-5, Table 4-6, Table 4-7, Table 4-8 and Table 4-9.

5.3.2 Stage Two: Quantitative Pretest

Quantitative pretests are recommended in the literature and implemented in similar studies to improve the surveys and test their quality. In line with this recommendation (Anderson and Gerbing 1991; Reynolds and Diamantopoulos 1996) and practical examples of using this technique (see Table 5-1) second pretest was conducted. A group of executive MBA students enrolled at a major UK university were briefed about the research and asked to participate as part of their assessment for a course in marketing. They were asked to consider twenty of the most important business relationships of their company. Ideally they should be relationships
of a minimum duration of three years. They may be either their company’s business customers or suppliers. They were asked to randomly choose a minimum of four companies from these twenty companies. They were required to study the relationship between their company and these specific four companies by means of two questionnaires, one filled in by a person within their company, knowledgeable and in charge of the relationship with the other company, and the other filled in by a person within the other company, who is knowledgeable and in charge of the relationship with their company. The two questionnaires (one for the executives’ company and one for the other company) were provided to the students. The questionnaires included the measurement items for the model constructs as presented above. Thus, for four business relationships they would collect eight questionnaires with the aim of understanding those relationships.

The two questionnaires’ (for the buyer-side and the supplier-side) items are presented in Table 5-2. It is identified which construct each item is capturing. The third letter in the items’ code indicates if they are a reverse item or not. If this letter is R it is a reverse scale. For example, the reverse scales for commitment are COR3 and COR4. All constructs, except from dependence, are asked in the questionnaire positing “please indicate to what extent you agree or disagree with the following statements about your company’s relationship with this company.”

1 (strongly disagree) . . . 4 (neither agree nor disagree) . . . 7 (strongly agree)

For questions with regard to inter-personal trust, it was emphasised that “please think of the people that you deal with at this company (i.e. focus on inter-personal aspects of the relationship with this company) when answering the following questions.” For questions with regard to inter-organisational trust, it was stressed that “please think of this company as a
whole (i.e. focus on inter-organisational aspects of the relationship with this company) when answering the following questions.” For the item measuring dependence, it was posited “if for some reason, your relationship with this company ends, please indicate to what extent you agree or disagree with the following statements.”

1 (strongly disagree) . . . 4 (neither agree nor disagree) . . . 7 (strongly agree)

Table 5-2: The Items in the Questionnaires for the Pretest (Stage Two)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Code</th>
<th>Questionnaire</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>inter-personal trust</td>
<td>PTQ1</td>
<td>Buyer-side</td>
<td>1. Even when the people we deal with at this supplier give us a rather unlikely explanation, we are confident that they are telling the truth.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier-side</td>
<td>1. Even when the people we deal with at this customer give us a rather unlikely explanation, we are confident that they are telling the truth.</td>
</tr>
<tr>
<td></td>
<td>PTQ2</td>
<td>Buyer-side</td>
<td>2. Whenever the people we deal with at this supplier give us advice on our business operations, we know that they are sharing their best judgment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier-side</td>
<td>2. Whenever the people we deal with at this customer give us advice on our business operations, we know that they are sharing their best judgment.</td>
</tr>
<tr>
<td></td>
<td>PTQ3</td>
<td>Buyer-side</td>
<td>3. We can count on the people we deal with at this supplier to be sincere.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier-side</td>
<td>3. We can count on the people we deal with at this customer to be sincere.</td>
</tr>
<tr>
<td></td>
<td>PTQ4</td>
<td>Buyer-side</td>
<td>4. Though circumstances change, we believe the people we deal with at this supplier will be ready and willing to offer us assistance and support.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier-side</td>
<td>4. Though circumstances change, we believe the people we deal with at this customer will be ready and willing to offer us assistance and support.</td>
</tr>
<tr>
<td></td>
<td>PTQ5</td>
<td>Buyer-side</td>
<td>5. When making important decisions, the people we deal with at this supplier are concerned about our welfare.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier-side</td>
<td>5. When making important decisions, the people we deal with at this customer are concerned about our welfare.</td>
</tr>
<tr>
<td></td>
<td>PTQ6</td>
<td>Buyer-side</td>
<td>6. When we share our problems with the people we deal with at this supplier, we know that they will respond with understanding.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier-side</td>
<td>6. When we share our problems with the people we deal with at this customer, we know that they will respond with understanding.</td>
</tr>
<tr>
<td></td>
<td>PTQ7</td>
<td>Buyer-side</td>
<td>7. When it comes to things that are important to us, we can depend on the support of the people that we deal with at this supplier.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier-side</td>
<td>7. When it comes to things that are important to us, we can depend on the support of the people that we deal with at this customer.</td>
</tr>
<tr>
<td>inter-organisational trust</td>
<td>OTQ1</td>
<td>Buyer-side</td>
<td>1. Our company is confident that this supplier is competent at what it is doing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier-side</td>
<td>1. Our company is confident that this customer is competent at what it is doing.</td>
</tr>
<tr>
<td></td>
<td>OTQ2</td>
<td>Buyer-side</td>
<td>2. The performance of this supplier always meets our supplier’s expectations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier-side</td>
<td>2. The performance of this supplier always meets our customer’s expectations.</td>
</tr>
<tr>
<td></td>
<td>OTQ3</td>
<td>Buyer-side</td>
<td>3. Our company believes in this supplier’s ability to fulfill its promises.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier-side</td>
<td>3. Our company believes in this customer’s ability to fulfill its promises.</td>
</tr>
<tr>
<td></td>
<td>OTQ4</td>
<td>Buyer-side</td>
<td>4. Our company is confident with this supplier’s ability to fulfill our agreements.</td>
</tr>
<tr>
<td>Commitment</td>
<td>Supplier-side</td>
<td>Buyer-side</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>---------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>COQ1</td>
<td>4. Our company is confident with this customer’s ability to fulfill our agreements.</td>
<td>1. Our company defends this supplier when others criticise them.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Our company defends this customer when others criticise them.</td>
<td></td>
</tr>
<tr>
<td>COQ2</td>
<td>2. Our company has a strong sense of loyalty to this supplier.</td>
<td>2. Our company has a strong sense of loyalty to this customer.</td>
<td></td>
</tr>
<tr>
<td>COR3</td>
<td>3. Our company is continually on the lookout to add to or replace this supplier.</td>
<td>3. Our company is continually on the lookout to add to or replace this customer.</td>
<td></td>
</tr>
<tr>
<td>COR4</td>
<td>4. Our company is not very committed to this supplier.</td>
<td>4. Our company is not very committed to this customer.</td>
<td></td>
</tr>
<tr>
<td>COQ5</td>
<td>5. Our company is quite willing to make long-term investments to keep this supplier.</td>
<td>5. Our company is quite willing to make long-term investments to keep this customer.</td>
<td></td>
</tr>
<tr>
<td>COQ6</td>
<td>6. Our company's relationship with this supplier is a long-term alliance.</td>
<td>6. Our company's relationship with this customer is a long-term alliance.</td>
<td></td>
</tr>
<tr>
<td>COQ7</td>
<td>7. We are patient with this supplier when they make mistakes that cause us trouble.</td>
<td>7. We are patient with this customer when they make mistakes that cause us trouble.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunistic behaviour</th>
<th>Supplier-side</th>
<th>Buyer-side</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPQ1</td>
<td>1. On occasion, this supplier lies to our company about certain things in order to protect their interests.</td>
<td>1. On occasion, this customer lies to our company about certain things in order to protect their interests.</td>
</tr>
<tr>
<td>OPR2</td>
<td>2. This supplier has always provided our company with a completely truthful picture of their business.</td>
<td>2. This customer has always provided our company with a completely truthful picture of their business.</td>
</tr>
<tr>
<td>OPQ3</td>
<td>3. Sometimes this supplier alters the facts in order to get what they need.</td>
<td>3. Sometimes this customer alters the facts in order to get what they need.</td>
</tr>
<tr>
<td>OPR4</td>
<td>4. This supplier carries out its duties even if our company does not check up on them.</td>
<td>4. This customer carries out its duties even if our company does not check up on them.</td>
</tr>
<tr>
<td>OPQ5</td>
<td>5. This supplier has sometimes promised to do things without actually doing them later.</td>
<td>5. This customer has sometimes promised to do things without actually doing them later.</td>
</tr>
<tr>
<td>OPQ6</td>
<td>6. This supplier feels that it is ok to do anything within their means that will help further their own interests.</td>
<td>6. This customer feels that it is ok to do anything within their means that will help further their own interests.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information sharing</th>
<th>Supplier-side</th>
<th>Buyer-side</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISQ1</td>
<td>1. Our company provides this supplier with any information that might help them.</td>
<td>1. Our company provides this customer with any information that might help them.</td>
</tr>
<tr>
<td>ISQ2</td>
<td>2. Our company exchanges information with this supplier frequently and informally, and not only according to a pre-specified agreement.</td>
<td>2. Our company exchanges information with this customer frequently and informally, and not only according to a pre-specified agreement.</td>
</tr>
<tr>
<td>ISQ3</td>
<td>3. Our company provides this supplier with proprietary information if it can help them.</td>
<td>3. Our company provides this customer with proprietary information if it can help them.</td>
</tr>
<tr>
<td>ISQ4</td>
<td>4. Our company keeps this supplier informed about events or changes that may affect them.</td>
<td>4. Our company keeps this customer informed about events or changes that may affect them.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>ISR5</td>
<td>Buyer-side</td>
<td>5. Our company rarely talks with this supplier about our business strategy.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>5. Our company rarely talks with this customer about our business strategy.</td>
<td></td>
</tr>
<tr>
<td>ISQ6</td>
<td>Buyer-side</td>
<td>6. Our company openly shares confidential information with this supplier.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>6. Our company openly shares confidential information with this customer.</td>
<td></td>
</tr>
<tr>
<td>relationship-specific investments</td>
<td>RIQ1</td>
<td>Buyer-side</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>1. Our company has made significant investments in capabilities dedicated to our relationship with this customer (for example people, systems, processes and tools).</td>
<td></td>
</tr>
<tr>
<td>RIQ2</td>
<td>Buyer-side</td>
<td>2. This supplier has some unusual technological norms and standards, which have required adaptation on our company's part.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>2. This customer has some unusual technological norms and standards, which have required adaptation on our company's part.</td>
<td></td>
</tr>
<tr>
<td>RIQ3</td>
<td>Buyer-side</td>
<td>3. Training and qualifying this supplier has involved substantial commitments of our company's time and/or money.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>3. Training and qualifying this customer has involved substantial commitments of our company's time and/or money.</td>
<td></td>
</tr>
<tr>
<td>RIQ4</td>
<td>Buyer-side</td>
<td>4. Our company's processes have been tailored to use the particular items provided by this supplier.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>4. Our company's processes have been tailored to use the particular items provided by this customer.</td>
<td></td>
</tr>
<tr>
<td>RIQ5</td>
<td>Buyer-side</td>
<td>5. Our company's business system has been tailored to meet the requirements of dealing with this supplier.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>5. Our company's business system has been tailored to meet the requirements of dealing with this customer.</td>
<td></td>
</tr>
<tr>
<td>RIQ6</td>
<td>Buyer-side</td>
<td>6. Gearing up to deal with this supplier required highly specialised capabilities (for example people, systems, processes and tools).</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>6. Gearing up to deal with this customer required highly specialised capabilities (for example people, systems, processes and tools).</td>
<td></td>
</tr>
<tr>
<td>financial performance</td>
<td>FIQ1</td>
<td>Buyer-side</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>1. The relationship with this customer contributes to our company's achieving a higher sales growth.</td>
<td></td>
</tr>
<tr>
<td>FIQ2</td>
<td>Buyer-side</td>
<td>2. The relationship with this supplier contributes to our company's achieving a higher profit growth.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>2. The relationship with this customer contributes to our company's achieving a higher profit growth.</td>
<td></td>
</tr>
<tr>
<td>FIQ3</td>
<td>Buyer-side</td>
<td>3. The relationship with this supplier contributes to our company's achieving a higher overall profitability.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>3. The relationship with this customer contributes to our company's achieving a higher overall profitability.</td>
<td></td>
</tr>
<tr>
<td>non-economic (soft) performance</td>
<td>NEQ1</td>
<td>Buyer-side</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>1. Our company learns a lot from the relationship with this customer.</td>
<td></td>
</tr>
<tr>
<td>NEQ2</td>
<td>Buyer-side</td>
<td>2. By cooperating with this supplier our company considerably improves its competitiveness.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>2. By cooperating with this customer our company considerably improves its competitiveness.</td>
<td></td>
</tr>
<tr>
<td>NEQ3</td>
<td>Buyer-side</td>
<td>3. By cooperating with this supplier our company gains valuable contacts.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>3. By cooperating with this customer our company gains valuable contacts.</td>
<td></td>
</tr>
<tr>
<td>NEQ4</td>
<td>Buyer-side</td>
<td>4. The relationship with this supplier helps our company to be more innovative.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>4. The relationship with this customer helps our company to be more innovative.</td>
<td></td>
</tr>
<tr>
<td>NEQ5</td>
<td>Buyer-side</td>
<td>5. The relationship with this supplier helps our company to detect changes in end-user needs and preferences before our competitors do.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>5. The relationship with this customer helps our company to detect</td>
<td></td>
</tr>
</tbody>
</table>
changes in end-user needs and preferences before our competitors do.

<table>
<thead>
<tr>
<th>NEQ6</th>
<th>Buyer-side</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6. The relationship with this supplier has a positive effect on our company's ability to develop successful new offerings.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>6. The relationship with this customer has a positive effect on our company's ability to develop successful new offerings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DER1</th>
<th>Buyer-side</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Our company could easily compensate for it by appointing another supplier of similar offerings.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>1. Our company could easily compensate for it by appointing another customer for similar offerings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEQ2</th>
<th>Buyer-side</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Such a loss would significantly damage our company's reputation in this market.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>2. Such a loss would significantly damage our company's reputation in this market.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEQ3</th>
<th>Buyer-side</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3. Such a loss would negatively affect the service our customers have come to expect in this area.</td>
</tr>
<tr>
<td>Supplier-side</td>
<td>3. Such a loss would negatively affect the service our customers have come to expect in this area.</td>
</tr>
</tbody>
</table>

Forty-three students took part in this exercise. Among them, one provided twelve completed questionnaires, six students provided ten questionnaires each, thirty-two provided eight questionnaires each. In addition, two students provided six completed questionnaires each and two others provided four questionnaires each. In total, 348 completed questionnaires were received. Fourteen of these questionnaires were eliminated as they had missing data. Therefore, 334 questionnaires were used for testing the measurement model. In order to test reliability and uni-dimensionality of the scales, a combination of exploratory and confirmatory analyses was conducted (Anderson and Gerbing 1988; Hair et al. 2010).

The initial stage was based on an exploratory factor analysis on all the scales for the basic model’s constructs (i.e. inter-personal trust, inter-organisational trust, commitment, opportunistic behaviour, information sharing, relationship-specific investments, financial performance and non-economic (soft) performance). The scales for dependence were not included as this construct is incorporated into the model with the moderation effects and it will be included as a dummy variable. An exploratory factor analysis helps to explore the underlying structure among the factors in the analysis (Hair et al. 2010). Exploratory factor analysis was conducted using principal component analysis as the extraction method and
varimax as the rotation method. Additionally confirmatory factor analysis was conducted and the constructs’ reliability was examined, calculating Cronbach’s alpha (α), Construct (Composite) Reliability (CR) and Average Variance Extracted (AVE). Following a combination of EFA and CFA (Anderson and Gerbing 1988), some items were dropped due to cross-loading on other constructs or low loadings on their own constructs.

This analysis was performed to develop and test a measurement model using these data from the quantitative pretest. It is noteworthy that this set of analyses will be repeated later using data from the final survey. Those data will also be used to test the structural model and the remaining of the analyses. The measurement model was developed by use of six items for inter-personal trust, four items for inter-organisational trust, three items for commitment, two items for opportunistic behaviour, four items for information sharing, two items for relationship-specific investments, three items for financial performance and three items for non-economic (soft) performance (see Table 5-4 for a list of these remaining items). The EFA result is presented in Table 5-3 listing the rotated factor loadings (the number of factors specified as 8; extraction method: Principal Component Analysis; rotation method: Varimax with Kaiser Normalisation). This helped interpreting factors and showed to what degree each item (i.e. variable) is loaded on the component (i.e. factor) (Hair et al. 2010). The correlations below 0.4 were suppressed in the table. As seen in this table, the items for inter-personal trust and inter-organisational trust show a high cross-loading, all loading into one component.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<td>inter-personal trust</td>
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<td>PTQ7</td>
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<td>inter-organisational trust</td>
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<tr>
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<tr>
<td></td>
<td>OTQ3</td>
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<td></td>
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<tr>
<td>opportunistic behaviour</td>
<td>OPQ1</td>
<td></td>
<td>.73</td>
<td></td>
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<td></td>
<td>OPQ3</td>
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<td>.83</td>
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<tr>
<td>relationship-specific investments</td>
<td>RIQ4</td>
<td></td>
<td></td>
<td>.88</td>
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</tr>
<tr>
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<td>RIQ5</td>
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<tr>
<td>commitment</td>
<td>COQ2</td>
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<td>COR4</td>
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<tr>
<td></td>
<td>COQ5</td>
<td></td>
<td>.73</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>non-economic (soft) performance</td>
<td>NEQ3</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>NEQ4</td>
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<td></td>
<td>.57</td>
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</tr>
<tr>
<td></td>
<td>NEQ5</td>
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<td>.51</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>financial performance</td>
<td>FIQ1</td>
<td></td>
<td></td>
<td></td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>FIQ2</td>
<td></td>
<td></td>
<td></td>
<td>.90</td>
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</tr>
<tr>
<td></td>
<td>FIQ3</td>
<td></td>
<td></td>
<td></td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Extraction method: Principal Component Analysis, Rotation method: Varimax
The loadings above .4 are retained in the table.

Due to high cross-loading of inter-personal and inter-organisational trust items a CFA model with a latent variable, labelled trust, was considered as a second-order construct, which inter-personal trust and inter-organisational trust indicate it (reflectively). This measurement model was based on two layers of (latent) constructs (see Hair et al. 2010). When developing higher-order constructs, a researcher needs to make a decision with regard to adopting a reflective versus formative perspective (Diamantopoulos and Winklhofer 2001; Diamantopoulos and Siguaw 2006). This decision should be based on the conceptualisation of the construct. The construct can be treated as giving rise to its indicators; In this case a reflective perspective is adopted (see Fornell and Bookstein 1982a). Alternatively the
indicators can be viewed as defining characteristics of the construct, based on a formative perspective (Rossiter 2002).

Here trust is considered as a second-order construct that causes inter-personal and inter-organisational trust, which in turn cause the measurement items. Therefore trust is an overall attitude having inter-personal trust and inter-organisational trust as its indicators. This is in line with (1) conceptualising an attitude adopting a reflective perspective (Diamantopoulos and Siguaw 2006) and (2) considering the high correlation between the indicators shown in the factor analysis; this incorporates the reflective measure assumption, that all measurement items are caused by the same latent construct; therefore they are highly correlated with each other (Hair et al. 2010).

The measurement model was tested by Confirmatory Factor Analysis using AMOS to cross-validate the factor structure. The item-to-total correlation, Cronbach’s alpha, construct reliability and average variance extracted were examined (Anderson and Gerbing 1988; Nunnally and Bernstein 1994; Hair et al. 2010). These criteria are listed in Table 5-4. The questionnaire items (which remained in the final pretest analysis) are also listed in this table including their factor loadings (λ).

Cronbach’s alpha is a measure of reliability (coefficient), which allows testing the convergent validity of the scales. It is the “most widely used measure” for assessing the consistency of the entire scale (Hair et al. 2010, p. 125). The critical level of reliability measure is generally agreed as 0.7 (Fornell and Larcker 1981; Hair et al. 2010), also values as low as 0.6 might be accepted (in exploratory settings) (Hair et al. 2010). Most Cronbach’s alphas exceed the critical level of 0.7. This criterion for non-economic (soft) performance is slightly below the
upper level (0.687). The criterion with regard to opportunistic behaviour is also lower. However, this construct was measured by only two items. Therefore its internal consistency should be interpreted with caution (Hair et al. 2010).

Reliability measures derived from confirmatory factor analysis include construct (composite) reliability and average variance extracted. Composite reliability is another measure of convergent validity (It is computed from the squared sum of factor loadings for each construct and the sum of the error variance terms for a construct; its computation will be discussed in greater detail in the following chapter). The average variance extracted is calculated as the mean variance extracted for the items loading on a construct. It is a summary indicator of convergence (this computation of this measure will also be discussed in the next chapter). The critical levels for the average variance extracted and construct reliability are suggested as 0.5 and 0.7 respectively (Fornell and Larcker 1981; Hair et al. 2010).

The AVEs exceeds the critical level of 0.5, again except for non-economic (soft) performance (0.45) (regarding information sharing it is also slightly below the threshold (0.49)). Composite reliability is satisfactory (above 0.7) for all constructs except for opportunistic behaviour, which as mentioned before has only two indicators, therefore its internal consistency and reliability should be interpreted with caution.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Code</th>
<th>Item/Construct</th>
<th>( \lambda )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td></td>
<td>inter-personal trust</td>
<td>.97</td>
</tr>
<tr>
<td>AVE =0.85</td>
<td>NA</td>
<td>inter-personal trust</td>
<td></td>
</tr>
<tr>
<td>CR = 0.92</td>
<td></td>
<td>inter-organisational trust</td>
<td>.88</td>
</tr>
<tr>
<td>inter-personal trust</td>
<td>PTQ2</td>
<td>Whenever the people we deal with at this customer/supplier give us advice on our business operations, we know that they are sharing their best judgment.</td>
<td>.68</td>
</tr>
<tr>
<td>( \alpha = 0.871 )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVE = 0.53</td>
<td>PTQ3</td>
<td>We can count on the people we deal with at this customer/supplier to be</td>
<td>.81</td>
</tr>
<tr>
<td>CR = 0.87</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
inter-organisational trust

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTQ4</td>
<td>Though circumstances change, we believe the people we deal with at this customer/supplier will be ready and willing to offer us assistance and support.</td>
<td>0.73</td>
</tr>
<tr>
<td>PTQ5</td>
<td>When making important decisions, the people we deal with at this customer/supplier are concerned about our welfare.</td>
<td>0.64</td>
</tr>
<tr>
<td>PTQ6</td>
<td>When we share our problems with the people we deal with at this customer/supplier, we know that they will respond with understanding.</td>
<td>0.75</td>
</tr>
<tr>
<td>PTQ7</td>
<td>When it comes to things that are important to us, we can depend on the support of the people that we deal with at this customer/supplier.</td>
<td>0.77</td>
</tr>
</tbody>
</table>

commitment

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTQ1</td>
<td>Our company is confident that this customer/supplier is competent at what it is doing.</td>
<td>0.78</td>
</tr>
<tr>
<td>OTQ2</td>
<td>The performance of this supplier always meets our customer/supplier’s expectations.</td>
<td>0.78</td>
</tr>
<tr>
<td>OTQ3</td>
<td>Our company believes in this customer/supplier’s ability to fulfill its promises.</td>
<td>0.87</td>
</tr>
<tr>
<td>OTQ4</td>
<td>Our company is confident with this customer/supplier’s ability to fulfill our agreements.</td>
<td>0.80</td>
</tr>
</tbody>
</table>

opportunistic behaviour

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPQ1</td>
<td>On occasion, this customer/supplier lies to our company about certain things in order to protect their interests.</td>
<td>0.90</td>
</tr>
<tr>
<td>OPQ3</td>
<td>Sometimes this customer/supplier alters the facts in order to get what they need.</td>
<td>0.50</td>
</tr>
</tbody>
</table>

information sharing

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISQ1</td>
<td>Our company provides this customer/supplier with any information that might help them.</td>
<td>0.75</td>
</tr>
<tr>
<td>ISQ2</td>
<td>Our company exchanges information with this customer/supplier frequently and informally, and not only according to a pre-specified agreement.</td>
<td>0.74</td>
</tr>
<tr>
<td>ISQ3</td>
<td>Our company provides this customer/supplier with proprietary information if it can help them.</td>
<td>0.73</td>
</tr>
<tr>
<td>ISQ6</td>
<td>Our company openly shares confidential information with this customer/supplier.</td>
<td>0.58</td>
</tr>
</tbody>
</table>

relationship-specific investments

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIQ4</td>
<td>Our company's processes have been tailored to use the particular items provided by this customer/supplier.</td>
<td>0.78</td>
</tr>
<tr>
<td>RIQ5</td>
<td>Our company's business system has been tailored to meet the requirements of dealing with this customer/supplier.</td>
<td>0.96</td>
</tr>
</tbody>
</table>

financial performance

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIQ1</td>
<td>The relationship with this customer/supplier contributes to our company's achieving a higher sales growth.</td>
<td>0.80</td>
</tr>
<tr>
<td>FIQ2</td>
<td>The relationship with this customer/supplier contributes to our company's achieving a higher profit growth.</td>
<td>0.94</td>
</tr>
<tr>
<td>FIQ3</td>
<td>The relationship with this customer/supplier contributes to our company's achieving a higher overall profitability.</td>
<td>0.94</td>
</tr>
</tbody>
</table>

non-economic (soft) performance

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEQ3</td>
<td>By cooperating with this customer/supplier our company gains valuable contacts.</td>
<td>0.71</td>
</tr>
<tr>
<td>NEQ4</td>
<td>The relationship with this customer/supplier helps our company to be more innovative.</td>
<td>0.76</td>
</tr>
<tr>
<td>NEQ5</td>
<td>The relationship with this customer/supplier helps our company to detect changes in end-user needs and preferences before our competitors do.</td>
<td>0.52</td>
</tr>
</tbody>
</table>

λ: all significant at the 0.001 level (two-tailed)
α: Cronbach’s alpha; CR: Construct (Composite) Reliability; AVE: Average Variance Extracted

Another important characteristic used for examining the measures is discriminant validiy (Fornell and Larcker 1981). “Discriminant validity is the extent to which a construct is truly distinct from other constructs. Thus, high discriminant validity provides evidence that a
construct is unique and captures some phenomena other measures do not” (Hair et al. 2010, p. 710). The average variance extracted values for any two construct estimates are greater than the squared correlation estimate between these two constructs; see Table 5-5. Discriminant validity is therefore confirmed (Fornell and Larcker 1981; Hair et al. 2010).

Table 5-5: Pretest AVE and Squared Construct Correlation Matrix

<table>
<thead>
<tr>
<th>Construct</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trust</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Commitment</td>
<td>0.36</td>
<td>0.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Opportunistic Behaviour</td>
<td>0.27</td>
<td>0.13</td>
<td>0.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Information Sharing</td>
<td>0.23</td>
<td>0.30</td>
<td>0.03</td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Relationship-Specific Investments</td>
<td>0.00</td>
<td>0.13</td>
<td>0.02</td>
<td>0.04</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Financial Performance</td>
<td>0.13</td>
<td>0.18</td>
<td>0.01</td>
<td>0.10</td>
<td>0.05</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>7. Non-economic Performance</td>
<td>0.24</td>
<td>0.37</td>
<td>0.01</td>
<td>0.22</td>
<td>0.09</td>
<td>0.40</td>
<td>0.45</td>
</tr>
</tbody>
</table>

The measurement model was tested using confirmatory factor analysis. The model fit is indicated with $\chi^2 = 744.689$ (p-value = .000), df = 301, $\chi^2$/df = 2.474, Standardised RMR (SRMR) = .051, CFI = .906, RMSEA = .067. The overall model fit is acceptable. CFI above .90 is generally accepted in the literature (see Van Bruggen et al. 2005). The fit indices for N=334 and m=28; N=number of observations; m=number of observed variables can be acceptable with value levels, similar for N=250 and m=30, as: $\chi^2$ significant; CFI above .90; RMSEA<.07) (Hair et al. 2010).

The quantitative pretest with an overall acceptable characteristics encouraged proceeding with the final survey. High cross-loading across inter-personal and inter-organisational trust gives the idea of further investigating these two constructs and examining whether they represent an overall (second-order) construct. The questionnaire was also modified to encourage the respondents to distinguish between these two constructs. This was done by (1) more clearly instructing the respondents to focus on personal and organisational issues when
replying to the items regarding inter-personal trust and inter-organisational trust respectively and (2) separating these items to a greater extent in the questionnaire.
6 Chapter 6: Method, Sample and Data Collection

This chapter covers the research method, sample and data collection. In this chapter the unit of analysis and informants are introduced. The sample and the framing of the research questionnaire are discussed. Non-response bias and common method bias are discussed and tested.

6.1 The Unit of Analysis and Informants

The level issues with regard to theory development, data collection and data analysis in this study are discussed here. In the following paragraph the importance of clarifying level-related issues is discussed. In the remaining paragraphs the particularity of the unit of analysis, the informants and the level of constructs are introduced.

As Klein et al. (1994) emphasise, in business and management studies, the level of interest can be an individual, an element within a set or a member within a unit. Higher levels can include a group as an organisational entity such as a dyad, team, company or industry. A theory can have more than one level. It is also important to note the levels of constructs in the theory. An appropriate level of theory, level of measurement and level of analysis are required when designing and discussing management and organisational studies. The level of theory describes the target (e.g. individual, group, organisation, relationship or network) that the researcher aims to explain. It is the level at which generalisation is made. The level of measurement describes the actual source of the data. The level of statistical analysis describes the treatment of the data during statistical procedures (Rousseau 1985; Klein et al. 1994). For
instance either the dyadic business relationship or the network of business relationships can be the focus of the study (Dyer and Singh 1998).

In this study, the unit of analysis is the business relationship. This is in line with the purpose of the study that focuses on business relationships and understanding of the role of trust in those relationships. More specifically, the unit of analysis is the relationship between one company (the focal company) and another company (the target company), which is the supplier or service provider of the focal company. Many studies in business-to-business marketing and inter-organisational research opt to consider the business relationship as the unit of analysis (e.g. Morgan and Hunt 1994; Jap 1999; Palmatier et al. 2007a).

The respondents, the unit of measurement, are informants at middle or senior positions in their companies who are knowledgeable about the relationship that their companies have with their suppliers or service providers. This is in line with the method used in previous studies in the area in two aspects (i.e. supplier relationship as the focus of the study and middle or senior managers as informants): In many studies into business relationships, supplier relationships are considered (e.g. Barnes et al. 2007; Joshi 2009). In inter-organisational research (including the ones based on TCE) data has been collected from informants having a functional responsibility for some elements of channel operations (Rindfleisch and Heide 1997). These respondents include purchasing managers (e.g. Heide and John 1990; Noordewier et al. 1990), sales managers (e.g. Anderson 1985; 1988; John and Weitz 1988; 1989), or manufacturers’ agents (e.g. Heide and John 1988; Dutta et al. 1995).

It is noteworthy that all constructs, except inter-personal trust, are at the organisational level (particularly at the organisation-organisation level). Inter-personal trust is at the employee-
employee level. This has been detailed in the previous chapters, especially with regard to differentiating between inter-personal trust and inter-organisational trust. The remaining constructs are also considered similar to inter-organisational trust. All constructs (except for inter-personal trust) examine the organisational level perception of its relationship with another organisation, measured by a well-informed individual within that organisation.

6.2 The Sample

The research hypotheses are examined in the context of buyer-supplier relationships for UK-based companies with more than 10 employees. A cross-sectional research design covering all industries was used to test the conceptual model. A survey-based online questionnaire was designed. The survey was launched by a research company. The invitations to participate in the survey were sent to panel members with decision making authority at middle to senior level positions.

The research company uses respondent panels. Panels are managed lists of individuals who volunteer to participate in research studies. This study was launched using a B2B panel. B2B panels are managed based on criteria such as industry and job title. The research company implements some precautions in order to improve the validity of the responses. For instance, there is a risk of respondents signing up multiple times for the same panel using different email and mailing addresses. The research company reduces this risk by placing limits on the number of surveys that can be completed from a single IP address. This is a highly effective measure for static IP addresses. It is also a useful counter measure for DSL accounts that have dynamic IP addresses due to the fact that the user will have to log off the DSL line and reinitiate a connection before starting another survey.
A total of 855 panel members received the invitation. The organisational roles of the panel members were ensured by use of a screening procedure. The online questionnaire started with a screening question asking the respondents “are you knowledgeable about the business relationships that your company has with some (or at least one) of its suppliers or service providers?” The role of the individuals in the sample who received the invitation are categorised in Table 6-1. The categories include senior managers and officials, professional occupations, middle managers and professional analysts and consultants, associate professional occupations, contract managers and analysts, purchasing managers, IT managers and administrators, trade, logistics and production managers and directors, personal assistants and office managers, and sales and marketing managers and assistants. Almost 42% of these members are senior managers and officials, 20% are professional occupations, middle managers and professional analysts and consultants and 14% are purchasing managers and IT managers and administrators.

Table 6-1: The Sample Members' Roles at their Companies

<table>
<thead>
<tr>
<th>Role</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Senior Managers and Officials</td>
<td>358</td>
<td>42</td>
</tr>
<tr>
<td>2. Professional Occupations, Middle Managers and Professional Analysts and Consultants</td>
<td>172</td>
<td>20</td>
</tr>
<tr>
<td>3. Associate Professional Occupations, Contract Managers and Analysts</td>
<td>81</td>
<td>9</td>
</tr>
<tr>
<td>4. Purchasing Managers, IT Managers and Administrators</td>
<td>119</td>
<td>14</td>
</tr>
<tr>
<td>5. Trade, Logistics and Production Managers and Directors</td>
<td>36</td>
<td>4</td>
</tr>
<tr>
<td>6. Personal Assistants and Office Managers</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td>7. Sales and Marketing Managers and Assistants</td>
<td>57</td>
<td>7</td>
</tr>
<tr>
<td>8. Others</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>855</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The sample covers a range of industries. The informants who received the questionnaire work within companies operating in various industries including aerospace and defense, computer hardware, computer software and services, diversified services, drugs and pharmaceuticals, financial services, food, beverage tobacco and agriculture, health products, medical and
healthcare services, insurance, leisure, manufacturing and construction, media, real estate, retail, specialty retail, telecommunications, transportation and utilities. The sub-section of these categories and the number of sample members in each of them is listed in Table 6-2.

Table 6-2: The Sample Industries

<table>
<thead>
<tr>
<th>Industry</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aerospace and Defense: Products Maintenance and Services</td>
<td>15</td>
</tr>
<tr>
<td>2. Computer Hardware: PC Data Storage, Networking and Peripherals</td>
<td>19</td>
</tr>
<tr>
<td>3. Computer Software and Services: Entertainment Database, Networking and Data Processing</td>
<td>73</td>
</tr>
<tr>
<td>5. Drugs and Pharmaceuticals: Manufacturing, Discovery Vitamins and Diagnostics</td>
<td>13</td>
</tr>
<tr>
<td>6. Financial Services: Accounting, Asset Management, Banking, Investment Firms, Mortgage Banking and Services</td>
<td>52</td>
</tr>
<tr>
<td>7. Food, Beverage, Tobacco and Agriculture</td>
<td>13</td>
</tr>
<tr>
<td>8. Health Products, Medical and Healthcare Services: Medical Instruments, Home Care Practices and Distribution</td>
<td>96</td>
</tr>
<tr>
<td>9. Insurance: Life, Accident and Reinsurance</td>
<td>16</td>
</tr>
<tr>
<td>10. Leisure: Travel, Lodging, Gaming, Sports Teams and Restaurants</td>
<td>54</td>
</tr>
<tr>
<td>11. Manufacturing and Construction</td>
<td>24</td>
</tr>
<tr>
<td>13. Real Estate</td>
<td>26</td>
</tr>
<tr>
<td>14. Retail</td>
<td>94</td>
</tr>
<tr>
<td>15. Specialty Retail</td>
<td>18</td>
</tr>
<tr>
<td>16. Telecommunications</td>
<td>22</td>
</tr>
<tr>
<td>17. Transportation: Airlines, Trucking, Shipping, Rail, Bus and Taxi</td>
<td>53</td>
</tr>
<tr>
<td>18. Utilities</td>
<td>20</td>
</tr>
<tr>
<td>19. Others</td>
<td>62</td>
</tr>
<tr>
<td><strong>Total:</strong> 855</td>
<td></td>
</tr>
</tbody>
</table>

The industries which were represented by less than 10 respondents were all grouped into the ‘others’. That includes chemicals, consumer products (durables: appliances, toys, jewellery and photography, non-durables: personal care and office supplies), electronics and miscellaneous technology (semiconductor scientific and technical instruments), energy (oil and gas), market research and advertising, and metals and mining.

In total, 495 questionnaires were collected of which 90 were completed within less than six minutes (minimum reliability cut-off), and were excluded, leaving 405 cases. This cut-off point was chosen followed by observing and monitoring the time spent by the respondents completing the questionnaire. The responses from eight respondents were considered in order
to choose the appropriate cut-off point. The respondents included three colleagues (who were not involved in the pretest) in addition to five participants in the pretest procedure who first completed the questionnaire and then gave feedback with regard to the questions. The observed duration varied in a range of 5 to 10 minutes. The cut-off point of six minutes was chosen to guarantee a minimum of five minutes in addition to one minute of tolerance.

To further control the quality of the data, the Standard Deviation (STD) for each case (i.e. respondent) was calculated. This measure is taken due to consideration of the low reliability of the questionnaires that are filled with too many repetitive (or close) scores. The cases that have close scores in a suspiciously repetitive pattern can be identified by their low STD. The cases with STD less or equal to 0.75 were examined individually (50 cases) and 49 of them eliminated to ensure the data reliability. The threshold of 0.75 was chosen after observation of the responses eliminated due to their short completion time. Half of those cases (45 out of 90) were identified with a STD lower than 0.75, and therefore this threshold was chosen to identify careless responses. In total 10 more cases were identified as having too many repetitive scores, and were eliminated too, leaving 346 cases. These 10 additional cases identify the responses that satisfy the minimum STD criterion but represent observable excessively repetitive patterns. This happens in cases in which for instance the first half of the questions are scored 1 and the second half scored 7. In such cases, in spite of a high STD, the pattern shows a careless reply.

Following on from this, outliers were identified. Based on three independent–dependent outlier search methods (Hair et al. 2010), three relationships were examined: Those between inter-organisational trust and commitment, between information sharing and non-economic performance and between relationship-specific-investment and financial performance. This
was done by using both box plots and scatter plots. These graphs are illustrated in Figure 6-1. In all, 15 cases were identified as extremes and outliers. Eight of them were extracted from the ‘inter-organisational trust-commitment’ relationship, four cases from the ‘information sharing-non-economic performance’ relationship and three from the ‘relationship-specific-investment-financial performance’ relationship.

Scatter plots and box plots help to determine potential relationships among the constructs (variables) by plotting multivariate data. The box plot also identifies outliers (see cases identified with a small circle in Figure 6-1) and extremes (see cases (i.e. responses) identified with a small star in Figure 6-1). Using these plots, outliers were extracted. Two criteria were considered for choosing the outliers. They are (1) identification of cases by box plots as outliers (i.e. values between 1.5 IQR (Interquartile Range) and 3 IQR from the end of the box) and extremes (i.e. values more than 3 IQR from the end of the box) and (2) observation of their position in the scatter plot in relation to the fit line.

With regard to the relationship between inter-organisational trust and commitment, eight cases are considered as outliers. These include three extremes identified by the box plot (i.e. cases # 50, 81 and 243) and five outliers identified by this plot (i.e. cases # 101, 120, 131, 157 and 320). With regard to the relationship between information sharing and non-economic performance four cases (i.e. cases # 127, 141, 146 and 307) are considered as outliers; all have been introduced as outliers by the box plot as well. Three cases are identified as outliers, considering the relationship between relationship-specific investments and financial performance; two of them are introduced as extremes (i.e. cases # 23 and 247) and one as an outlier (i.e. case # 263) by the box plot as well.
The empirical analysis was based on the 331 remaining cases. This results in a 39% response rate for the study. Generally for structural equation modeling techniques, 100-150 respondents appear to be the minimum acceptable size (Anderson and Gerbing 1988; Lei and Lomax 2005; Hult et al. 2007b; Pervan et al. 2009). In this study, as the model development includes moderation effects and multiple-group analysis (using two groups) will be used to test the model, this larger sample size would be appropriate. A response rate of 12% to 25% is common in business-to-business marketing studies (Van Bruggen et al. 2005; Ulaga and Eggert 2006; Poppo et al. 2008; Wang et al. 2008). In this study, due to the data collection method (i.e. panel-based) a higher response rate has been achieved.
<table>
<thead>
<tr>
<th>R.</th>
<th>Inter-Organisational Trust-Commitment</th>
<th>O.L.: 50, 81, 101, 120, 131, 157, 243, 320</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Information Sharing-Non-Economic Performance</td>
<td>Scatter plot</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scatter plot</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O.L.: 127, 141, 146, 307</td>
</tr>
<tr>
<td></td>
<td>Relationship-Specific Investments-Financial Performance</td>
<td>Scatter plot</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scatter plot</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O.L.: 23, 247, 263</td>
</tr>
</tbody>
</table>

R.: Relationship, O.L.: Outliers

*Figure 6-1: The Plots for Identifying Outliers*
6.3 Framing of the Questionnaire

The unit of analysis in this study is the business relationship, and the respondents were asked to think about one specific important relationship with one of their suppliers (or service providers) and fill in the questionnaire with regard to that specific relationship. This is in line with recent studies of inter-organisational relationships in leading journals in which the data is collected from the companies asking about their relationships with their suppliers (e.g. Frazier et al. 2009).

The questionnaire familiarised the respondents by noting that “you are invited to participate in an academic research project being undertaken by Manchester Business School, one of Europe’s premier business schools. This non-commercial project is focused on developing our understanding of the relationships that exist between companies. You will be contributing to an international research project by filling out this questionnaire. This research examines the factors that are important for building and developing business relationships between companies. We would very much value your views regarding this issue, and we therefore invite you to participate in this survey. The completion of this survey will take about 12 minutes”. Also in the beginning of the questionnaire it was clarified that “for the specific purpose of this survey we are looking for respondents who are familiar with the relationships between their company and its suppliers or service providers”.

The respondents were asked to answer all the questions about one of their important suppliers or service providers; “it should be a supplier or service provider that you are directly involved with. Before answering the following questions, think about those relationships that your company has with its different suppliers (or service providers). You may select any supplier (or service provider) but ideally think about the suppliers with whom you have had a
relationship for three or more years. Within this group ideally please select one of the most important suppliers (or service providers) in terms of annual purchasing value. We would like you to answer all the following questions with this one major supplier (or service provider) in mind.”

It was also mentioned that the research project was being conducted by the Manchester Business School. The respondents were informed that the study is for research purposes only, and all the questions are completely anonymous. All the information that they provide is absolutely confidential and will not be disclosed to anyone.

6.4 Test of Non-Response Bias Using T-Test

In this study, procedural remedies were implemented in order to maximise the number of respondents and the response rate. (1) Several procedures were carried out to avoid ambiguity and to make sure that the questions were clear and relevant. These procedures were discussed in the previous chapters. (2) The length of the questionnaire was kept as short as possible by focusing on the major constructs under study and selecting representable, but not extensive, items for measuring the constructs. These were discussed in detail in previous chapters. (3) Sending the questionnaires was outsourced to a research company. This allowed the use of a business-to-business panel sample that consists of well-informed respondents (knowledgeable with regard to the questionnaire items) who would be rewarded for completing the questionnaire, for instance the panel members may receive “Market Points” as an incentive for participation, which are redeemable for cash. This encouraged the sample members to participate in the study, thereby increasing the number of respondents and the response rate (39%). (4) The respondents were also informed that this was an academic study conducted by
a large and reputable university in the UK to encourage participation. However, in spite of these efforts there are some non-respondents in the sample.

Non-response bias can be an inhibitor in survey-based studies. “If persons who respond differ substantially from those who do not, the results do not directly allow one to say how the entire sample would have responded” (Armstrong and Overton 1977, p. 396). A non-response test examines whether the sample can be generalised to the population. Using the test of differences to examine the non-response bias is a method used very often in marketing studies (e.g. Hult et al. 2007b; Palmatier et al. 2007b; Fang et al. 2008; Palmatier 2008).

The t-test can be used here as it tests the potential differences in the means of two groups, which might be the early and late respondent groups or the respondent and non-respondent groups (Armstrong and Overton 1977). The t-test assesses the statistical significance of the difference between two sample means for a dependent variable. It is a special case of ANOVA for two groups with the purpose of analysing group differences (Hair et al. 2010).

The two-sample t-test permits a test of the null hypothesis:

\[ H_0: \mu_1 = \mu_2 \]

for the means \( \mu_1 \) and \( \mu_2 \) of two distinct populations (Mendenhall et al. 1986; Daly et al. 1995; Aaker et al. 2007).

In this study, non-response bias was tested using a known value, the number of employees of the company, which has been used in previous studies (e.g. Palmatier 2008). The test compared this factor of the respondents against non-respondents among the sample members. This factor was provided for all panel members who were invited to participate in the survey by the research company. The comparison, using the t-test, resulted in no significant
differences (p > 0.05). In addition to this, the number of employees at the companies and the companies’ turnover was used for comparing two groups among the collected questionnaires, the group that consists of the responses that are used in the final analysis (model testing) and the one consisting of the responses that are excluded (i.e. outliers and the ones whose reliability was not accepted). The rationale for this test is that the responses in the second group are similar to the non-responses. This is in line with the early-versus-late responses comparison (Hult et al. 2007b; Palmatier et al. 2007b; Palmatier 2008). The test again resulted in no significant differences (p > 0.05). Therefore, no significant differences between respondents and non-respondents are found, and non-response bias does not appear to be a concern in the analysis and interpretation of the data.

6.5 Common Method Bias

“Cross-sectional studies of attitude-behaviour relationships are vulnerable to the inflation of correlations by common method variance” (Lindell and Whitney 2001, p. 114). In cross-sectional (rather than longitudinal) studies the respondents’ reports of their behaviour and attitude both in the present and past are collected at the same time as a snapshot. So it is possible that the common variance has inflated the observed correlations between variables (Lindell and Whitney 2001). Such bias is more severe when same respondent is asked “to report a specific fact or finite event. We are asking persons to go well beyond that and to engage in a higher-order cognitive process, a process that involves not only recall but weighting, inference, prediction, interpretation, and evaluation” (Podsakoff and Organ 1986, p. 533). Common method bias is a problem because it is one of the main sources of measurement error that endangers the conclusions about the relationships between independent and dependent constructs; it can provide an alternative explanation for the
observed relationships between measures of these constructs that is different from the one hypothesised (Podsakoff et al. 2003).

6.5.1 Procedural Remedies

Procedural remedies can help to reduce common method bias. This study uses some techniques introduced in the extant literature to control this potential problem; the suggested techniques in the literature are:

- Psychological separation of measurement (Podsakoff et al. 2003; Podsakoff et al. 2012): this should reduce biases “in the retrieval stage of the response process by eliminating the saliency of any contextually provided retrieval cues” (Podsakoff et al. 2003, p. 888).

- Protecting respondents’ anonymity and reducing evaluation apprehension: This includes allowing the respondents’ answers to be anonymous and assuring respondents that there are no right or wrong answers and that they should answer questions as honestly as possible. These should reduce the respondents’ evaluation apprehension and make them less likely to edit their responses to be more socially desirable and consistent with how they think the researcher wants them to respond (Podsakoff et al. 2003; Wang et al. 2008; Podsakoff et al. 2012).

- Improving scale items (Podsakoff et al. 2003; Wang et al. 2008; Podsakoff et al. 2012): Most common problem in the comprehension stage of the response process is items’ ambiguity (Tourangeau et al. 2000), therefore it is suggested to attempt to minimise the items’ ambiguity and improve them with the purpose of reducing common method bias (Podsakoff et al. 2003; Wang et al. 2008; Podsakoff et al.
2012). This can be done by defining ambiguous or unfamiliar terms; avoiding vague concepts and providing examples when such concepts must be used; keeping questions simple, specific, and concise; and avoiding complicated syntax (Tourangeau et al. 2000); identifying items that need to be eliminated or reworded (Nederhof 1985); and also providing verbal labels for the midpoints of scales (Tourangeau et al. 2000).

Several techniques, introduced in the literature discussed above, were undertaken to reduce common method bias. (1) Psychological separation was sought by adding a brief comment particularly with regard to the measurement of inter-personal trust and inter-organisational trust. Regarding inter-organisational trust, before the measurement items the respondents were asked to think of the supplier company as a whole, also of their company as a whole (i.e. focus on inter-organisational aspects of the relationship of their company with the supplier). Regarding inter-personal trust, they were asked to think of the people that they deal with at the supplier and their personal and individual relationship with them (i.e. focus on inter-personal aspects of the relationship with the people they deal with at this supplier).

Additionally with the purpose of protecting respondent anonymity and reducing evaluation apprehension (2), confidentiality was assured by emphasising that this study is for research purposes only, and all the questions are completely anonymous. This was achieved by assuring respondents that all the information that they provide is absolutely confidential and will not be disclosed to anyone, and also by avoiding asking questions that might pose sensitivity. In order to improve scale items (3), in the design of the questionnaire, a pretest stage was carried out to make sure that the items are clear and avoid any potential ambiguity. This stage was conducted to eliminate unfamiliar terms and vague concepts, to keep
questions simple and concise and to avoid complicated grammar. Finally some questions with a different format (i.e. open-ended and categorical questions) were inserted between two sections of Likert scales questions. This procedure is in line with Podsakoff et al.’s (2003) suggestion of using questions with different response formats. Although in this study this alternation is not between the attitudes and behaviours (independent and dependent variables), it provides the respondents with some breaks to alternate and refresh, and also attempts to make the questionnaire less tedious.

6.5.2 Statistical Remedies

It is possible to use procedural remedies to minimise the potential effect of common method variance. However, it is not always easy to find a procedural remedy that meets all of the requirements of a study and totally eliminates the effects of the common method variance. In these cases it may be useful to use the statistical remedies available (Podsakoff et al. 2003). Statistical procedures can be used in an attempt to examine the covariance due to artifactual reasons. “Common variance is defined as that variance in a variable that is shared with all other variables in the analysis. The variance is accounted for (shared) based on a variable’s correlations with all other variables in the analysis” (Hair et al. 2010, p. 105).

Harman’s one-factor (or single-factor) test (Harman 1967) is one of the most widely used techniques discussed (Podsakoff and Organ 1986; Lindell and Whitney 2001; Podsakoff et al. 2003) and implemented (e. g. Hult et al. 2007b; Wang et al. 2008) to address the issue of common method variance. In this test, all of the items in a study are subject to exploratory factor analysis. This test checks whether only one factor emerges from the factor solutions and also whether the first factor accounts for the majority of the variance. It assumes that if
common method bias creates a serious concern to the analysis and interpretation of the data, a single latent factor would account for a large majority of the manifest variables (Podsakoff and Organ 1986; Malhotra et al. 2006).

In this study, all the items (consisting of items measuring inter-personal trust (N = 7), inter-organisational trust (N = 4), commitment (N = 7), opportunistic behaviour (N = 6), information sharing (N = 6), relationship-specific investments (N = 6), financial performance (N = 3), non-economic (soft) performance (N = 6) and dependence (N = 3); in total N = 48) were subjected to factor analysis using SPSS 16.0. More than one factor emerged based on the principal axis factoring method; thereby indicating that common method variance does not exist (Malhotra et al. 2006). The analysis was run using the 331 cases that were used in the final analysis. Additionally the first extracted factor based on the principal axis factoring method and no rotation (an unrotated factor solution) (Podsakoff and Organ 1986) was examined. This factor explains 26.48% of the variance. This is not the majority so most probably common method variance does not create a serious concern to the analysis (Podsakoff and Organ 1986).

In studies in the psychology–sociology, marketing, business, and education literatures on average about one quarter (26.3%) of the variance in a research measure might be due to systematic sources of measurement error such as common method bias (Cote and Buckley 1987). Such common variance is evident in previous studies in inter-organisational relationships as well (e.g. 25.20%) (Poppo et al. 2008)). Method variance has been relatively lower in the field of marketing (about 15.8%), however in average performance-related measures contain 22.5% and those of attitudinal characteristics contain 40.7% method variance. Such measures are used in this study as well, which can explain the resulting higher
method variance. However, some other techniques are further used to investigate this concern:

As an alternative to exploratory factor analysis, confirmatory factor analysis can be used when implementing Harman’s one-factor (or single-factor) test. In the confirmatory factor analysis approach, a model is analysed in which all items are loaded on a single factor (a common latent variable). Common variance bias is assumed to be substantial if the hypothesised model shows a good fit (i.e. a single factor fits the data) (Mossholder et al. 1998; Malhotra et al. 2006) suggesting that a single latent factor would account for all manifest variables (Podsakoff and Organ 1986).

In this study, the confirmatory factor analysis approach to Harman’s one-factor test was also used. For this purpose, AMOS confirmatory factor analysis model was run. A latent factor was added and connected to all items in the model. If this model does not fit well it would suggest that common method variance does not pose a serious threat (see Hult et al. 2007b); as a single latent factor does not account for all manifest variables (Podsakoff and Organ 1986). The model was analysed using the same 331 cases. The estimation procedure selected was Maximum Likelihood (ML). This is the most commonly used estimation procedure for CFA (see Netemeyer et al. 2003; Hult et al. 2007a; Pervan et al. 2009). The goodness of the fit of the model with the common factor ($\chi^2_{(df=1080)} = 6692.346$) is compared to the fit of the CFA model with all the latent variables (i.e. inter-personal trust, inter-organisational trust, commitment, opportunistic behaviour, information sharing, relationship-specific investments, financial performance, non-economic (soft) performance and dependence) ($\chi^2_{(df=1044)} = 2592.756$). This shows that the fit of the model with the common factor is significantly worse
$\Delta\chi^2_{(\Delta df = 36)} = 4099.59$). This suggests that common method variance is not a serious concern.

This procedure was replicated for the sample of 331 cases with only the items that are later used for the final CFA model. The procedure of eliminating some items and proceeding with the remaining 32 items is elaborated in detail in the next chapter. These items consist of 6 items for inter-personal trust, 4 items for inter-organisational trust, 3 items for commitment, 4 items for opportunistic behaviour, 3 items for information sharing, 4 items for relationship-specific investments, 3 items for financial performance, and 5 items for non-economic (soft) performance. They were subjected to factor analysis. Again more than one factor emerged. The first extracted factor based explains 33.70% of the variance. Although it is higher, it still is not the majority so it suggests that common method variance does not create a serious concern (Podsakoff and Organ 1986; Malhotra et al. 2006).

Additionally Harman’s one-factor test using CFA approach was examined. The goodness of the fit of the model with the common factor ($\chi^2_{(df = 464)} = 4453.958$) is compared to the fit of the CFA model with the latent variables ($\chi^2_{(df = 436)} = 870.573$). The fit of the model with the common factor is extremely worse ($\Delta\chi^2_{(\Delta df = 28)} = 3583.385$) and the criteria of the model with the common factor show an extremely poor fit ($\chi^2 = 4453.958$ (p-value = .000), df = 464, $\chi^2/df = 9.599$, SRMR = 0.151, CFI = .475, RMSEA = 0.161; all SRMR, CFI and RMSEA fail to satisfy the thresholds indicating a good fit, see Hair et al. (2010, p. 672)). Overall the analysis based on Harman’s one-factor test using both EFA and CFA approaches suggests that common method bias is not significant.
To further investigate the common method bias, an additional test is carried out. Some other techniques have been introduced based on comparison of (the fit of) nested models. These include CFA marker approach and Unmeasured Latent Method Construct (ULMC) (or unmeasured latent method factor) (Podsakoff et al. 2003; Richardson et al. 2009; Podsakoff et al. 2012). In this study ULMC is implemented, as it specifies an unmeasured latent factor using the existing items for measuring the model’s constructs, versus the CFA marker approach, which needs a theoretically irrelevant marker variable (Richardson et al. 2009).

The unmeasured latent method factor is believed to be the Common Method Variance (CMV) only. “CMV is modeled by specifying factor loadings from the ULMC (which has no unique indicators of its own) to all of the substantive items suspected of CMV contamination” (Richardson et al. 2009, p. 8). This technique statistically tests the common method bias based on “controlling for the effects of a single unmeasured latent method factor” (Podsakoff et al. 2003, p. 894). This method involved adding a latent variable (common factor) with all of the measurement items as its indicators (see Podsakoff et al. 1990; MacKenzie et al. 1991; 1993; Carlson and Kacmar 2000) to the CFA model “adapting the test from the CFA marker approach” (see Richardson et al. 2009, p. 8). For identification purposes some of the measurement factor loadings were constrained to be equal (see MacKenzie et al. 1993). It was necessary to constrain the loadings within constructs, additionally the loadings across inter-personal trust, inter-organisational trust and commitment, across relationship-specific investments, information sharing, financial performance and non-economic performance to be equal. The significance of the parameters is then examined both with and without this common factor in the model (Podsakoff et al. 2003). So this adds a common factor to the CFA model with the final 32 items, with all 32 measurement items as the indicators of the common factor. This first-order common factor captures any additional systematic variance
common to the measurement items (see Podsakoff et al. 1990), for instance “common-rater bias, social desirability, “yea-saying,” and so forth” (p. 132).

The significance of the parameters and the model fits was examined both with and without this common factor in the CFA model. All parameters are significant (p=.05). The fit of the CFA model with common factor ($\chi^2 = 866.702$ (p-value = .000), df = 433, $\chi^2$/df = 2.002, SRMR = .0519, CFI = .943, RMSEA = .055) is compared to that of the CFA model without the common factor ($\chi^2 = 870.573$ (p-value = .000), df = 436, $\chi^2$/df = 1.997, SRMR = 0.053, CFI = 0.943, RMSEA = 0.055). It shows that after controlling the effect of the common factor, the model’s fit is improved. However, this improvement ($\Delta\chi^2 (\Delta\text{df} = 3) = 3.871$) is not significant (lower than 7.829 (critical value for 3 degrees of freedom (p-value = .05)) (Hair et al. 2010)). This again suggests that the common method variance does not influence the measurement structure significantly (i.e. method effects are insignificant) (see Elangovan and Xie 1999; Carlson and Kacmar 2000).

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9 The critical value derived from the Chi-square table
7 Chapter 7: Constructs Measures’ Validity and Reliability

This chapter discusses the measures’ validity and reliability. Factor analysis is used to explore the structure of the measurement items. Confirmatory factor analysis as a part of structural equation modeling is conducted and measuresment criteria are computed. These criteria consist of Cronbach’s alpha, composite reliability and the average variance extracted. Reliability and discriminant validity are tested using these criteria. The overall measurement model is tested using CFA. This chapter represents the first stage for structural equation modeling. The analysis discussed in this chapter allows progression to analysing the structural model in the next chapter, which informs the final chapter of this dissertation. This chapter is influenced by the research method and philosophy (discussed in chapter 6) as well as the measurement and pre-tests (discussed in chapter 5).

As mentioned before the questionnaire was designed with the purpose of measuring the model constructs. The items used in the questionnaire were based on available scales used in the literature. The items used for measuring the constructs are summarised in Table 7-1 in addition to their sources (this was explained in greater detail in chapter 5). The table also includes the constructs’ definitions. It is noteworthy that this procedure was repeated using data from the final survey. In chapter five it was performed using data from the pretest. In the questionnaire forty-five items were included for measuring the eight constructs, seven items for inter-personal trust (Kumar et al. 1995), four items for inter-organisational trust (Jiang et al. 2011), seven items for commitment (Anderson and Weitz 1992), six items for opportunistic behaviour (John 1984), six items for information sharing (Heide and John 1992; Cannon and Homburg 2001), six items for relationship-specific investments (Heide and John 1992), three items for financial performance (Palmatier et al. 2007a) and six items for non-
economic performance (Selnes and Sallis 2003; Beugelsdijk et al. 2009). The following sections of this chapter test the validity and reliability of these items.
Table 7-1: Constructs' Measures

<table>
<thead>
<tr>
<th>Construct</th>
<th>Code</th>
<th>Item</th>
<th>Source</th>
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<tbody>
<tr>
<td><strong>inter-personal trust</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>def:</strong> the extent to which the</td>
<td>PTQ1</td>
<td>1. Even when the people we deal with at this supplier give us a rather unlikely explanation, we are confident that they are telling the truth.</td>
<td>Kumar et al. (1995)</td>
</tr>
<tr>
<td>employee/employees of one company</td>
<td>PTQ2</td>
<td>2. Whenever the people we deal with at this supplier give us advice on our business operations, we know that they are sharing their best judgment.</td>
<td>Kumar et al. (1995)</td>
</tr>
<tr>
<td>perceives/perceive the employee/</td>
<td>PTQ3</td>
<td>3. We can count on the people we deal with at this supplier to be sincere.</td>
<td>Kumar et al. (1995)</td>
</tr>
<tr>
<td>employees of the other company</td>
<td>PTQ4</td>
<td>4. Though circumstances change, we believe the people we deal with at this supplier will be ready and willing to offer us assistance and support.</td>
<td>Kumar et al. (1995)</td>
</tr>
<tr>
<td>to be honest and benevolent</td>
<td>PTQ5</td>
<td>5. When making important decisions, the people we deal with at this supplier are concerned about our welfare.</td>
<td>Kumar et al. (1995)</td>
</tr>
<tr>
<td></td>
<td>PTQ6</td>
<td>6. When we share our problems with the people we deal with at this supplier, we know that they will respond with understanding.</td>
<td>Kumar et al. (1995)</td>
</tr>
<tr>
<td></td>
<td>PTQ7</td>
<td>7. When it comes to things that are important to us, we can depend on the support of the people that we deal with at this supplier.</td>
<td>Kumar et al. (1995)</td>
</tr>
<tr>
<td><strong>inter-organisational trust</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>def:</strong> the extent to which one company holds positive expectations that it can rely rationally on the other company, to do what has been expected to fulfill the focal company’s specific needs given its proven capability (Blois 1999; Mouzas et al. 2007; Jiang et al. 2011)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>OTQ1</td>
<td>1. Our company is confident that this supplier is competent at what it is doing.</td>
<td>Jiang et al. (2011)</td>
</tr>
<tr>
<td></td>
<td>OTQ2</td>
<td>2. The performance of this supplier always meets our company's expectations.</td>
<td>Jiang et al. (2011)</td>
</tr>
<tr>
<td></td>
<td>OTQ3</td>
<td>3. Our company believes in this supplier's ability to fulfill its promises.</td>
<td>Jiang et al. (2011)</td>
</tr>
<tr>
<td></td>
<td>OTQ4</td>
<td>4. Our company is confident with this supplier's ability to fulfill our agreements.</td>
<td>Jiang et al. (2011)</td>
</tr>
<tr>
<td><strong>Commitment</strong></td>
<td></td>
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<tr>
<td><strong>def:</strong> the extent to which one company has the desire to develop a stable relationship, has the willingness to make short-term sacrifices to maintain the relationship, and has the confidence in the stability of the relationship with the other company (Anderson and Weitz 1992; Jap and Ganesan 2000)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>COQ1</td>
<td>1. Our company defends this supplier when others criticise them.</td>
<td>Anderson and Weitz (1992)</td>
</tr>
<tr>
<td></td>
<td>COQ2</td>
<td>2. Our company has a strong sense of loyalty to this supplier.</td>
<td>Anderson and Weitz (1992)</td>
</tr>
<tr>
<td></td>
<td>COR3</td>
<td>3. Our company is continually on the lookout to add to or replace this supplier. (R)</td>
<td>Anderson and Weitz (1992)</td>
</tr>
<tr>
<td></td>
<td>COR4</td>
<td>4. Our company is not very committed to this supplier. (R)</td>
<td>Anderson and Weitz (1992)</td>
</tr>
<tr>
<td></td>
<td>COQ5</td>
<td>5. Our company is quite willing to make long-term investments to keep this supplier.</td>
<td>Anderson and Weitz (1992)</td>
</tr>
<tr>
<td></td>
<td>COQ6</td>
<td>6. Our company's relationship with this supplier is a long-term alliance.</td>
<td>Anderson and Weitz (1992)</td>
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<td></td>
<td>COQ7</td>
<td>7. Our company is patient with this supplier when they make mistakes that cause us trouble.</td>
<td>Anderson and Weitz (1992)</td>
</tr>
<tr>
<td><strong>opportunistic behaviour</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>def:</strong> the extent to which one company perceives that the other company's</td>
<td>OPQ1</td>
<td>1. On occasion, this supplier lies to our company about certain things in order to protect their interests.</td>
<td>John (1984)</td>
</tr>
<tr>
<td></td>
<td>OPR2</td>
<td>2. This supplier has always provided our company with a completely truthful picture of</td>
<td>John (1984)</td>
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<table>
<thead>
<tr>
<th>Information sharing</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISQ1</td>
<td>1. Our company provides this supplier with any information that might help them.</td>
<td>Heide and John (1992)</td>
</tr>
<tr>
<td>ISQ2</td>
<td>2. Our company exchanges information with this supplier frequently and informally, and not only according to a pre-specified agreement.</td>
<td>Heide and John (1992)</td>
</tr>
<tr>
<td>ISQ3</td>
<td>3. Our company provides this supplier with proprietary information if it can help them.</td>
<td>Heide and John (1992)</td>
</tr>
<tr>
<td>ISQ4</td>
<td>4. Our company keeps this supplier informed about events or changes that may affect them.</td>
<td>Heide and John (1992)</td>
</tr>
<tr>
<td>ISQ6</td>
<td>6. Our company openly shares confidential information with this supplier.</td>
<td>Cannon and Homburg (2001)</td>
</tr>
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<thead>
<tr>
<th>Relationship-specific investments</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIQ1</td>
<td>1. Our company has made significant investments in capabilities dedicated to our relationship with this supplier (for example people, systems, processes and tools).</td>
<td>Heide and John (1992)</td>
</tr>
<tr>
<td>RIQ2</td>
<td>2. This supplier has some unusual technological norms and standards, which have required adaptation on our company's part.</td>
<td>Heide and John (1992)</td>
</tr>
<tr>
<td>RIQ3</td>
<td>3. Training and qualifying this supplier has involved substantial commitments of our company's time and/or money.</td>
<td>Heide and John (1992)</td>
</tr>
<tr>
<td>RIQ4</td>
<td>4. Our company's processes have been tailored to use the particular items provided by this supplier.</td>
<td>Heide and John (1992)</td>
</tr>
<tr>
<td>RIQ5</td>
<td>5. Our company's business system has been tailored to meet the requirements of dealing with this supplier.</td>
<td>Heide and John (1992)</td>
</tr>
<tr>
<td>RIQ6</td>
<td>6. Gearing up to deal with this supplier required highly specialised capabilities (for example people, systems, processes and tools).</td>
<td>Heide and John (1992)</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Financial performance</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIQ1</td>
<td>1. The relationship with this supplier contributes to our company's achieving a higher sales growth.</td>
<td>Palmatier et al. (2007a)</td>
</tr>
<tr>
<td>FIQ2</td>
<td>2. The relationship with this supplier contributes to our company's achieving a higher profit growth.</td>
<td>Palmatier et al. (2007a)</td>
</tr>
<tr>
<td>FIQ3</td>
<td>3. The relationship with this supplier contributes to our company's achieving a higher overall profitability.</td>
<td>Palmatier et al. (2007a)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-economic (soft) performance</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEQ1</td>
<td>1. Our company learns a lot from the relationship with this supplier.</td>
<td>Beugelsdijk et al. (2009)</td>
</tr>
<tr>
<td>NEQ2</td>
<td>2. By cooperating with this supplier our company considerably improves its competitiveness.</td>
<td>Beugelsdijk et al. (2009)</td>
</tr>
<tr>
<td>NEQ3</td>
<td>3. By cooperating with this supplier our company gains valuable contacts.</td>
<td>Beugelsdijk et al. (2009)</td>
</tr>
</tbody>
</table>
satisfying in non-financial terms (adapted from Van de Ven 1976; Ruekert and Walker 1987; Selnes and Sallis 2003)

| NEQ4 | 4. The relationship with this supplier helps our company to be more innovative. | Beugelsdijk et al. (2009) |
| NEQ5 | 5. The relationship with this supplier helps our company to detect changes in end-user needs and preferences before our competitors do. | Selnes and Sallis (2003) |
| NEQ6 | 6. The relationship with this supplier has a positive effect on our company's ability to develop successful new offerings. | Selnes and Sallis (2003) |
7.1 Improving and Testing the Measurement Model Using Factor Analysis

The items used for measuring the study’s constructs were subjected to different forms of factor analysis (exploratory factor analysis and confirmatory factor analysis) (Fornell and Larcker 1981; Anderson and Gerbing 1988). A combination of these techniques is used in this study to improve and test the measurement model. The following paragraphs introduce factor analysis differentiating between exploratory factor analysis and confirmatory factor analysis. A discussion of the procedures carried out to improve and test the model follows.

As shown in chapter 4 for pretesting the measures, factor analysis is a technique with the primary purpose of defining the underlying structure among the variables in the analysis. It can play an important role in the application of other multivariate techniques, and is typically used prior to them. It helps to analyse the structure of the interrelationships (correlations) among the variables by defining sets of variables that are highly interrelated, called factors. These groups of variables are assumed to represent dimensions within the data. Factor analysis is an interdependence technique. In dependence techniques (such as multiple regression, discriminant analysis and multivariate analysis of variance), one or more variables are considered dependent variables and the others are the independent variables. In factor analysis, all variables are simultaneously considered with no distinction between dependent and independent variables (Hair et al. 2010).

Factor analysis can be used for both exploratory and confirmatory purposes. With the exploratory perspective it can be used in searching for structure among a set of variables. In this case it does not set any a priori constraints (e.g. on the estimation of components or the number of components to be extracted from the data). The outcome of factor analysis is data
summarisation (in addition to data reduction for some other purposes). Data summarisation shows the set of variables at various levels of generalisation, from the most detailed level, which is the individual level, to the more generalised level, where individual variables are grouped. With the confirmatory perspective, the researcher has prior expectations on the structure of the data, based on theoretical support or prior research. Confirmatory factor analysis is a tool that enables us to either confirm or reject our preconceived theory (Hair et al. 2010, p. 693). As a part of structural equation modeling, CFA is used to provide a confirmatory test for the measurement theory. A measurement theory shows how measured variables represent constructs involved in a theoretical model. Measurement theory when combined with a structural theory fully specifies a SEM model. CFA is dependent on a measurement theory, in contrast to EFA (Hair et al. 2010). Following this brief introduction of different forms of factor analysis, construct validity and the relevance of factor analysis for testing it are discussed.

“Validity is the extent to which a measure or set of measures correctly represents the concept of study- the degree to which it is free from any systematic or non-random error. Validity is concerned with how well the concept is defined by the measures” (Hair et al. 2005, pp. 3). Reliability relates to the consistency of the measures, it “is the extent to which a variable or set of variables is consistent in what it is intended to measure. If multiple measurements are taken, the reliable measures will all be consistent in their values. It differs from validity in that it relates not to what should be measured, but instead to how it is measured” (Hair et al. 2005, pp. 2). An important measure of construct validity is the relationship between items and constructs. This is called the path estimate linking constructs to items (Hair et al. 2010).
A combination of EFA and CFA can be used for improving the measurement model by assessing the item-to-total correlations and the scales’ reliability (Fornell and Larcker 1981; Anderson and Gerbing 1988). Iterations of factor analysis were carried out. These iterations consist of running EFA and CFA and examining their results, considering the EFA loadings, computed Cronbach's alpha, the CFA-related measures (i.e. the factor loading ($\lambda$), composite reliability, AVE and the overall model fit). The final computation of all these measures will be presented later in this chapter. Based on comparing and contrasting the outcomes for these measures upon elimination of ill-fitting items, in total thirteen items were dropped (due to low factor loadings on their constructs or cross-loading on other constructs). See Table 7-2.

As summarised in Table 7-2, the retained items consist of six items (out of seven) for interpersonal trust, four (out of four) for inter-organisational trust, three (out of seven) for commitment, four (out of six) for opportunistic behaviour, three (out of six) for information sharing, four (out of six) for relationship-specific investments, three (out of three) for financial performance and five (out of six) for non-economic performance. The table lists the eliminated and retained items.

Here, all the measures are reflective, so it is conceptually assumed that any change in the construct causes a change in all of its indicators (measurement items) (Diamantopoulos and Winklhofer 2001; Hair et al. 2010). Each indicator can explain the construct to a high degree (in case of a small measurement error), therefore eliminating a few items should not affect the validity of the constructs. However, modifying a measurement model should not be based on statistical reasons alone. The theory and content validity should also be considered (Anderson and Gerbing 1988). On the other hand due to statistical reasons (i.e. identification problems) each construct is suggested to be measured by at least three indicators (Hair et al. 2010). Due
to both conceptual and statistical concerns during the modification procedure it was attempted to minimise the number of eliminated items. A number of items were retained in spite of lower loadings for the purpose of ensuring conceptual validity (e.g. OPQ6 and ISQ1, see Table 7-4).

As seen in Table 7-2, three items measuring information sharing and four items measuring commitment are eliminated. This poses a concern with regard to the theoretical validity of these two constructs. However, three items are retained for measuring each of these constructs. A review of the scales used in previous studies for measuring commitment (see Table 4-3) shows that this construct has been frequently measured by only three items (Mohr and Spekman 1994; Morgan and Hunt 1994; Kumar et al. 1995; Mohr et al. 1996). Information sharing (see Table 4-5) has also been measured by three items (Cannon and Homburg 2001; Wang et al. 2008) (even two items (Doney and Cannon 1997), however those two items only indicate confidential information sharing). This suggests that eliminating some items and retaining three for measuring each of these two constructs should not impose a serious concern. Additionally critical tests (e.g. AVE) confirm the reliability and validity of the items. The remaining of this chapter provides additional insight into the validity and reliability of the measurement model.

Table 7-2: A Summary of Eliminated and Retained Measurement Items

<table>
<thead>
<tr>
<th>Construct</th>
<th>Source</th>
<th># Items original</th>
<th># Items eliminated</th>
<th># Items Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter-Personal Trust</td>
<td>Kumar et al. (1995)</td>
<td>7</td>
<td>1 (PTQ1)</td>
<td>6 (PTQ2, PTQ3, PTQ4, PTQ5, PTQ6, PTQ7)</td>
</tr>
<tr>
<td>Inter-Organisational Trust</td>
<td>Jiang et al. (2011)</td>
<td>4</td>
<td>0</td>
<td>4 (OTQ1, OTQ2, OTQ3, OTQ4)</td>
</tr>
<tr>
<td>Commitment</td>
<td>Anderson and Weitz (1992)</td>
<td>7</td>
<td>4 (COQ1, COR3, COR4, COQ7)</td>
<td>3 (COQ2, COQ5, COQ6)</td>
</tr>
<tr>
<td>Information</td>
<td>Heide and John</td>
<td>6</td>
<td>3 (ISQ2, ISR5, ISQ6)</td>
<td>3 (ISQ1, ISQ3, ISQ4)</td>
</tr>
<tr>
<td>Sharing</td>
<td>(1992); Cannon and Homburg (2001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship-Specific Investments</td>
<td>Heide and John (1992)</td>
<td>6</td>
<td>2 (RIQ1, RIQ2)</td>
<td>4 (RSQ3, RSQ4, RSQ5, RSQ6)</td>
</tr>
<tr>
<td>Financial Performance</td>
<td>Palmatier et al. (2007a)</td>
<td>3</td>
<td>0</td>
<td>3 (FIQ1, FIQ2, FIQ3)</td>
</tr>
<tr>
<td>Non-economic Performance</td>
<td>Beugelsdijk et al. (2009); Selnes and Sallis (2003)</td>
<td>6</td>
<td>1 (NEQ1)</td>
<td>5 (NEQ2, NEQ3, NEQ4, NEQ5, NEQ6)</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>13</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

For the remaining thirty two items the results of the exploratory factor analysis is presented in Table 7-3. This shows the results of the (rotated component) loadings based on an extraction using Principal Component Analysis and rotation using Varimax with Kaiser Normalisation. As seen in the table, the loading of each item is above .5 on its relevant component (factor) and below .4 on other components. To further test these items, Cronbach’s alpha for each construct is calculated. Additionally the CFA model is tested as a part of SEM. The model fit is evaluated and the loadings are considered to compute further reliability measures (i.e. composite reliability and AVE).
Table 7-3: Exploratory Factor Analysis Results

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>inter-personal trust</td>
<td>PTQ2</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PTQ3</td>
<td>.71</td>
<td>.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PTQ4</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PTQ5</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PTQ6</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PTQ7</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>inter-organisational trust</td>
<td>OTQ1</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OTQ2</td>
<td>.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OTQ3</td>
<td>.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OTQ4</td>
<td>.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>commitment</td>
<td>COQ2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COQ5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COQ6</td>
<td>.38</td>
<td>.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>opportunistic behaviour</td>
<td>OPQ1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.80</td>
</tr>
<tr>
<td></td>
<td>OPQ3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.82</td>
</tr>
<tr>
<td></td>
<td>OPQ5</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td>OPQ6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.72</td>
</tr>
<tr>
<td>information sharing</td>
<td>ISQ1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ISQ3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ISQ4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>relationship-specific investments</td>
<td>RSQ3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.40</td>
<td>.57</td>
</tr>
<tr>
<td></td>
<td>RSQ4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.86</td>
</tr>
<tr>
<td></td>
<td>RSQ5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.87</td>
</tr>
<tr>
<td></td>
<td>RSQ6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.75</td>
</tr>
<tr>
<td>financial performance</td>
<td>FPQ1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.39</td>
<td>.79</td>
</tr>
<tr>
<td></td>
<td>FPQ2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.32</td>
<td>.88</td>
</tr>
<tr>
<td></td>
<td>FPQ3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.88</td>
</tr>
<tr>
<td>non-economic (soft) performance</td>
<td>NPQ2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.74</td>
</tr>
<tr>
<td></td>
<td>NPQ3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.77</td>
</tr>
<tr>
<td></td>
<td>NPQ4</td>
<td></td>
<td>.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td>NPQ5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td>NPQ6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.62</td>
</tr>
</tbody>
</table>

Extraction method: Principal Component Analysis, Rotation method: Varimax
The loadings above .3 are retained in the table. The loadings above .4 are presented with bold font.

As mentioned earlier, CFA is a part of SEM. A brief introduction into SEM is presented in section 8.1. A way to assess the CFA model validity is by looking at the model fit. Fit compares the theory to reality by assessing the similarity of the estimated covariance matrix
(theory) to reality (the observed covariance matrix). Goodness-of-fit (GOF) Chi-square ($\chi^2$) measures the difference in the observed matrix and estimated covariance matrix. The difference between the two matrices (i.e. observed covariance matrix and estimate covariance matrix) is the key value in assessing the GOF. SEM estimation procedures such as Maximum Likelihood produce parameters that mathematically provide the minimum difference for a specified model. A Chi-square test provides a measurement for testing this difference.

$$\chi^2 = (N-1)(\text{Observed sample covariance matrix} - \text{SEM estimated covariance matrix})$$

or

$$\chi^2 = (N-1)(S - \Sigma_k)$$

N = the overall sample size  
S = the actual observed covariance matrix  
$\Sigma_k$ = the estimated covariance matrix

It is important to notice that the value of $\chi^2$ increases when the sample size increases if the differences in covariance matrices remain constant. Also the SEM (or CFA) estimated covariance matrix is influenced by how many parameters are free to be estimated (the k in $\Sigma_k$), so the model’s degrees of freedom also influences the $\chi^2$ GOF test (Jöreskog and Sörbom 1982; Hair et al. 2010).

The measurement model based on the remaining thirty two items (see Table 7-4) was tested by Confirmatory Factor Analysis (CFA) using AMOS to cross-validate the factor structure (Mishra et al. 1998). It shows good model fit (Jöreskog and Sörbom 1988; Kline 2005; Hair
et al. 2010) with \( \chi^2 = 870.573 \) (p-value = .000), df = 436, \( \chi^2/df = 1.997 \), RMR = 0.128, CFI = 0.943, RMSEA = 0.055. The standardised factor loadings are listed in Table 7-4.

As seen in Table 7-4, most loadings are above .7 except for a few items (an item for commitment (.69), an item for opportunistic behaviour (.62), an item for information sharing (.68) and an item for relationship-specific investments (.63)). However, these items are not eliminated due to the theories supporting them in addition to the further analysis that shows that other reliability measures satisfy the acceptable criteria. These measures include Cronbach’s alpha, composite reliability, which are also shown in Table 7-4; Cronbach’s alphas for the used items were estimated all above 0.7 (Nunnally and Bernstein 1994). In all cases the composite reliabilities (CR) are higher than 0.7 suggesting good reliability (Hair et al. 2010). AVE values are also computed, which are presented in Table 7-5. AVEs are later used for testing the constructs’ discriminant validity as well. A brief introduction of these different measures will be presented in the remaining part of this section.

Table 7-4: Measurement Statistics: Standardised Factor Loading, Composite Reliability and Cronbach’s Alpha

<table>
<thead>
<tr>
<th>Construct/items</th>
<th>Load</th>
<th>CR</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inter-personal Trust</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTQ2 Whenever the people we deal with at this supplier give us advice on our business operations, we know that they are sharing their best judgment.</td>
<td>0.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTQ3 We can count on the people we deal with at this supplier to be sincere.</td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTQ4 Though circumstances change, we believe the people we deal with at this supplier will be ready and willing to offer us assistance and support.</td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTQ5 When making important decisions, the people we deal with at this supplier are concerned about our welfare.</td>
<td>0.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTQ6 When we share our problems with the people we deal with at this supplier, we know that they will respond with understanding.</td>
<td>0.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTQ7 When it comes to things that are important to us, we can depend on the support of the people that we deal with at this supplier.</td>
<td>0.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inter-organisational Trust</strong></td>
<td>0.94</td>
<td>0.94</td>
<td></td>
</tr>
<tr>
<td>OTQ1 Our company is confident that this supplier is competent at what it is doing.</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTQ2 The performance of this supplier always meets our company’s expectations.</td>
<td>0.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTQ3 Our company believes in this supplier’s ability to fulfill its promises.</td>
<td>0.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTQ4 Our company is confident with this supplier’s ability to fulfill our agreements.</td>
<td>0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Commitment</strong></td>
<td>0.75</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>COQ2 Our company has a strong sense of loyalty to this supplier.</td>
<td>0.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COQ5 Our company is quite willing to make long-term investments to keep this supplier.</td>
<td>0.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COQ6 Our company’s relationship with this supplier is a long-term alliance.</td>
<td>0.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Opportunistic Behaviour</strong></td>
<td>0.84</td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td>OPQ1 On occasion, this supplier lies to our company about certain things in order to protect their interests.</td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPQ3 Sometimes this supplier alters the facts in order to get what they need.</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPQ5 This supplier has sometimes promised to do things without actually doing them later.</td>
<td>0.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPQ6 This supplier feels that it is ok to do anything within their means that will help further their own interests.</td>
<td>0.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Information Sharing</strong></td>
<td>0.78</td>
<td>0.77</td>
<td></td>
</tr>
<tr>
<td>ISQ1 Our company provides this supplier with any information that might help them.</td>
<td>0.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISQ3 Our company provides this supplier with proprietary information if it can help them.</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISQ4 Our company keeps this supplier informed about events or changes that may affect them.</td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Convergent validity is a dimension of construct validity. Convergent validity can be measured by the factor loading (λ), AVE or composite reliability. The rule of thumb is that standardised loading estimates “should be .5 or higher, and ideally .7 or higher”. The rationale behind this rule is that the square of a standardised factor loading represents how much variation in an item is explained by the latent variable and is termed the variance extracted of the item. A loading of .71 squared equals .5; so this factor explains “half the variation in the item with the other half being error variance” (Hair et al. 2010, p. 709).

Average variance extracted (AVE) is calculated as the mean variance extracted for the items loading on a construct and is a summary indicator of convergence. Using standardised loadings, this measure can be calculated:

\[
AVE = \frac{\sum_{i=1}^{n} \lambda_i^2}{n}
\]

The \(\lambda_i\) is the standardised factor loading and \(i\) is the number of items. So AVE is the average squared standardised factor loading or average communality. Using the same logic (as for the factor loadings) an AVE of .5 or higher is a good rule of thumb suggesting adequate convergence (Fornell and Larcker 1981; Hair et al. 2010). An “AVE of less than .5 indicates...
that, on average, more error remains in the items than variance explained by the latent factor” (Hair et al. 2010, p. 709).

Construct (composite) reliability (CR) is another measure of reliability. It is computed from the squared sum of factor loadings ($\lambda_i$) for each construct and the sum of the error variance terms for a construct ($e_i$):

$$
CR = \frac{\left(\sum_{i=1}^{n} \lambda_i \right)^2}{\left(\sum_{i=1}^{n} \lambda_i \right)^2 + \left(\sum_{i=1}^{n} e_i \right)}
$$

The rule of thumb for either reliability measure (composite reliability or Cronbach’s alpha) “is that .7 or higher suggests good reliability. High construct reliability indicates that internal consistency exists, meaning that the measures all consistently represent the same latent construct” (Hair et al. 2010, p. 710). As discussed previously these measures of reliability and convergent validity were examined for the measurement items in addition to the overall CFA fit indices.

### 7.2 Testing the Constructs’ Discriminant Validity

In addition to the convergent validity and reliability measures, discriminant validity is tested as a dimension of construct validity. Discriminant validity is “the extent to which a construct is truly distinct from other constructs” (Hair et al. 2010, p. 689). High discriminant validity shows that a construct is unique and captures some phenomena that other measures do not. Adding the test of discriminant validity to the tests discussed in the previous chapter, four primary measures of (nomological) construct validity (i.e. factor loadings, composite reliability, AVE and discriminant validity) will be all examined (Hair et al. 2010).
Two techniques (based on CFA) are implemented here to test discriminant validity. First, the correlation between any pair of constructs is fixed as equal to one (i.e. the constructs’ covariance is constrained to unity). This is the same as specifying that the items measuring these two constructs could just measure one construct. The model is run twice, once constraining the constructs’ correlations (one-construct model) and once freeing this parameter (two-construct model). If the fit of the one-construct model is significantly different from that of the two-construct model, discriminant validity is supported (Jöreskog 1971; Anderson and Gerbing 1988; Hair et al. 2010). Based on this technique the paired models were run and the Chi-square difference test was used to assess whether the Δχ² was significantly lower for the unconstrained models. It was examined whether the critical value (Δχ² (Δdf = 1) > 3.84¹⁰) was exceeded (all df = 437):

- inter-personal trust and inter-organisational trust: χ² = 888.180, Δχ² (Δdf = 1) = 17.61
- inter-personal trust and commitment: χ² = 882.145, Δχ² (Δdf = 1) = 11.57
- inter-personal trust and opportunistic behaviour: χ² = 1104.308, Δχ² (Δdf = 1) = 233.74
- inter-personal trust and information sharing: χ² = 892.916, Δχ² (Δdf = 1) = 22.34
- inter-personal trust and relationship-specific investment: χ² = 967.603, Δχ² (Δdf = 1) = 97.03
- inter-personal trust and financial performance: χ² = 891.307, Δχ² (Δdf = 1) = 20.73
- inter-personal trust and non-economic performance: χ² = 889.879, Δχ² (Δdf = 1) = 19.31
- inter-organisational trust and commitment: χ² = 889.461, Δχ² (Δdf = 1) = 18.89
- inter-organisational trust and opportunistic behaviour: χ² = 1105.457, Δχ² (Δdf = 1) = 234.88
- inter-organisational trust and information sharing: χ² = 896.934, Δχ² (Δdf = 1) = 26.36
- inter-organisational trust and relationship-specific investment: χ² = 952.689, Δχ² (Δdf = 1) = 82.12
- inter-organisational trust and financial performance: χ² = 902.442, Δχ² (Δdf = 1) = 31.87
- inter-organisational trust and non-economic performance: χ² = 900.797, Δχ² (Δdf = 1) = 30.22

¹⁰ The critical value derived from the Chi-square table
commitment and opportunistic behaviour: $\chi^2 = 1003.301$, $\Delta \chi^2_{(\Delta df = 1)} = 132.73$
commitment and information sharing: $\chi^2 = 884.223$, $\Delta \chi^2_{(\Delta df = 1)} = 13.65$
commitment and relationship-specific investment: $\chi^2 = 898.241$, $\Delta \chi^2_{(\Delta df = 1)} = 27.67$
commitment and financial performance: $\chi^2 = 881.973$, $\Delta \chi^2_{(\Delta df = 1)} = 11.40$
commitment and non-economic performance: $\chi^2 = 880.093$, $\Delta \chi^2_{(\Delta df = 1)} = 9.52$
opportunistic behaviour and information sharing: $\chi^2 = 962.151$, $\Delta \chi^2_{(\Delta df = 1)} = 91.58$
opportunistic behaviour and relationship-specific investment: $\chi^2 = 877.289$, $\Delta \chi^2_{(\Delta df = 1)} = 6.72$
opportunistic behaviour and financial performance: $\chi^2 = 934.304$, $\Delta \chi^2_{(\Delta df = 1)} = 63.73$
opportunistic behaviour and non-economic performance: $\chi^2 = 986.122$, $\Delta \chi^2_{(\Delta df = 1)} = 115.55$
information sharing and relationship-specific investment: $\chi^2 = 914.275$, $\Delta \chi^2_{(\Delta df = 1)} = 43.70$
information sharing and financial performance: $\chi^2 = 885.747$, $\Delta \chi^2_{(\Delta df = 1)} = 15.17$
information sharing and non-economic performance: $\chi^2 = 885.438$, $\Delta \chi^2_{(\Delta df = 1)} = 14.87$
relationship-specific investment and financial performance: $\chi^2 = 881.882$, $\Delta \chi^2_{(\Delta df = 1)} = 11.31$
relationship-specific investment and non-economic performance: $\chi^2 = 889.227$, $\Delta \chi^2_{(\Delta df = 1)} = 18.65$
financial Performance and non-economic Performance: $\chi^2 = 870.582$, $\Delta \chi^2_{(\Delta df = 1)} = 0.01$

As seen above, comparison of the goodness-of-fit (GOF) Chi-square ($\chi^2$) of the two-construct model and the one-construct model shows that for all paired constructs the difference is significant (above 3.84 for $\Delta df = 1$, significant at the 0.05 level) except for financial performance and non-economic performance. This supports discriminant validity of the constructs. In the case of financial performance and non-financial performance, it is not surprising to see such high level of correlation among their items as these two construct represent two dimensions of performance. This issue is further investigated by the second technique.

The second technique for testing discriminant validity is based on the AVE values and the correlation estimates between the constructs. If AVE values for any two construct estimates
are greater than the squared correlation estimate between these two constructs discriminant validity is confirmed (Fornell and Larcker 1981; Hair et al. 2010).

Table 7-5: AVE and Squared Construct Correlation Matrix

<table>
<thead>
<tr>
<th>Construct</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inter-personal Trust</td>
<td>0.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Inter-organisational Trust</td>
<td>0.40</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Commitment</td>
<td>0.49</td>
<td>0.29</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Opportunistic Behaviour</td>
<td>0.25</td>
<td>0.26</td>
<td>0.10</td>
<td>0.58</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Information Sharing</td>
<td>0.28</td>
<td>0.20</td>
<td>0.32</td>
<td>0.03</td>
<td>0.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Relationship-Specific Investments</td>
<td>0.00</td>
<td>0.00</td>
<td>0.10</td>
<td>0.13</td>
<td>0.02</td>
<td>0.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Financial Performance</td>
<td>0.16</td>
<td>0.07</td>
<td>0.19</td>
<td>0.01</td>
<td>0.14</td>
<td>0.12</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>8. Non-economic Performance</td>
<td>0.37</td>
<td>0.21</td>
<td>0.46</td>
<td>0.05</td>
<td>0.31</td>
<td>0.18</td>
<td>0.52</td>
<td>0.62</td>
</tr>
</tbody>
</table>

Table 7-5 presents the AVE value for each construct (presented diagonally in bold font) in addition to squared correlation of all paired constructs. The AVE for each construct is greater than the squared correlation between that construct and other constructs. Therefore overall discriminant validity is supported. This adds up to the measures discussed in the previous section (i.e. factor loading, reliability measures (composite reliability and Cronbach’s alpha), AVE and the CFA model fit), supporting the overall measurement model and constructs’ validity.
8 Chapter 8: Data Analysis for Testing the Model and Hypotheses

This chapter presents the data analysis. The technique of structural equation modeling is briefly introduced. The initial model and suggested hypotheses are tested. The mediating effects embedded in the model and the moderating effects, both suggested previously, are tested. A further analysis follows, which tests the impact of the relationship length as a control variable. Additionally a multiple-group analysis technique is used to control for the size of the companies. Furthermore, a mixture modeling approach is performed to explore the result with regard to the effect of the other party’s opportunistic behaviour on relationship-specific investments.

8.1 Structural Equation Modeling

Structural Equation Modeling is a family of statistical models that seek to explain the relationships among multiple variables. It examines the structure of relationships between variables; these relationships are expressed in a series of equations, similar to a series of multiple regression equations. These equations show causal relationships among constructs (the dependent and independent variables). Constructs are unobservable (or latent) and can be defined in conceptual terms but cannot be measured directly. Latent variables cannot be measured directly, but they can be represented or measured by one or more indicators. Indicators are also called measured or manifest variables (Jöreskog and Sörbom 1982; Bagozzi 1994; Bagozzi and Baumgartner 1994; Hair et al. 2010). These manifest variables are the items presented in the survey questionnaire.
SEM is an extension of several multivariate techniques particularly factor analysis and multiple regression analysis. It enables simultaneous examination of a series of interrelated relationships. There are several software packages currently available to perform SEM using maximum-likelihood covariance analysis and providing model fit (Fornell and Bookstein 1982b; Bollen 1989; Jöreskog and Sörbom 1993; Byrne 2001; Hair et al. 2010) (e.g. AMOS, LISREL and EQS). Alternatively Partial Least Squares (also a structural equation model analysis) is a variance based approach, which allows similar examination, but is more appropriate for predicting purposes (rather than testing) (Fornell and Bookstein 1982b). As argued previously, this study rests on testing the developed model using empirical data, therefore SEM using a maximum-likelihood approach is chosen for the analysis.

Identification is a critical issue in SEM; identification of a model looks at whether there is enough information to identify a solution to a set of structural equations, whether one parameter can be estimated for each unique variance and covariance in the observed covariance matrix, by the provided information. If there are $m$ measured items the number of these variances and covariances is:

$$1/2[m(m+1)]$$

One degree of freedom is used for each parameter estimated. The degree of identification is the degree of freedom after all parameters are estimated. So the number of degrees of freedom for a SEM model, when $k$ is the number of estimated (free) parameters is:

$$1/2[m(m+1)] - k$$
A model is *underidentified* if the number of parameters to be estimated is more than the number of unique variances and covariances, it is *just-identified* if these two numbers are the same, and it is *overidentified* if the number of estimated parameters is less than the number of the variances and covariances. The objective of CFA and SEM models is to have an overidentified model (Hair et al. 2010). In this research’s model the degree of freedom (df) is 448, which represents an overidentified model.

As the number of measured items \( m \) in this study’s model (see Figure 4-2 for the basic model and Table 7-4 for the list of measurement items) is 32, the number of variances and covariances is:

\[
\frac{1}{2}[m(m+1)] = \frac{1}{2}[32(33)] = 528
\]

The number of estimated parameters is:

\[16 \text{ (regression weights: structural path estimates)} + \]
\[24 \text{ (items to constructs regression weights: 32 (total items) – 8 (regression weight of one item per construct fixed as one))} + \]
\[32 \text{ (items error term variances)} + \]
\[1 \text{ (independent construct (opportunistic behaviour) variance)} + \]
\[7 \text{ (dependent (all except for opportunistic behaviour) constructs error term variances)} \]
\[= 80\]

The degree of freedom (df) \( = 528 – 80 = 448 \)
8.2 Model Testing

To test the hypotheses in the model, covariance-based structural equation modeling was used with AMOS 7.0, using the Maximum Likelihood indicator. The goodness-of-fit Chi-square measure was introduced in previous chapter. As mentioned, this measure is a function of the sample size and the difference between the observed and estimated covariance matrices. When assessing the fit of an SEM model, several measures and indices are used. These measures include CFI, RMR and RMSEA (Bentler and Bonett 1980; Jöreskog and Sörbom 1982; Bentler 1990; Browne and Cudeck 1993; Hair et al. 2010). A brief introduction to these measures follows in addition to a discussion of their values estimated as the fit of this study’s basic model (shown in Figure 4-2).

RMSEA, RMR and SRMR are among absolute fit indices (in addition to the $\chi^2$ value, which was introduced in previous chapter) (Jöreskog and Sörbom 1982; Hair et al. 2010). Absolute fit indices are direct measures of “how well the model specified by the researcher reproduces the observed data”; they provide a basic assessment of how well the theory fits the sample data. They do not compare the GOF of a specified model to any other model. So each model is evaluated independently of all other possible models (Hair et al. 2010, p. 666).

The practice of using $\chi^2$ values as the only goodness of fit measure is generally avoided. The analysis of the basic model in this study shows the $\chi^2$ of 916.32 (df = 448, p-value = .000). As the model fits into the category characterised by (N (sample size) > 250 and m (number of observed variables) ≥ 25), a significant p-value is expected for a good fit (Hair et al. 2010, p. 672). As discussed before, $\chi^2$ is sensitive to the sample size and the number of observed variables. Other measures such as SMEA and RMR (or SRMR) are absolute fit indices that can be used to assess the model fit.
Root Mean Square Error of Approximation (RMSEA) is one of the most widely used measures for testing the model fit (Browne and Cudeck 1993; Hair et al. 2010). This measure tries “to correct for the tendency of the $\chi^2$ GOF test statistic to reject models with a large sample or a large number of observed variables” by including them in its computation (Hair et al. 2010, p. 667). Lower RMSEA values indicate a better fit. The cutoff value of .05 or .08 has been indicated as a good RMSEA value (Hu and Bentler 1999; Hair et al. 2010). One key advantage of RMSEA is that a confidence interval can be constructed giving the range of RMSEA values for a given level of confidence.

The analysis of the fit of this study’s basic model with the sample data results in a RMSEA of .056 (the lower and upper boundaries with 90% confidence as .051 and .061; therefore with about 90 percent confidence, the population RMSEA for the model is between .051 and .061). The RMSEA measure is less than .08 as suggested by Browne and Cudeck (1993) and also less than .07 indicated by Hair et al. (2010). The fit indices characteristics, suggested by Hair et al. 2010 (2010, p. 667), is based on the number of observed variables (i.e. items) and the sample size. In the case of this study’s model ($N$ (sample size) > 250 and $m$ (number of observed variables) ≥ 25) values less than .07 (with CFI of .90 or higher) would suggest a good fit.

Root Mean Square Residual (RMR) is the square root of the mean of the squared residuals. The error in prediction for each covariance term creates a residual. Residuals are sensitive to the scale of the indicators, but standardised residuals are directly comparable. RMR has the same problem as residuals (in that it is related to the scale of the indicators). The alternative measure is Standardised Root Mean Square Residual (SRMR), which is the average
standardised residual. It is introduced as a useful measure for comparing fit across models. Lower RMR and SRMR values represent better fit. Therefore, these measures (in addition to RMSEA) are sometimes called badness-of-fit measures in which high values indicate poor fit (Jöreskog and Sörbom 1982; Hair et al. 2010). Hair et al. (2010, p. 667) have indicated values of .08 or less (with CFI above .92) for an SRMR representing a good fit. The fit of the basic model of this study with the sample data indicates a SRMR as .0639, which meets the suggested criterion.

As mentioned above, the measures discussed so far are among absolute fit indices. Additionally some incremental fit indices are used to assess the model fit. It is highly recommended to consider incremental fit indices for assessing the model fits as well (Bentler and Bonett 1980). These indices differ from absolute fit indices in that “they assess how well the estimated model fits relative to some alternative baseline model” (Hair et al. 2010, p. 668). The most common baseline model is a null model (i.e. independence model).

Comparative Fit Index (CFI) is an incremental fit index (Bentler 1990), also called Relative Noncentrality Index (RNI) (McDonald and Marsh 1990). It is an improved version of Normed Fit Index (NFI), which is a “ratio of the difference in the $\chi^2$ value for the fitted model and a null model divided by the $\chi^2$ value for the null model” (Hair et al. 2010, p. 668). CFI has many desirable properties (including its relative insensitivity to model complexity), therefore it is one of the most widely used indices. Usually CFI values above .90 are associated with a good model fit (Hair et al. 2010, p. 669). The CFI fit value of the basic model for this study is 0.938. Considering the fit indices table introduced by Hair et al. (2010, p. 672), the suggested criterion for this measure in this study’s category (N (sample size) > 250 and $m$ (number of observed variables) ≥ 25) is also above .90.
So overall the basic model (presented in Figure 4-2) shows a good fit with the data. The fit measures and significance levels are summarised as: $\chi^2 = 916.32$ (p-value = .000), df = 448, $\chi^2$/df = 2.045, RMR = 0.150, Standardised RMR (SRMR) = 0.0639, CFI = 0.938, RMSEA = .056.

### 8.3 Hypotheses Testing

Fifteen out of sixteen hypotheses were supported at significant confidence levels; see Table 8-1. Inter-personal trust has a positive and strong impact on inter-organisational trust (.50, p=.00). Both trust dimensions positively impact on commitment; with inter-personal trust having a strong significant impact (.70, p=.00) and inter-organisational trust having a significant and moderate impact (.14, p<.05). Supplier opportunistic behaviour has a significant negative and strong impact on inter-personal trust (-.50, p=.00) and a relatively strong negative impact on inter-organisational trust (-.26, p=.00). The influences of the trust dimensions on behavioural characteristics are also supported. Inter-personal trust has a positive, significant and strong influence on information sharing (.42, p=.00); inter-organisational trust has positive, significant and relatively strong influence on information sharing (.19, p<.01) and relationship-specific investments (.25, p=.00).

Relationship-specific investments have a strong and significant positive effect on commitment (.35, p=.00). Supplier opportunistic behaviour has a significant and strong impact on relationship-specific investments (.47, p=.00), but in contrast to the hypothesised relationship, the relationship is positive (this is the only hypothesis unsupported here). This unexpected and surprising result will be discussed in the following sections of the dissertation. Relationship-specific investments have a significant and relatively strong
positive path coefficients with regard to both dimensions of relationship performance, financial performance (.19, p<.01) and non-economic (soft) performance (.12, p<.01). In turn information sharing significantly, relatively strongly and positively affects non-economic (soft) performance (.18, p<.01).

Commitment has a significant and strong positive path coefficients with regard to both dimensions of relationship performance, financial performance (.45, p=.00) and non-economic (soft) performance (.43, p=.00). Finally, financial performance significantly, strongly and positively affects non-economic (soft) performance (.42, p=.00). Squared multiple correlations of dependent variables are the values representing the extent to which the dependent variables are explained by their predictors (Jöreskog and Sörbom 1993; Hair et al. 2010). The squared multiple correlations show that commitment (.72)\textsuperscript{11} as the crucial dependent variable is well explained by the model (in other words the error variance of commitment is approximately 28 percent of the variance of commitment itself). With regard to the performance dependent variables, non-economic (soft) performance is well explained (.74) with financial outcome showing relatively less explained variance (.24) (a complete list of the squared multiple correlations are presented in Table 8-4, in which the basic model is compared to the control model later).

\begin{table}[h]
\centering
\begin{tabular}{lcc}
\hline
Hypothesis & Standardised Regression Weights \\
\hline
H1: Inter-personal trust positively affects inter-organisational trust. & .50 *** \\
H2: Inter-personal trust positively affects commitment. & .70 *** \\
H3: Inter-organisational trust positively affects commitment. & .14 * \\
H4: (Supplier’s) opportunistic behaviour negatively affects (buyer’s) inter-personal trust. & -.50 *** \\
H5: (Supplier’s) opportunistic behaviour negatively affects (buyer’s) inter-organisational trust. & -.26 *** \\
H6: Inter-personal trust positively affects information sharing. & .42 *** \\
\hline
\end{tabular}
\caption{Test of Hypotheses}
\end{table}

\textsuperscript{11} The squared correlations are listed in Table 8-4, which is presented in section 8.6.
H7: Inter-organisational trust positively affects information sharing. .19 **
H8: Inter-organisational trust positively affects relationship-specific investments. .25 ***
H9: Relationship-specific investments positively affect commitment. .35 ***
H10: (Supplier’s) opportunistic behaviour negatively affects (buyer’s) relationship-specific investments. .47 ***(*)
H11: Relationship-specific investments positively affect financial performance. .19 **
H12: Relationship-specific investments positively affect non-economic (soft) performance. .12 **
H13: Information sharing positively affects non-economic (soft) performance. .18 **
H14: Commitment positively affects financial performance. .45 ***
H15: Commitment positively affects non-economic (soft) performance. .43 ***
H16: Financial performance positively affects non-economic (soft) performance. .42 ***

*** significant at the 0.001 level; ** significant at the 0.01 level; * significant at the 0.05 level (two-tailed)
(a) the relationship is positive in contrast to the hypothesised relationship

8.4 Testing the Mediating Effects

In the conceptual model inter-organisational trust intervenes the relationship between inter-personal trust and commitment and the relationship between inter-personal trust and information sharing. Due to the focus of this research on trust, these effects are investigated more carefully. These relationships indicate mediating effects (Baron and Kenny 1986), which are created when a third variable/construct intervenes between two other constructs. Mediation involves direct and indirect effects. “Direct effects are those relationships that link two constructs with a single arrow. Indirect effects are those relationships that involve a sequence of relationships with at least one intervening construct involved” (Hair et al. 2010, p. 766).

In order to test each of these mediating effects, another model in addition to the basic model, is tested (Hair et al. 2010). The basic model includes both direct and indirect effects, whereas the alternative model includes only indirect effects. First, the mediating effect of inter-organisational trust (OT) on the relationships between inter-personal trust (PT) and commitment (CO) is tested. For testing this mediating effect, the alternative model tested is the basic model (so called model with direct and indirect effects) with the relationship
between inter-personal trust (PT) and commitment (CO) excluded (so called model with only the indirect effect). This alternative model is presented in Figure 8-1. As seen in this figure, all paths are retained except for the path between inter-personal trust and commitment (marked in the figure by a dashed arrow).

The model fit, standardised parameter estimates, the total, direct and indirect effects are estimated (presented in Table 8-2). All the relationships among these three constructs in two models (i.e. the model with direct and indirect effects and the model with only the indirect effect) are significant. The $\Delta \chi^2 (\Delta df=1) = 103.793 (1020.113 - 916.32$, see Table 8-2), so the model significantly improves when the direct effects is also included ($\Delta \chi^2$ exceeds the critical value of 3.84 for 1 degree of freedom (Hair et al. 2010)). The direct effect is almost 86% of the total effects ($\frac{696}{.811}$ see Table 8-2).

This supports *partial mediation*. Mediation exists when there is significant correlation among all three constructs; a mediating construct (i.e. inter-organisational trust) facilitates the relationship between the other two constructs (i.e. inter-personal trust and commitment).
Partial mediation exists when there is still some of the relationship between the two constructs that is not explained by the mediator (versus complete mediation, in which the mediating construct completely explains the relationship between the two other constructs) (Hair et al. 2010, p. 767).

Table 8-2: Testing for Mediating Effect of Inter-Organisational Trust on the Relationship between Inter-Personal Trust and Commitment

<table>
<thead>
<tr>
<th></th>
<th>Model with only the indirect effect</th>
<th>Model with direct and indirect effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model fit</strong></td>
<td>χ² (Chi-square)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1020.113</td>
<td>916.32</td>
</tr>
<tr>
<td><strong>Standardised parameter estimates</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT→OT</td>
<td>.513 ***</td>
<td>.499 ***</td>
</tr>
<tr>
<td>OT→CO</td>
<td>.586 ***</td>
<td>.142 *</td>
</tr>
<tr>
<td>PT→CO</td>
<td>Not estimated</td>
<td>.696 ***</td>
</tr>
<tr>
<td><strong>Standardised effects of PT→CO</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total effects</td>
<td>.341</td>
<td>.811</td>
</tr>
<tr>
<td>Direct effects</td>
<td>.000</td>
<td>.696</td>
</tr>
<tr>
<td>Indirect effects</td>
<td>.341</td>
<td>.115</td>
</tr>
</tbody>
</table>

PT: inter-personal trust, OT: inter-organisational trust, CO: commitment

For testing the mediating effect of inter-organisational trust (OT) on the relationship between inter-personal trust (PT) and information sharing (IS), the alternative model tested is the basic model (so called model with direct and indirect effects) with the relationship between inter-personal trust (PT) and information sharing (IS) excluded (so called model with only the indirect effect). The alternative model is presented in Figure 8-2. All paths are retained except for the path between inter-personal trust and information sharing. The excluded path is marked in the figure by a dashed arrow.
All the relationships among these three constructs in two models are significant (presented in Table 8-3). The $\Delta \chi^2$ ($\Delta d.f.=1$) = 30.043 (946.363 - 916.32, see Table 8-3), so the model significantly improves when the direct effect is also included. The direct effect is almost 81% of the total effects (0.81 = 0.421 / 0.517, see Table 8-3). The partial mediation is again supported.

### Table 8-3: Testing for Mediating Effect of Inter-Organisational Trust on the Relationship between Inter-Personal Trust and Information Sharing

<table>
<thead>
<tr>
<th></th>
<th>Model with only the indirect effect</th>
<th>Model with direct and indirect effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model fit</td>
<td>946.363</td>
<td>916.32</td>
</tr>
<tr>
<td>$\chi^2$ (Chi-square)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standardised parameter estimates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT $\rightarrow$ OT</td>
<td>.507 ***</td>
<td>.499 ***</td>
</tr>
<tr>
<td>OT $\rightarrow$ IS</td>
<td>.472 ***</td>
<td>.193 **</td>
</tr>
<tr>
<td>PT $\rightarrow$ IS</td>
<td>Not estimated</td>
<td>.421 ***</td>
</tr>
<tr>
<td>Standardised effects of PT $\rightarrow$ IS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total effects</td>
<td>239</td>
<td>517</td>
</tr>
<tr>
<td>Direct effects</td>
<td>0.000</td>
<td>.421</td>
</tr>
<tr>
<td>Indirect effects</td>
<td>239</td>
<td>.096</td>
</tr>
</tbody>
</table>

**PT:** inter-personal trust, **OT:** inter-organisational trust, **IS:** information sharing

### 8.5 Testing the Moderating Effects

A moderating effect occurs when a third construct changes the relationship between two related constructs (Baron and Kenny 1986). If the relationship between inter-organisational...
trust and relationship-specific investments differs significantly by the level of dependence, it can be said that the relationship between inter-organisational trust and relationship-specific investments is moderated by dependence. Multiple-group analysis can be used for testing and demonstrating moderation (Hair et al. 2010).

Dependence was incorporated by a single item as it is considered only as a moderator. The item asks whether the informant agrees with the statement ‘If for some reason, your relationship with this supplier ends’... ‘Our company could easily compensate for it by appointing another supplier of similar offerings’. The reverse of this item measures the degree of dependence (Palmatier et al. 2007a).

For testing the moderating role of dependence, a dummy variable is considered based on the scale of dependence (DE) (dummy variable = 0, if DE = 1, 2, 3, and = 1, if DE = 4, 5, 6, 7). The sample is grouped according to the dummy variable of dependence into two groups consisting of 169 and 162 cases. Based on multiple-group analysis (Bollen 1989; Byrne 2001; Kline 2005) the conceptual model is tested against two groups. The impact of inter-organisational trust and relationship-specific investments is estimated with regression weight equal to .41 and significant at .001 level at the group with low dependence. This impact is estimated with lower regression weight, equal to .06. The relationship is so weak in this group that it is not supported significantly at .05 level. The moderating effect is supported at significant level (when the estimate between the two constructs are fixed: $\Delta \chi^2_{(\Delta df=1)} = 5.369$), supporting hypotheses H17 (Hair et al. 2010).

Multiple-group analysis similarly tests the moderating effect of dependence on the impact on relationship-specific investments on commitment. This impact is higher (.44; significant at
.001 level) in situation in which dependence is low in comparison to when dependence is high (.27; significant at .01 level). The moderating effect is supported at significant level (when the estimate between the two constructs are fixed $\Delta \chi^2_{(\Delta df=1)} = 4.349$), supporting hypothesis H18.

Although a moderating effect of dependence on the relationship between opportunistic behaviour and relationship-specific investments was not suggested in the nomological model, this effect is tested with the purpose of further investigating the surprising result with regard to this relationship (i.e. positive significant impact of opportunistic behaviour on relationship-specific investments). The result (of the multiple-group analysis) shows that the difference between the two groups (i.e. with (1) low dependence and (2) high dependence) is not significant ($\Delta \chi^2_{(\Delta df=1)} = .26 < 3.84$). However, the impact is relatively lower (.39; significant at .001 level) when dependence is high (in comparison to .52; significant at .001 level when dependence is low).

8.6 Testing the Impact of the Relationship Length as a Control Variable

The length of the relationship might control the business relationship characteristics (Prahinski and Benton 2004; Joshi 2009). In this section this potential control effect is examined. A control variable might considerably account for (i.e. control) the variance of a construct, making the effect of dependent variables insignificant. Such potential impact is tested in this section considering the length of the relationship as the control variable. First, this is examined by adding this variable to the basic model as a control variable. Control variables in regression-based analysis models can be examined based on comparison of the degree to which dependent variables are explained (i.e. squared correlation ($R^2$)) by (1) only
control variables, (2) only the basic model’s independent variables and (3) both basic model’s independent variables and control variables (see Fichman and Kemerer 1997; Beugelsdijk et al. 2009; Joshi 2009; Fink and Kessler 2010; Noordhoff et al. 2011). In this study, as only one control variable is considered with one measurement item (which will be explained in the following paragraph), the first alternative is excluded. The two other models are used for comparison.

Therefore two models are considered, (1) the basic model illustrated in Figure 4-2, and (2) the basic model modified by adding five (structural) paths that are the impact of relationship length on the constructs in the two final blocks of the model (see Figure 4-1) (i.e. relationship-specific investments, information sharing, commitment and both performance dimensions), so-called the control model. In the literature, the relationship length has been tested as a control variable on the mediator and outcome variables in business relationship models (Joshi 2009). This examines whether all behavioural characteristics and outcomes of the relationship are simply functions of the length of the relationship.

The length of the relationship was measured by asking the respondents to identify for approximately how many years their company has been doing business with the supplier (in years), with a single item (Mohr et al. 1996; Joshi 2009). As this construct is indicated by one measurement item, (and therefore it is not possible to estimate the measurement error for this construct) it is assumed that the construct equals the measurement item (so the error variance of this construct is set to zero) (Jöreskog and Sörbom 1993, p. 35).

The results for the basic model and the control model are presented in Table 8-4 for comparison. The table lists the standardised regression weight and the significance level of all
the paths by presenting the dependent variables and their determinants. The $\chi^2$ (Chi-square) of the two models are compared. The difference ($\Delta \chi^2_{(\text{df}=26)} = 75.118 > 38.89^{12}$) is significant, supporting the role of relationship length as a control variable. As seen in the table the hypothesised relationships are not significantly different between the basic model and the control model. The relationship length therefore does not have a significant impact on the dependant variables examined. However, the p-value for the path from relationship length to commitment is .057 and the effect is positive. The significance levels of the impacts are not different except for the path from inter-organisational trust to information sharing that does vary slightly (.19** in the basic model and .19* in the control model; see Table 8-4).

Neither the estimates nor the squared correlations of the dependent variables are significantly different between the two models. Overall the comparison again supports the hypotheses except for the hypothesis H10. This hypothesis suggested that (the supplier’s) opportunistic behaviour negatively affects relationship-specific investments. The impact of opportunistic behaviour on relationship-specific investments is significant. However, in contrast to the hypothesis, the relationship is positive.

### Table 8-4: The Effects and Squared Correlations in the Basic Model and the Control Model

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Basic Model</th>
<th>Control Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter-personal Trust</td>
<td>Opportunistic Behaviour (H4)</td>
<td>-.50***</td>
<td>-.50***</td>
</tr>
<tr>
<td></td>
<td>$R^2$</td>
<td>.25</td>
<td>.25</td>
</tr>
<tr>
<td>Inter-organisational Trust</td>
<td>Opportunistic Behaviour (H5)</td>
<td>-.26***</td>
<td>-.26***</td>
</tr>
<tr>
<td></td>
<td>Inter-personal Trust (H1)</td>
<td>.50***</td>
<td>.50***</td>
</tr>
<tr>
<td></td>
<td>$R^2$</td>
<td>.45</td>
<td>.45</td>
</tr>
<tr>
<td>Commitment</td>
<td>Inter-personal Trust (H2)</td>
<td>.70***</td>
<td>.60***</td>
</tr>
<tr>
<td></td>
<td>Inter-organisational Trust (H3)</td>
<td>.14*</td>
<td>.16*</td>
</tr>
<tr>
<td></td>
<td>Relationship-Specific Investments (H9)</td>
<td>.35***</td>
<td>.34***</td>
</tr>
<tr>
<td></td>
<td>Relationship Length</td>
<td>n.a.</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>$R^2$</td>
<td>.72</td>
<td>.73</td>
</tr>
<tr>
<td>Information Sharing</td>
<td>Inter-personal Trust (H6)</td>
<td>.42***</td>
<td>.42***</td>
</tr>
<tr>
<td></td>
<td>Inter-organisational Trust (H7)</td>
<td>.19**</td>
<td>.19*</td>
</tr>
<tr>
<td></td>
<td>Relationship Length</td>
<td>n.a.</td>
<td>-.00</td>
</tr>
<tr>
<td></td>
<td>$R^2$</td>
<td>.32</td>
<td>.32</td>
</tr>
<tr>
<td>Relationship-Specific Investments</td>
<td>Inter-organisational Trust (H8)</td>
<td>.25***</td>
<td>.26***</td>
</tr>
<tr>
<td></td>
<td>Opportunistic Behaviour (H10)</td>
<td>.47***</td>
<td>.47***</td>
</tr>
<tr>
<td></td>
<td>Relationship Length</td>
<td>n.a.</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>$R^2$</td>
<td>.16</td>
<td>.17</td>
</tr>
</tbody>
</table>

12 The critical value derived from the Chi-square table

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To further investigate the impact of the relationship length, two additional alternative control models (with a focus on non-economic performance and commitment as dependent variables) were tested. These two constructs (i.e. non-economic performance and commitment) have the highest number of relationships explaining them in the basic model (non-economic performance having four and commitment three). As seen in Table 8-4 these two constructs are also explained to a higher degree ($R^2_{\text{non-economic performance}} = .74$, $R^2_{\text{commitment}} = .72$) by the model in comparison to the remaining dependent variables ($R^2_{\text{inter-personal trust}} = .25$, $R^2_{\text{inter-organisational trust}} = .45$, $R^2_{\text{information sharing}} = .32$, $R^2_{\text{relationship-specific investments}} = .16$, $R^2_{\text{financial performance}} = .28$). Therefore these two constructs (i.e. commitment and non-economic performance) are selected. The first alternative control model consists of the sixteen relationships suggested in the basic model (see Figure 4-2) modified by adding a path from relationship length to non-economic performance. The second alternative control model consists of the relationships suggested in the basic model modified by adding a path from relationship length to commitment.

Testing these two alternative control models shows that they do not vary significantly from the initial control model (which had five added paths to the basic model). However, the second alternative control model shows a significant effect of relationship length on
commitment (significant at the .05 level; in the initial control model the p-value of this path was .057) with a squared correlation ($R^2$) of .73 for commitment. This is in line with the conceptualisation of commitment and its strong relatedness to continuity and stability of the relationship (Anderson and Weitz 1992; Jap and Ganesan 2000; Goodman and Dion 2001). These two alternative control models analyses, adding up to the initial control model analysis, supports the overall basic model’s results with regard to the hypotheses and constructs.

### 8.7 Controlling for the Size of the Companies Using Multiple-Group Analysis

The business models can differ between big and small companies (Rogers 1983; Henneberg et al. 2009; Joshi 2009). Controlling for the size of the company can help to understand organisational phenomena such as business relationships (Parkhe 1993). To test whether there are differences among big companies versus small companies in terms of the relationships examined in this study, a multiple-group analysis technique is performed (Bollen 1989; Byrne 2001; Kline 2005). The respondents were asked to estimate the number of employees working for their companies and choose one among the six categories, (1) less than 50, (2) 50 – 200, (3) 201 – 500, (4) 501 – 1000, (5) 1001 – 10,000 and (6) more than 10,000. A dummy variable is considered based on these categories for the number of the employees in the company (NE) (dummy variable = 0, if NE = 1, 2, 3, and = 1, if NE = 4, 5, 6). The sample is grouped according to the dummy variable of the number of the employees into two groups consisting of 168 and 163 cases (respectively for NE = 0 and 1). Based on multiple-group analysis the conceptual model is tested against two groups.

Initially two models are defined (1) a multiple-group model with no measure constrained (so-called unconstrained model) and (2) a multiple-group model with all structural weights
constrained (so-called structural weights constrained model). Each of these two models is tested against the two groups (small companies and big companies) using multiple-group analysis (Byrne 2001). The fit comparison shows that there is a significant difference ($\Delta \chi^2 (\Delta df=16) = 31.437 > 26.30^{13}$, p-value = .05) between the unconstrained model ($\chi^2 (df=896) = 1528.147$, p-value = .000) and the structural weights constrained model ($\chi^2 (df=912) = 1559.584$, p-value = .000). This suggests that there is a significant difference between the two groups.

Table 8-5: Multiple-Group Analysis Controlling for the Size of the Company

<table>
<thead>
<tr>
<th>Path</th>
<th>Basic Model Loading</th>
<th>MG Model Small Companies Loading</th>
<th>MG Model Big Companies Loading</th>
<th>Constrained Model</th>
<th>$\chi^2$</th>
<th>$\Delta \chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT→OT (H1)</td>
<td>.50 ***</td>
<td>.61 ***</td>
<td>.42 ***</td>
<td>M01</td>
<td>1528.182</td>
<td>0.035</td>
</tr>
<tr>
<td>PT→CO (H2)</td>
<td>.70 ***</td>
<td>.58 ***</td>
<td>.73 ***</td>
<td>M02</td>
<td>1531.293</td>
<td>3.146</td>
</tr>
<tr>
<td>OT→PT (H3)</td>
<td>.14</td>
<td>.26</td>
<td>.09</td>
<td>M03</td>
<td>1530.206</td>
<td>2.059</td>
</tr>
<tr>
<td>OP→PT (H4)</td>
<td>.50 ***</td>
<td>.48 ***</td>
<td>.32 ***</td>
<td>M04</td>
<td>1528.603</td>
<td>0.456</td>
</tr>
<tr>
<td>OP→OT (H5)</td>
<td>.26 ***</td>
<td>.17 ***</td>
<td>.31 ***</td>
<td>M05</td>
<td>1529.928</td>
<td>1.781</td>
</tr>
<tr>
<td>PT→IS (H6)</td>
<td>.42 ***</td>
<td>.25</td>
<td>.55 ***</td>
<td>M06</td>
<td>1530.256</td>
<td>2.109</td>
</tr>
<tr>
<td>OT→IS (H7)</td>
<td>.19 **</td>
<td>.39 ***</td>
<td>.05</td>
<td>M07</td>
<td>1536.104</td>
<td>7.957 **</td>
</tr>
<tr>
<td>OT→RS (H8)</td>
<td>.25 ***</td>
<td>.25</td>
<td>.23</td>
<td>M08</td>
<td>1528.491</td>
<td>0.344</td>
</tr>
<tr>
<td>RS→CO (H9)</td>
<td>.35 ***</td>
<td>.24 **</td>
<td>.45 ***</td>
<td>M09</td>
<td>1533.268</td>
<td>5.121 *</td>
</tr>
<tr>
<td>OP→RS (H10)</td>
<td>.47 ***</td>
<td>.52 ***</td>
<td>.18 ***</td>
<td>M10</td>
<td>1530.185</td>
<td>2.038</td>
</tr>
<tr>
<td>RS→FP (H11)</td>
<td>.19 **</td>
<td>.34 ***</td>
<td>.00</td>
<td>M11</td>
<td>1537.249</td>
<td>9.102 **</td>
</tr>
<tr>
<td>RS→NP (H12)</td>
<td>.12 **</td>
<td>.18 **</td>
<td>.09</td>
<td>M12</td>
<td>1528.947</td>
<td>0.800</td>
</tr>
<tr>
<td>IS→NP (H13)</td>
<td>.18 **</td>
<td>.13</td>
<td>.25 **</td>
<td>M13</td>
<td>1529.954</td>
<td>1.807</td>
</tr>
<tr>
<td>CO→FP (H14)</td>
<td>.45 ***</td>
<td>.32 ***</td>
<td>.60 ***</td>
<td>M14</td>
<td>1529.710</td>
<td>1.563</td>
</tr>
<tr>
<td>CO→NP (H15)</td>
<td>.43 ***</td>
<td>.44 ***</td>
<td>.35 **</td>
<td>M15</td>
<td>1528.999</td>
<td>0.852</td>
</tr>
<tr>
<td>FP→NP (H16)</td>
<td>.42 ***</td>
<td>.45 ***</td>
<td>.41 ***</td>
<td>M16</td>
<td>1528.231</td>
<td>0.084</td>
</tr>
</tbody>
</table>


The loadings (standardised regression weights) resulted from performing the multiple-group analysis per relationship per group is presented in Table 8-5. Next, each path’s invariance is investigated by performing sixteen model fit comparison (M01 to M16 (see Table 8-5)). This shows significant variance with regard to three relationships by comparing the fit of

13 The critical value derived from the Chi-square table
unconstrained model with the fit of the model with one path constrained (significantly different if $\Delta \chi^2_{(df=1)} > 3.84$; e.g. in the model M01 the only structural weight constrained is: PT→OT). The effects vary significantly different with regard to three paths; those are (1) OT→IS (H7), (2) RS→CO (H9) and (3) RS→FP (H11). Also two other paths are not significant in the big companies group, which are significant in small companies group; those are (1) OT→CO (H3) and (2) RS→NP (H12). Overall, the model shows better fit with the smaller companies. These results are further discussed in next chapter. The path that was suggesting a significant reverse effect in the initial analysis than suggested (OP→RS (H10): the effect of opportunistic behaviour on relationship-specific investments) stays as it was among both groups of smaller and bigger companies (i.e. showing a significant positive effect). Therefore this additional test does not provide any basis for further explanation of this surprising result.

8.8 Using Mixture Modeling to Investigate the Impact of Opportunistic Behaviour on Relationship-Specific Investments

As mentioned in the previous sections, analysis of the relationship between the supplier’s opportunistic behaviour and the customer’s relationship-specific investments shows counterintuitive results. In order to further explore this relationship, a further analysis (i.e. mixture modeling) is performed. Mixture modeling (also called latent class analysis and latent profile analysis) is a technique, used in the context of structural equation modeling. It is based on the Bayesian approach and helps assigning cases to groups (Arminger et al. 1999; Hoshino 2001; Zhu and Lee 2001; Loken 2004; Vermunt and Magidson 2005; Lee 2007; Tueller and Lubke 2010). It has been used in a few studies, for instance in marketing looking into market segmentation (Jedidi et al. 1997; Hemphill and Kulik 2011a; 2011b) and in general organisational studies into workforce commitment (Morin et al. 2011).
Mixture modeling can assist in structural equation modeling as a complementary technique for instance when a model does not have a good fit with the entire sample, but the sample can be divided into groups in such a way that the model fits with some subgroups. Mixture modeling requires the researcher to identify the number of groups (Nylund et al. 2007). The researcher may also assign some cases to the groups (which is not relevant in this study). It is particularity useful here to explore the surprising result with regard to the relationship between opportunistic behaviour and relationship-specific investments by helping with categorising the sample into some groups and explore the relationship between these two constructs investigating their effects within each group in this research.

Both 2-group and 3-group mixture modeling were performed (using Bayesian structural equation modeling). The variance within data would be better explained by a higher number of clusters (groups). However, the maximum number of groups that would still have meaningful statistical results would be three, assuming that the analysis assigns the (331) cases to clusters almost equally. As expected 3-group mixture modeling showed more useful results in terms of explaining the surprising result with regard to the path under examination (i.e. the effect of opportunistic behaviour on relationship-specific investments: OP→RS). The modeling was performed using an SEM model with only the structural path suggesting the effect of opportunistic behaviour on relationship-specific investments. For identification purposes and enhancing the modeling power, the error variance of each item (measuring opportunistic behaviour and relationship-specific investments) and the measurement regression weight of each item were constrained within groups.
The analysis provides three sets of estimates for the clusters (i.e. groups). An estimate of the proportion of the population in each cluster and the (posterior) distribution of the proportion is provided. The distributions of all estimates (e.g. measurement and structural regression weights and the proportion of the population in each cluster) are calculated. The estimates of the mean of the structural path regression weights for clusters 1, 2 and 3 are -.313, -.099 and .082 respectively. This suggests that in cluster 1 there is a pattern with regard to the effect of opportunistic behaviour on relationship-specific investments that supports the suggested hypothesis with regard to the relationship between these two constructs, whereas in the remaining two clusters the same result is not found. Therefore, using this clustering solution can potentially provide some insight with regard to the initial surprising results.

Based on the 3-group mixture modeling solution, the cases (i.e. responses) were assigned to the three clusters. The analysis provides estimates for the proportion of the population in each cluster. As shown in Figure 8-3, the distribution measures, including the mean, standard deviation, skewness, kurtosis, maximum and minimum are provided for each cluster. These estimates (e.g. the means) advise how the sample can be classified into three groups (clusters). As shown in the figure, the estimates of the mean of the population proportion in cluster 1, 2 and 3 are 28.5%, 42.2% and 29.3% respectively. This suggests that, for instance, about 28% of the population should be assigned to cluster 1.
Additionally, the posterior predictive distribution for each cluster is provided, which estimates the probability of membership of each case in cluster 1, 2 and 3. This is used to assign cases to clusters (for instance it suggests that there is 89% chance that case #9 belongs to cluster 1, 1% to cluster 2 and 10% to cluster 3). Using these distributions, in total 311 (out of 331) cases were assigned to clusters. Only cases holding at least 60% probability for membership in a particular cluster were assigned to that cluster. This resulted in eliminating 20 cases, classifying 80 cases to cluster 1, 139 cases to cluster 2 and 92 cases to cluster 3.

A set of multiple-group analysis follows the mixture modeling in order to investigate the clusters’ characteristics and particularly the relationship between (the supplier’s) opportunistic behaviour and (the customer’s) relationship-specific investments. Three groups are identified based on mixture modeling, explained in the paragraph above. First, multiple-group analysis was performed testing whether there are significant differences between the three groups. Similar to previous multiple-group analysis solutions, described in previous sections, the goodness-of-fit $\chi^2$ was compared between the unconstrained model ($\chi^2 \text{ (df}=1352) = 2384.579, \text{ p-value} = .000$) and constrained model, that is the model with all structural
regression weights constrained ($\chi^2_{(df=1384)} = 2484.260$, p-value = .000). The comparison of the models’ fit supports the finding that there is an overall significant difference between groups ($\Delta\chi^2_{(\Delta df=32)} = 99.681$, significant at the .001 level\(^\text{14}\)). The standardised regression weights are provided for each structural path per cluster and for the whole sample in Table 8-6. The next stage tests the significance of the difference per path among the groups. This is tested by performing sixteen constrained models (in each model only one structural path constrained; see M01 to M16 in Table 8-6) and comparing their fit to the fit of the unconstrained model. Table 8-6 presents which paths showed significant difference (using $\Delta\chi^2$ for $\Delta df = 2$).

Table 8-6: Multiple-Group Analysis Using the Classification Based on Mixture Modeling

<table>
<thead>
<tr>
<th>Path</th>
<th>The Whole Sample</th>
<th>Cluster 1</th>
<th>Cluster 2</th>
<th>Cluster 3</th>
<th>C’d Model</th>
<th>$\chi^2$</th>
<th>$\Delta\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT→OT (H1)</td>
<td>.50 ***</td>
<td>.61 ***</td>
<td>.06</td>
<td>.63 ***</td>
<td>M01</td>
<td>2395.82</td>
<td>11.242 **</td>
</tr>
<tr>
<td>PT→CO (H2)</td>
<td>.70 ***</td>
<td>.84 ***</td>
<td>.63 ***</td>
<td>.69 ***</td>
<td>M02</td>
<td>2388.88</td>
<td>4.303</td>
</tr>
<tr>
<td>OT→PT (H3)</td>
<td>.14 *</td>
<td>-.14 **</td>
<td>.17 *</td>
<td>.07</td>
<td>M03</td>
<td>2389.78</td>
<td>5.205 *</td>
</tr>
<tr>
<td>OP→PT (H4)</td>
<td>-.50 ***</td>
<td>-.46 ***</td>
<td>-.73 **</td>
<td>-.26 *</td>
<td>M04</td>
<td>2406.406</td>
<td>21.827 ***</td>
</tr>
<tr>
<td>OP→OT (H5)</td>
<td>-.26 ***</td>
<td>-.02</td>
<td>-.06</td>
<td>-.12</td>
<td>M05</td>
<td>2392.913</td>
<td>8.334 **</td>
</tr>
<tr>
<td>PT→IS (H6)</td>
<td>.42 ***</td>
<td>.36 *</td>
<td>.45 ***</td>
<td>.45 *</td>
<td>M06</td>
<td>2386.566</td>
<td>1.987</td>
</tr>
<tr>
<td>OT→IS (H7)</td>
<td>.19 *</td>
<td>.34 *</td>
<td>.31 **</td>
<td>.04</td>
<td>M07</td>
<td>2388.192</td>
<td>3.613</td>
</tr>
<tr>
<td>OT→RS (H8)</td>
<td>.25 ***</td>
<td>.23 *</td>
<td>.09</td>
<td>.25 *</td>
<td>M08</td>
<td>2384.765</td>
<td>0.186</td>
</tr>
<tr>
<td>RS→CO (H9)</td>
<td>.35 ***</td>
<td>.33 *</td>
<td>.40 ***</td>
<td>.33 ***</td>
<td>M09</td>
<td>2385.879</td>
<td>1.100</td>
</tr>
<tr>
<td>OP→RS (H10)</td>
<td>.47 ***(^a)</td>
<td>-.52 ***</td>
<td>.02 (^b)</td>
<td>.25 (^c)</td>
<td>M10</td>
<td>2405.269</td>
<td>20.69 **</td>
</tr>
<tr>
<td>RS→FP (H11)</td>
<td>.19 **</td>
<td>.28 *</td>
<td>.14</td>
<td>.14</td>
<td>M11</td>
<td>2385.314</td>
<td>0.735</td>
</tr>
<tr>
<td>RS→NP (H12)</td>
<td>.12 **</td>
<td>.10</td>
<td>.05</td>
<td>.21 **</td>
<td>M12</td>
<td>2386.966</td>
<td>2.387</td>
</tr>
<tr>
<td>IS→NP (H13)</td>
<td>.18 **</td>
<td>.08</td>
<td>.23 *</td>
<td>.13</td>
<td>M13</td>
<td>2385.708</td>
<td>1.129</td>
</tr>
<tr>
<td>CO→FP (H14)</td>
<td>.45 ***</td>
<td>.32 *</td>
<td>.46 ***</td>
<td>.48 ***</td>
<td>M14</td>
<td>2386.934</td>
<td>2.355</td>
</tr>
<tr>
<td>CO→NP (H15)</td>
<td>.43 ***</td>
<td>.74 ***</td>
<td>.41 **</td>
<td>.17 *</td>
<td>M15</td>
<td>2402.780</td>
<td>18.201 ***</td>
</tr>
<tr>
<td>FP→NP (H16)</td>
<td>.42 ***</td>
<td>.21 *</td>
<td>.38 ***</td>
<td>.69 ***</td>
<td>M16</td>
<td>2396.143</td>
<td>11.564 **</td>
</tr>
</tbody>
</table>

\(\text{N} \quad 331 \quad 80 \quad 139 \quad 92\)

\(^a\) the relationship’s positivity or negativeness is in contrast to the hypothesised relationship
\(^b\) the relationship’s positivity or negativeness is in contrast to the hypothesised relationship
\(^c\) the relationship’s positivity or negativeness is in contrast to the hypothesised relationship

14 The critical value derived from the Chi-square table
The estimates presented in Table 8-6 helps studying and comparing three clusters. It is noteworthy that this investigation is rather exploratory in nature, with no propositions being tested at this stage. Additionally the size of the clusters is not large enough for meaningful statistical analysis. This analysis seeks to guide how the surprising result with regard to hypothesis H10 can be explained.

As seen in the highlighted row in Table 8-6, cluster 1 consists of cases (i.e. responses) that support the suggested hypothesis (H10), showing that opportunistic behaviour (of the supplier) has a negative significant effect on (the customer’s) relationship-specific investments. Clusters 2 and 3 contrarily show a positive effect. However, this effect is not significant within cluster 2. Here the comparison is continued with a focus on the differences between clusters 1 and 3 as two opposing clusters with regard to the particular relationship (i.e. OP→RS). In cluster 3, the impact of opportunistic behaviour on inter-personal trust (OP→PT) is also less effective than in cluster 1 (-.26* versus -.46***). This suggests that overall opportunistic behaviour has a weaker impact for cases within cluster 3. Additionally relationship-specific investments have an overall stronger effect on commitment and non-economic performance in cluster 3 in comparison to cluster 1 (RS→CO: .33*** versus .33*; RS→NP: .21** versus .10).

Furthermore, comparing the means of the constructs’ items enables investigating the potential differences between the two clusters. The results of this comparison (using SPSS 16.0) are presented in Table 8-7. The relationship-specific investments are not significantly different between two clusters. But two items among four items measuring opportunistic behaviour are significantly different between clusters 1 and 3. Overall it can be partially supported that
there is a higher level of (supplier’s) opportunistic behaviour within cases (i.e. responses) in cluster 3, which represent the surprising result.

Table 8-7: Comparison of Opportunistic Behaviour and Relationship-Specific Investments between Clusters 1 and 3

<table>
<thead>
<tr>
<th></th>
<th>Cluster 1 mean</th>
<th>Cluster 3 mean</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opportunistic behaviour</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPQ1</td>
<td>3.34</td>
<td>4.29</td>
<td>14.50 ***</td>
</tr>
<tr>
<td>OPQ3</td>
<td>3.41</td>
<td>5.60</td>
<td>1.90</td>
</tr>
<tr>
<td>OPQ5</td>
<td>4.25</td>
<td>4.87</td>
<td>0.41</td>
</tr>
<tr>
<td>OPQ6</td>
<td>3.89</td>
<td>4.75</td>
<td>8.50 **</td>
</tr>
<tr>
<td><strong>Relationship-specific investments</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSQ3</td>
<td>4.45</td>
<td>4.30</td>
<td>0.04</td>
</tr>
<tr>
<td>RSQ4</td>
<td>4.78</td>
<td>4.72</td>
<td>0.77</td>
</tr>
<tr>
<td>RSQ5</td>
<td>4.20</td>
<td>4.35</td>
<td>0.07</td>
</tr>
<tr>
<td>RSQ6</td>
<td>4.11</td>
<td>4.53</td>
<td>0.99</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td><strong>80</strong></td>
<td><strong>92</strong></td>
<td></td>
</tr>
</tbody>
</table>

The comparison between clusters 1 and 3 suggests that the cluster 3, which shows an opposite effect to that expected, are experiencing a relatively higher degree of opportunistic behaviour from the supplier. To further investigate the proposition of the effect of the level of opportunistic behaviour, the means of clusters 2 and 3 were also compared. In line with the proposition, cluster 3 has relatively higher measures in comparison to cluster 2 too (significant difference partially supported); see table Table 8-8. The table shows that among the four items measuring opportunistic behaviour, two items are significantly higher in cluster 3. Comparing the means and the significance level (of F-values) of the two groups suggests that overall the level of (the supplier’s) opportunistic behaviour is higher in cluster 3. These findings are used in the following chapter to discuss and provide some potential explanations for the initial result with regard to the effect of opportunistic behaviour on relationship-specific investments.

Table 8-8: Comparison of Opportunistic Behaviour between Clusters 2 and 3

<table>
<thead>
<tr>
<th></th>
<th>Cluster 2 mean</th>
<th>Cluster 3 mean</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opportunistic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPQ1</td>
<td>1.46</td>
<td>4.29</td>
<td>164.32 ***</td>
</tr>
</tbody>
</table>

292
Another observation is made when studying the clusters; the impact of relationship-specific investments and commitment on financial dimensions seem to be exchangeable. When relationship-specific investments do not impact outcomes (RS→FP), commitment does (CO→FP) and when commitment does not impact outcomes (CO→NP), relationship-specific investments do (RS→NP). So if one is not effective, the other one is.

In order to further investigate the characteristics of the clusters, which potentially have driven the differences, the length of the relationship is compared between the clusters. The means and standard deviations are calculated per cluster, the means between each pair of clusters (i.e. clusters 1 versus 2; 1 versus 3 and 2 versus 3) in addition to the means between each cluster and the whole remaining of the sample is compared. The results are presented in Table 8-9.

It is evident that there is a significant difference with regard to the relationship length in cluster 3 in comparison to the whole remaining of the sample (F-Value: 6.525, significant at the 0.01 level). A significant difference between clusters 2 and 3 is also supported (F-Value: 3.899, significant at the 0.05 level). A comparison of the means show that cluster 3 consist of responses with regard to relatively longer relationships (14.38 years in average in comparison to 11.18 in cluster 1 and 10.81 in cluster 2). This adds up to the previous analysis in an attempt to understand the characteristic that has driven the difference between clusters in the sample particularly with regard to the relationship between opportunistic behaviour and

<table>
<thead>
<tr>
<th>behaviour</th>
<th>OPQ3</th>
<th>1.52</th>
<th>5.60</th>
<th>14.05 ***</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPQ5</td>
<td>2.12</td>
<td>4.87</td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td>OPQ6</td>
<td>2.42</td>
<td>4.75</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>139</td>
<td>92</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
relationship-specific investments. The next chapter discusses some potential explanations using these results.

Table 8-9: Comparison of the Relationship Length between Clusters

<table>
<thead>
<tr>
<th></th>
<th>Cluster 1</th>
<th>Cluster 2</th>
<th>Cluster 3</th>
<th>The whole sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>11.18</td>
<td>10.81</td>
<td>14.38</td>
<td>11.80</td>
</tr>
<tr>
<td>STD</td>
<td>11.364</td>
<td>11.161</td>
<td>23.719</td>
<td>15.572</td>
</tr>
<tr>
<td>N</td>
<td>80</td>
<td>139</td>
<td>92</td>
<td>331</td>
</tr>
<tr>
<td>F-Value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cluster 1</td>
<td>---</td>
<td>.026</td>
<td>2.211</td>
<td>---</td>
</tr>
<tr>
<td>Cluster 2</td>
<td>---</td>
<td>---</td>
<td>3.899*</td>
<td>---</td>
</tr>
<tr>
<td>Cluster 3</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Remaining of the sample(^{(b)})</td>
<td>.353</td>
<td>1.450</td>
<td>6.525**</td>
<td>---</td>
</tr>
</tbody>
</table>

STD: Standard Deviation; N: Number of the responses
** significant at the 0.01 level; * significant at the 0.05 level
Means are in years; \(^{(b)}\) the comparison between the cluster and the remaining of the sample
9 Chapter 9: Discussion and Conclusion

This chapter discusses the findings of the research. It also presents the theoretical contributions and implications, explains the limitations, proposes some suggestions for future research and finally concludes the study.

9.1 Discussion

The test of the measurement model with the final survey shows that inter-personal trust and inter-organisational trust can be considered as two distinct constructs (by means of implementing several techniques for testing discriminant validity). Jiang et al. (2011), Fang et al. (2008) and Doney and Cannon (1997) have also provided evidence for discriminant validity between inter-organisational and inter-personal aspects of trust. Discriminant validity was not supported in the quantitative pretest in this study. As a result in the pretest the two dimensions of trust were considered as indicators of a second-order overall concept (i.e. trust), which is advisable if the two aspects of trust show a high correlation and cross-loading. In the final survey, the questionnaire was modified by more effectively distinguishing between measurement items for inter-personal trust and inter-organisational trust. This was sought by a small paragraph presented before the set of questions, measuring inter-personal trust and inter-organisational trust, asking the respondents to focus on inter-personal and inter-organisational aspects of the business relationship respectively. Additionally all the questions with regard to inter-organisational aspects (including inter-organisational trust) were represented at the beginning of the questionnaire and the set of questions measuring inter-personal test at the end. This presentation assisted in achieving discriminant validity. This confirms the relevance of some remedies suggested in the literature with regard to
implementing procedures that improve measurement items (Podsakoff et al. 2003; 2012). Also the distinction between the personal and organisational effects is confirmed, in line with findings of previous studies (Narayandas and Rangan 2004; Fang et al. 2008), by means of showing and discussing their different effects on behavioural and outcome constructs in business relationships.

The initial analysis provides support for fifteen (out of sixteen) suggested hypotheses. The embedded mediating effects in the model in addition to the moderating effects, suggested as the final hypotheses are tested. Further analysis, controlling for the size of the companies provides more insight. Overall evidence is provided with regard to those fifteen hypotheses especially in small companies, showing that inter-personal trust positively affects inter-organisational trust; both inter-personal and inter-organisational trust positively affect commitment. The other party’s opportunistic behaviour negatively affects both inter-personal and inter-organisational trust. Both inter-personal and inter-organisational trust positively affect information sharing. Inter-organisational trust positively affects relationship-specific investments. Relationship-specific investments positively affect commitment. Relationship-specific investments positively affect both financial and non-economic performance. Information sharing positively affects non-economic performance. Commitment positively affects both financial and non-economic performance and financial performance positively affects non-economic performance.

Overall the role of trust as a key concept influencing relationship outcomes is supported. This confirms the findings of previous studies showing the effect of trust on relationship outcomes (e.g. success, long-term orientation and expectation of continuity: Mohr and Spekman 1994; Geyskens et al. 1998; Zaheer et al. 1998; Palmatier et al. 2006; Jiang et al. 2009), and adds to
it by showing the role of a group of behavioural business relationship characteristics mediating this effect. Previous studies have found that trust affects cooperation (as a dyadic construct) (Palmatier et al. 2006). This study also considers (cooperative) behavioural characteristics such as information sharing and relationship-specific investments (as a monadic construct) and finds that different aspects of trust promote such behaviours (particularly information sharing affected by both inter-organisational and inter-personal trust and relationship-specific investments by inter-organisational trust). This study shows that commitment has a central role in determining relationship outcomes. Previously, scholars including Palmatier et al. (2007a) and Morgan and Hunt (1994) have found this impact. The role of relationship-specific investments as immediate precursor of relationship outcomes is also supported (in line with Palmatier et al. (2007a) and Fang et al. (2008)’s findings). The impact of trust at the inter-organisational level on relationship-specific investments is also supported (similar to results shown by Fang et al. (2008)).

The suggested negative effect of supplier’s opportunistic behaviour on relationship-specific investments was not supported. In contrast, a positive effect was observed. Previous studies have also reported an inconsistency with regard to the role of opportunism in inter-organisational relationships. Gundlach et al. (1995) investigate the role of opportunism in mediating commitment processes and do not find consistency. Additionally, Palmatier et al. (2007a) have developed a model of business relationships, using a resource-based perspective, in which the opportunistic behaviour of the other party (i.e. the supplier) is suggested to affect (the buyer) relationship-specific investment. In contrast, testing the relationship has shown a positive effect, although it is not significant. In this regard, they argued that the supplier’s opportunistic behaviour plays a role only by influencing the buyer’s trust and consequently affecting the outcomes. Our analysis also shows a counterintuitive
result. Here opportunistic behaviour not only has a positive effect on relationship-specific investments, but also this effect is significant.

The findings (particularly using mixture modeling) seek to help explaining the result with regard to the effect of (the supplier’s) opportunistic behaviour on (the customer’s) relationship-specific investments. It is found that about one-third of the sample support the hypothesis, suggesting that the supplier’s opportunistic behaviour negatively affects the customer’s relationship-specific investments. However, surprisingly about one-third of the sample shows an opposite pattern (i.e. a positive affect), while the remainder of the sample stay neutral (i.e. showing no significant effect). Two sets of findings (based on the mixture modeling results) are used to explore the responses with the opposite results; first, the relationships between other pairs of constructs in the research are studied. In the group of responses accounting for the opposite result, opportunistic behaviour affects inter-personal trust less. Relationship-specific investments have a relatively more significant effect on commitment as the central relationship construct and on non-economic performances as the ultimate relationship outcome, making a negative response to potential opportunistic behaviour by making less investments more highly disadvantageous. The second procedure (comparing the means of the constructs) found that these customers (i.e. the ones accounting for the surprising result) observe a relatively higher degree of opportunistic behaviour. They probably replace some other mechanisms to safeguard their investments. These mechanisms are potentially also a part of the investments the customers make in the relationship for monitoring the supplier, ensuring their performance and controlling their opportunism. So when they observe a higher level of opportunistic behaviour, they protect their assets (e.g. by means of contractual governance and third party monitoring (Williamson 1979; Gilliland and Bello 2002; Cavusgil et al. 2004; Ferguson et al. 2005; Heide et al. 2007)) and to signal their
interest in the relationship in an attempt to moderate the other party’s attitude towards the relationship, and create stronger bonds. This explanation is supported by the finding with regard to the length of the relationship for these responses. These relationships are characterised by relatively longer duration, have a relatively higher degree of opportunistic behaviour and benefit more highly from relationship-specific investments. So they are long-lasting relationships in which the customers benefit highly from its continuation and the investments made in it. An increase in the supplier’s opportunistic behaviour does not result in a decrease in their relationship-specific investments as a retaliatory and safeguarding mechanism. It is suggested that, contrary to expectations, they seek to moderate such behaviour by bonding the supplier into the relationship by different means, as suggested above (e.g. mutual investments as a safeguarding mechanism and positive signalling), which in practice involve more investments.

Examining the issue of creating stronger bonds in more detail, it can be argued that in a situation in which there is a risk of opportunistic behaviour, the parties try to use safeguarding mechanisms. Relationship-specific investments can make exchange partners irreplaceable, or replaceable only at a cost (Heide 1994), acting as a safeguarding approach. This can explain the surprising result provided that relationship-specific investments of the customer correlate to the relationship-specific investments of the supplier, as one-sided relationship-specific investments can be open to exploitation if not safeguarded (Williamson 1979; Ganesan 1994). The literature provides support for this assumption; the correlation between one party’s relationship-specific investments and its perception of the other party’s relationship-specific is positive and significant (Anderson and Weitz 1992), supporting the potential validity of this argument. Additionally, as a form of a pledge, a business partner may undertake an action that demonstrates good faith and binds the channel members to the
relationship (and affects the perception of the other party) (Anderson and Weitz 1992). Relationship-specific investments are one kind of such pledge. In the case of observing opportunistic behaviour from the other party, the focal partner can provide a strong signal of commitment to the other party in order to improve the mutual interest and relationship quality. Businesses “send signals that they intend to work together with channel members over the long run”. “These signals help build the level of mutual trust in a dyad” (Anderson and Weitz 1989, p. 314 and 315). Finally, it is important to re-emphasise that when opportunistic behaviour is relatively lower, it has a negative effect on relationship-specific investments as the hypothesis suggested.

Some mediating effects are embedded in the developed model. Due to the focus of this research on two aspects of trust (i.e. inter-personal and inter-organisational), the mediating effects involving these two aspects are further examined. Two further sets of analyses investigated the mediating effect of inter-organisational trust on the relationship between inter-personal trust and commitment (inter-personal→inter-organisational trust→commitment) and the mediating effect of inter-organisational trust on the relationship between inter-personal trust and information sharing (inter-personal→inter-organisational trust→information sharing). The analyses confirm the partial mediation effect within both sets of relationships and provides support for antecedent effect of inter-personal trust on both commitment and information sharing (by means of showing that the total effect is not totally due to the mediating effect of inter-organisational trust).

Testing for the moderating effects of dependence showed that, as suggested, the positive effect of inter-organisational trust on relationship-specific investments decreases as dependence increases. Also the positive effect of relationship-specific investments on
commitment decreases as dependence increases. This supports the final two hypotheses providing evidence for the role of dependence in business relationships as suggested previously in the literature (Emerson 1962; Frazier 1983b; Buchanan 1992), particularly with regard to the effects on commitment and relationship-specific investments.

In big companies the examination of some of the paths showed a difference from small companies. Four paths that were significant in the group of small companies were not significantly supported for the group of big companies. The effects of inter-organisational trust on commitment, inter-organisational trust on information sharing, relationship-specific investments on financial performance, and relationship-specific investments on non-economic performance were not statistically significant. However, they all showed a positive impact as suggested. The following paragraphs discuss these results in more detail.

The impact of inter-organisational trust on information sharing did not prove to be significant in big companies. This might be due to the higher degree of regulations in big companies, which control the kind and extent of the information to be disclosed (Inchausti 1997), influencing the effect of inter-organisational trust on information sharing. However, this effect is still positive (but not significant). On the other hand, the effect of inter-personal trust on information sharing is positive and even more significant, suggesting that although the inter-organisational aspect of trust is not influencing information sharing, the inter-personal aspect is. So if people trust the people in the other company more, they would open up and share more information, but the increase in the degree of rational reliance (i.e. inter-organisational trust) does not necessarily have such an effect in big companies.
The pattern explained in the paragraph above is evident in the paths from inter-organisational trust and inter-personal trust to commitment. Again the impact of inter-organisational trust on this concept is not significant (similar to that with regard to information sharing). But the effect of inter-personal trust on commitment in big companies (standardised regression weight: 0.725) is stronger than that in small companies (standardised regression weight: 0.583). In bigger companies additional issues might impact the effect of inter-organisational trust. Regulations (Inchausti 1997) or contractual safeguarding might be in place influencing this effect. This effect is still positive, but does not prove to be significant.

The effect of relationship-specific investments on both commitment and financial performance is different between big and small companies.Interestingly, this effect is insignificant on financial performance, but stronger on commitment in bigger companies. The effect of relationship-specific investments on non-economic performance is not supported at a significant level either (although this did not show a significant difference between the two groups of small and big companies based on multiple-group analysis). This is due to the fact that in the group of small companies the effect was also only significant at the .01 level with a low standardised regression weight (i.e. 0.18)). This suggests that when bigger companies make more investments in a relationship they consequently become more committed to it, however, they don’t necessarily gain higher financial performance. It potentially can be explained by the focus of big companies on long-term and future outcomes from the relationship, rather than immediate and current performance. Overall the model fits better with the data from smaller companies in comparison to the bigger companies (even the only path that is not significant at the .05 level encompassed a p-value of .075). The business systems in big companies are more complex (Henneberg et al. 2009), which influences how well the model explains the relationship between the considered constructs.
9.2 Theoretical Contributions

This study contributes to a body of the literature that has called for the study of trust in business relationships noting its complexity (Wilson 1995; Geyskens et al. 1998; Seppänen et al. 2007). Previous studies have distinguished between different aspects, particularly at the inter-personal and inter-organisational levels (Dwyer et al. 1987; Chow and Holden 1997; Doney and Cannon 1997; Zaheer et al. 1998; Blois 1999; Mouzas et al. 2007; Jiang et al. 2011). Previously, scholars have attempted to conceptualise inter-personal and inter-organisational aspects of trust (Blois 1999; Mouzas et al. 2007). It has been particularly emphasised in the literature that trust does not always have the predicted effect in empirical studies because the complexities of this concept are not carefully captured in the measurement phase of the research (Wilson 1995; Seppänen et al. 2007). By measuring two different aspects of trust using different sets of scales and distinguishing between them in the model, this study addresses this gap. It also contributes an understanding of how trust enhances the outcomes of the relationship, mediated by affecting commitment and promoting collaborative behaviour (i.e. information sharing and relationship-specific investments), adding both dimensions of trust into the equations.

Therefore, this study extends our understanding of different aspects of trust by empirically testing them. This adds to the limited number of studies that have sought to do so (Chow and Holden 1997; Doney and Cannon 1997; Zaheer et al. 1998; Fang et al. 2008; Jiang et al. 2011). These studies have investigated the impact of inter-personal and inter-organisational aspects of trust on loyalty (Chow and Holden 1997), the negotiation process, performance (Zaheer et al. 1998), collaboration, resource investments, financial performance (Fang et al.
2008) and long-term orientation (Jiang et al. 2011). They have also focused on finding the determinants of trust (Doney and Cannon 1997).

This study agrees with some findings in previous studies. For instance, inter-personal and inter-organisational aspects of trust proved to be two distinct constructs, similar to Jiang et al.’s (2011) finding. Investigating the role of trust at different levels in a coentity setting, Fang et al. (2008) also show that two aspects of trust operating at different levels have different effects. However, they do not test any causal relationships between them. This study adds to these studies in several ways, including showing a causal effect between the two aspects of trust. By doing so it contributes to the body of the knowledge focusing on these two aspects that calls for such investigation (Jiang et al. 2011).

This study is also differentiated from previous empirical studies into investigating two aspects of trust operating at different levels by (presenting an attitude-behaviour-outcome framework) contributing to an understanding of the impact of inter-personal trust and inter-organisational trust on different business relationship behavioural characteristics (i.e. information sharing, relationship-specific investments and commitment) and relationship outcomes (i.e. financial performance and non-economic performance). It also investigates the role of the other party’s opportunistic behaviour and the moderating impact of dependence. It additionally shows the causal effect of inter-personal trust on inter-organisational trust.

This study contributes to the literature of business marketing and purchasing by introducing and testing a model of business relationships distinguishing between two aspects of trust (i.e. inter-personal and inter-organisational). It contributes by developing an “opportunistic behaviour-attitudinal attributes-behavioural attributes-outcomes” framework shedding light
on how these groups play roles in business relationships. This bridges two main perspectives into the study of business relationships (i.e. social exchange theory and transaction cost economics), which are the major approaches informing this study. Additionally the resource-based view of firms plays a role (relatively minor in comparison to the other two approaches) in shaping the study, particularly due to its emphasis on relationship outcomes and the antecedent role of resource allocations on them. This study contributes to this perspective in terms of providing evidence for the determinants of two dimensions of relationship outcomes (i.e. financial and non-economic).

Therefore, the presented model based on an attitude-behaviour-outcome framework bridges two main streams of research (i.e. social exchange theory and transaction cost economics in the attitude-behaviour part). Particularly attitudinal characteristics consist of two aspects of trust looking at inter-personal and inter-organisational levels of this construct using a SET perspective. Commitment is also included in the model as a business relationship characteristic acknowledged by SET and its following perspectives, that are the IMP, trust-commitment and relational norms perspective (Anderson and Weitz 1992; Morgan and Hunt 1994; Kumar et al. 1995; Blois 1999; Mouzas et al. 2007; Jiang et al. 2011). Relationship-specific investments and information sharing are other behavioural characteristics (in addition to commitment) incorporated in the model using a TCE perspective (Heide and John 1988; 1992); The antecedent role of opportunistic behaviour is also included in the model based on this perspective (John 1984; Parkhe 1993). This study contributes to these two perspectives by bridging them and gaining insight from one into the other. The resource-based view also has a relatively minor role in development of this study’s model. Being informed by this perspective this study’s framework is completed by consideration of the relationship outcomes (Palmatier et al. 2007a). How this study contributes to each perspective discussed
Transaction cost economics (Williamson 1975) and the relational norms perspective (Heide and John 1992), which is also rooted in transaction cost economics, focus on the cooperative behaviours in business relationships. They support the relevance and importance of relationship-specific investments (Williamson 1975; 1979; Heide and John 1992) and information sharing (Williamson 1979; Heide and John 1992; Heide and Miner 1992) in business relationships. The relational norms perspective incorporates the role of social dimensions in business relationships by emphasising the importance of social norms. This study extends these perspectives by investigating and confirming the impact of both inter-personal trust and inter-organisational trust on relationship behavioural characteristics. This study contributes to these two perspectives by showing the relevance of these two aspects of trust when explaining the behavioural characteristics and showing that inter-personal and social relationships play a significant role in business relationships, in addition to the inter-organisational and structural dimensions. Furthermore, transaction cost economics emphasises the role of opportunism (Williamson 1985). However, the relational norms
perspective challenges this emphasis (Heide and John 1992). In this study the impact of opportunistic behaviour on attitudinal characteristics (i.e. inter-personal trust and inter-organisational trust) is suggested and tested. The antecedent role of opportunistic behaviour of the other party on two dimensions of trust is identified. An additional relationship (i.e. the negative effect of opportunistic behaviour on relationship-specific investment) is also suggested and tested. This relationship is not supported. This suggests that the role of opportunistic behaviour in business relationships needs further investigation. This finding additionally supports the relational norms perspective, which challenges the focus on opportunistic behaviour. However, the impact of opportunistic behaviour on aspects of trust and their effect on behavioural and consequently on outcome characteristics are supported. This supports the mediating role of trust in the relationship between opportunistic behaviour and behavioural characteristics and re-emphasises the significance of the role of trust (at both levels).

Social exchange theory assumes that the role of social interactions and inter-personal relationships is critical in exchanges such as business relationships (Blau 1964; Emerson 1981). Both social and structural characteristics are considered as influential factors when examining business relationships (Wilson 1995; Blois 1999). This study tests the role of trust with consideration of these two aspects (social, i.e. inter-personal, and structural, i.e. inter-organisational,) and confirms their relevance. Therefore, this study contributes to social exchange theory by empirically testing and confirming its underlying assumptions. It confirms the difference between inter-personal trust and inter-organisational trust suggested by previous studies based on SET. This study confirms the proposition made by social exchange theory that emotions and feelings (the source of inter-personal trust) play a role in business relationships, which involve social exchanges (Thibaut and Kelley 1959). This
study, furthermore, develops SET by testing and supporting the impact of these two aspects on behavioural characteristics (i.e. commitment, relationship-specific investments and information sharing) and relationship outcomes (financial and non-economic performance). This study investigates the impact of dependence and by doing so it confirms the role of this construct in line with the dependence perspective (El-Ansary 1975) (considered as one of the theories derived from the social exchange perspective). This study shows that there is a positive relationship between inter-organisational trust and relationship-specific investments and relationship-specific investments and commitment. However, these relationships, forming a pertinent path (i.e. inter-organisational trust → relationship-specific investments → commitment) are moderated by dependence: as the degree of dependence increases the positive relationship between these constructs decreases.

The resource-based view emphasises implementation of strategies that enable firms to gain competitive advantages accessing and managing resources productively and profitably (Wernerfelt 1984; Barney 1986). This study contributes to this perspective by developing a framework that incorporates two different groups of characteristics (i.e. attitudinal and behavioural) that play a role enhancing business relationship outcomes. Particularly it shows that firms can achieve superior outcomes and enhance their competitive advantage by establishing and managing trust-based relationships, which allow them to make investments and share information with the purpose of improving the relationship outcomes and creating value. Both inter-personal trust and inter-organisational trust enhance commitment and relationship cooperative behaviour (specifically inter-personal trust influences commitment and information sharing; and inter-organisational trust influences commitment, information sharing and relationship-specific investments). These behavioural attributes consequently improve the relationship performance (specifically commitment and relationship-specific
investment influence both financial and non-economic performance; and information sharing influences non-economic performance).

Additionally, key mediating effects in the model were tested. In particular evaluation of the mediating effect of inter-organisational trust on the relationship between inter-personal trust and other characteristics (i.e. commitment and information sharing) further contributes to social exchange theory. This examination shows that although inter-personal trust influences behavioural characteristics in business relationships, it is mediated by inter-organisational trust. This suggests that these two aspects of trust can lead to these cooperative behaviours when present in tandem with each other. On the other hand inter-organisational trust is the only aspect of trust that influences relationship-specific investments. This is due to the nature of inter-organisational trust; this aspect of trust is sourced in rationality (whereas inter-personal trust is sourced in emotions) (Mouzas et al. 2007). Therefore it is strongly linked to ‘hard’ behavioural characteristics such as relationship-specific investments (as suggested previously by scholars (Nielson 1998; Fang et al. 2008)). On the other hand, ‘soft’ behavioural characteristics (i.e. information sharing and commitment) are influenced by both inter-personal and inter-organisational trust (in line with previous studies (trust aspects influencing commitment: Narayandas and Rangan 2004; Palmatier et al. 2007a); (trust aspects influencing information sharing: Dyer and Singh 1998; Zaheer et al. 1998)). For instance, inter-personal trust facilitates person-to-person communication and encourages informal exchange of information as a form of ‘soft’ business interactions. Previous studies have also shown that informal networks are influential on soft business practices such as knowledge transfer (Reagans and McEvily 2003).
However, using different perspectives in an integrated model involved challenges. This research, based on social exchange theory, considers two different aspects of trust (i.e. interpersonal and inter-organisational) in business relationships. The effect of these aspects of trust (operating at different levels) on behavioural characteristics (using transaction cost economics) are hypothesised and tested. As explained in the previous paragraph, hypotheses suggested a relationship between inter-personal trust (the emotion-based aspect) and soft behavioural characteristics. They also suggested relationships between inter-organisational trust (the rationality-based aspect) and (both soft and hard) behavioural characteristics. This suggests that all business behaviours are rational; soft behaviours are also influenced by emotions and sentiments. However, the distinction between soft and hard characteristics and behavioural decisions is a challenging task as organisations comprise human beings (managers, employees, stakeholders) and all business decisions are made by individuals, who are never entirely deprived from their emotions (Lawler and Yoon 1996).

Furthermore, the surprising result with regard to the relationship between opportunistic behaviour and relationship-specific investments can indicate another challenge when using different theories together. As described in the analysis and discussion sections the (negative) effect of opportunistic behaviour of the other party on two aspects of trust is supported. Additionally the (positive) effect of trust (at inter-organisational level) on relationship-specific investments is supported. However, the suggested (negative) effect of opportunistic behaviour on relationship-specific investments is not supported. One possible reason might be that that opportunistic behaviour is collected at individual level rather than organisation. Further investigation regarding this result, suggests that the role of opportunistic behaviour is different from what was expected. The emphasis on the effect of trust, at two different levels, on behavioural characteristics inhibits the effect of the other party’s opportunistic behaviour.
on those characteristics. Probably these business relationships have already incorporated the
effect of opportunistic behaviour, controlling for its effect on behavioural characteristics. So
opportunistic behaviour might be given and safeguarded in ways not incorporated into this
study’s model. Finally the size effect shows that the model has a better fit with responses
from smaller companies. The business model of bigger companies is more complicated,
particularly when combining different theories and incorporating different constructs at
different levels due to multiple relationships that exist.

In summary, this study provides evidence for the role of two different aspects (i.e. inter-
personal and inter-organisational) of trust in business relationships. It also supports the
suggested overall framework of attitude-behaviour-outcome in business relationships. This
study investigates the causal relationship between inter-personal and inter-organisational
aspects of trust. The findings support the positive effect of two aspects of trust (as attitudinal
characteristics) on behavioural characteristics, inter-personal trust impacting on commitment
and information sharing while inter-organisational trust impacting commitment, information
sharing and relationship-specific investments. The effect of behavioural characteristics on
relationship outcomes is supported, commitment and relationship-specific investment
influencing both financial and non-economic performance, while information sharing
influencing non-economic performance, all in a positive way. The negative effect of the other
party’s opportunistic behaviour on trust dimensions is found, while its effect on relationship-
specific investments showed some variance among responses. The negative effect was
supported in a number of responses, as expected. However, surprisingly a positive effect was
also found in a group of responses that were characterised by having relatively longer
relationships with the supplier and observing a higher degree of opportunistic behaviour;
additionally relationship-specific investments had a stronger effect on its consequences.
within this group. Potential explanation with regard to the pattern found in this group was discussed.

9.3 Managerial Implications

Businesses seek to enhance their performance by means of successfully managing business relationships (with both suppliers and customers). This study shows that they can enhance their performance by the way they behave in their relationships. They would be able to enhance their financial performance (i.e. sales growth, profit growth and profitability) by allocating specific assets to the relationship with their suppliers. They would be able to enhance the financial performance in addition to the worth and productivity of the relationship (in terms of improving their competitiveness and innovativeness and gaining valuable contacts in the business network) by providing their suppliers with relevant information, which can help them. It contributes to previous implications of business marketing practice, which have recommended that high level of collaboration can enhance firms’ performance as the success of business partners depends on that of each other in part (Anderson and Narus 1990; Powell et al. 1996; Dyer 1997; Jap 1999; 2001). However, this is dependent on the appropriate selection of suppliers whom they can trust, as trusting the supplier (i.e. in terms of both trusting the people with whom they are dealing with and relying on their organisational competence and capability) permits and promotes collaborative behaviour.

On the other hand, firms attempt to successfully manage their relationships with their customers. By increasing how much the customers trust them they can promote the way they behave in the relationship (being more willing to make investments and provide helpful
information), which consequently improves their business together. Both inter-personal trust and inter-organisational trust play roles in enhancing collaborative behaviour. Ensuring the customer that they possess competencies and capabilities required for meeting their expectations enhances their willingness to allocate relationship-specific assets and share information. Enhancing the degree to which the customer trusts the supplier’s frontline people encourages the customer to openly share helpful information. This has further implications with regard to selecting and training the personnel, including those who deal with customers directly. This will be discussed in the following paragraphs.

Businesses seek higher performance by improving their relationships with other businesses. Staff behaviour and mindset are of significant importance to organisations. Business relationships are influenced by the behaviour and viewpoint of the employees who deal with outsiders, who are the organisation’s public face for stakeholders. Therefore organisations train their employees who interact with other firms (e.g. salespeople). Consideration of level issues help companies to better design their staff trainings. Discrepancies and misalignment between corporate and staff viewpoints have a negative impact on business relationships and networks (e.g. Anisimova and Mavondo 2010). As another example, it has been shown that there is a significant association between contact personnel (a personal level concept) and corporate image (an organisational level concept) (Nguyen and Leblanc 2002). The increased attention to long-term business relationships has an impact on employee (e.g. selling people) management issues, such as their selection, training, evaluation and compensation (Weitz and Bradford 1999).

Personnel dealing with customers at various organisational levels contribute to enhancing customers’ trust. The understanding of customer and market orientation (Kohli and Jaworski
1990; Narver and Slater 1990) and its implementation is the backbone for building a trust-based relationship. This should be guaranteed by all activities and processes that play a role in meeting customers’ expectations, such as intra-firm collaboration (within internal departments) (Smirnova et al. 2011) and inter-firm integration (through marketing channels) (Esper et al. 2010). Additionally conveying benevolence and sincerity should be pursued by the staff dealing with the customers. Therefore, it is advisable to select employees that have the manner to demonstrate trustworthiness and the capacity to transmit the strengths and capabilities of the firm. Training the employees with the purpose of developing these characteristics is also effective. The training programs should also create an awareness with regard to the negative effects of opportunistic behaviour on trust.

Personnel should realise that signalling trustworthiness (with the purpose of building inter-personal trust), is effective in encouraging collaborative behaviour, commitment and enhancing relationship performance. However, it is in part mediated by ensuring the business partner with regard to organisational competencies (with the purpose of building inter-organisational trust).

The recommendations above are comprehensively valid with regard to small companies. There are some differences with regard to relationships with big and small companies, which influence how they can be effectively managed. Overall big companies have a more complex business relationship model. The impact of inter-organisational trust on both commitment and information sharing, and that of relationship-specific investments on financial and non-economic performance is not as effective in big companies. On the other hand with regard to big customers, inter-personal trust has an effect on commitment and information sharing stronger than that with regard to small customers. This may be due to the fact that the impact
of regulations to some extent replaces the effect of inter-organisational trust on some behavioural characteristics. However, inter-personal trust serves effectively to promote those characteristics. These considerations are valuable in successfully managing customer relationships. This, similar to some previous studies (e.g. Anderson and Weitz 1989), highlights the importance of inter-personal aspects in business-to-business relationships.

9.4 Limitations and Future Research

It is noteworthy that this study has been carried out by means of data collection at one side of the relationship (the buyer-side). In order to fully understand any business relationship, the consideration of both sides’ perspectives (buyer and supplier; so called ‘dyadic’) is highly beneficial. Since the much earlier studies in the area of inter-organisational research, the significance of studying inter-organisational phenomena with a departure from a focal organisation concentration and focus on the dyad as the unit of analysis has been emphasised (Benson 1975). Some scholars have incorporated this perspective in their studies (Anderson and Weitz 1992; Deshpandé et al. 1993; Anderson et al. 1994; Deshpandé et al. 2000; Rodriguez and Wilson 2002; Straub et al. 2004; Svensson 2004; Blesa and Bigné 2005; Zhao and Cavusgil 2006; Klein et al. 2007). In this study one construct (opportunistic behaviour of the other party) was also incorporated in the model in an attempt to address this limitation to a degree. However, this was the focal company (i.e. the customer)’s perspective with regard to opportunistic behaviour of the other party (i.e. the supplier). Only a dyadic data collection, incorporating both buyer and supplier perspectives, can appropriately address this issue. Further research should investigate the examined issues with a dyadic approach.
It is additionally recommended to look beyond buyer-supplier dyads into business networks (Håkansson and Ford 2002; Ritter et al. 2004; Mouzas et al. 2008; Håkansson et al. 2009; Henneberg et al. 2010). To extend this study, it is suggested to seek to develop the understanding of trust in business relationships considering its network-related aspects. Future research should examine the role of different aspects of trust operating at the individual, organisational and network levels. Designing research with a network as a unit of analysis further benefits the field.

In this study the CFA marker technique (Podsakoff et al. 2003; Richardson et al. 2009; Podsakoff et al. 2012) was not used to test the common method variance. This technique requires a measured variable as a theoretically irrelevant marker construct. Instead the unmeasured latent method construct was used, which is based on comparison of the fit of nested models (similar to the CFA marker technique) (Podsakoff et al. 2003; Richardson et al. 2009; Podsakoff et al. 2012). It was not possible to run a CFA marker test in this research due to the lack of an appropriate marker variable.

The role of a number of business relationship characteristics and constructs are not included in this study. The study does not directly incorporate communication (Mohr and Nevin 1990; Mohr et al. 1996; Prahinski and Benton 2004; Sindhav and Lusch 2008; Joshi 2009), power (Emerson 1962; El-Ansary 1975; Cook and Emerson 1978; Cox 2001; Leonidou et al. 2008), or different aspects of commitment (e.g. affective and calculative) (Kumar et al. 1995; Gilliland and Bello 2002; Ganesan et al. 2010). However, this study considers information sharing, which has a conceptual overlap with communication (Morgan and Hunt 1994; Cannon and Homburg 2001; Leonidou 2004; Palmatier et al. 2007a). This concept is selected as it can be more appropriately conceptualised with one direction. This fits well with the
design of this study with a focus on behavioural characteristics of the focal company. Communication is, in contrast, conceptualised as a bi-directional (Mohr et al. 1996) and two-way phenomenon (Anderson and Weitz 1992). An extended argument with regard to this choice was presented in section 4.5.

Power (Emerson 1962; El-Ansary 1975; Cook and Emerson 1978; Cox 2001; Leonidou et al. 2008) is not considered in the model either. Dependence is included; dependence and power can be considered as two related concepts (Provan et al. 1980). Additionally the size of the company, which is included in the analysis, can be a proxy for perceived power. Therefore, dependence and the size of the company can to some degree account for power in the model. Commitment is included in the study as an overall concept. The selection of the concepts was discussed in greater detail in chapter 4 (model development). As argued, the concepts have been chosen with a focus on trust (and particularly its two aspects: inter-personal and inter-organisational) and the study’s overall attitude-behaviour-outcome framework (see Figure 4-1: The Model Overview).

The findings with regard to the impact of the perception of the other party’s opportunistic behaviour on relationship-specific investments was opposite to what was suggested in this study; showing a positive significant effect (it was hypothesised to be negative). Some potential explanations were presented. However, further research can help to explain this surprising result. The comparison of two groups of big and small companies showed that in big companies, having more complex business systems (Henneberg et al. 2009), the fit of the suggested model is not as good as in small companies. Some explanation for this difference was provided. Future research should seek investigating this issue in greater detail.
Future study should investigate different antecedents of inter-personal trust and inter-organisational trust. Such a study should seek to understand the determinants of inter-personal trust (e.g. personnel likability (Doney and Cannon 1997) and social bonding (Doney and Cannon 1997; Rodriguez and Wilson 2002)) and those of inter-organisational trust (e.g. firm’s reputation and size (Doney and Cannon 1997), contractual safeguarding (Mouzas et al. 2007), control mechanisms (Das and Teng 1998) and structural bonding (Rodriguez and Wilson 2002)).

The causal relationship between inter-personal trust and inter-organisational trust was tested in this study, finding that inter-personal trust positively effects inter-organisational trust. However, there is potentially a significant causal relationship between these two constructs in a reverse order as well, that is inter-organisational trust having a significant positive effect on inter-personal trust. Such a two-way causal relationship is suggested in the literature (Doney and Cannon 1997; Zaheer et al. 1998). Future research, especially by means of reciprocal model analysis (Jöreskog and Sörbom 1993; Wong and Law 1999) (which has been used in a few studies for instance in marketing looking into consumer trust (Sirdeshmukh et al. 2002) and in other areas such as health care (Ahmed and Mosley 2002)) should shed light on this issue. This is discussed in greater detail in the following sub-section.

### 9.4.1 Reciprocal Effect Analysis

In this study, the relationship between inter-personal trust and inter-organisational trust is examined, suggesting and testing whether inter-personal trust positively affects inter-organisational trust, in line with the extant literature (Doney and Cannon 1997; Blois 1999; Narayandas and Rangan 2004; Mouzas et al. 2007). There is also support with regard to the
positive effect of inter-organisational trust on inter-organisational and a reciprocal impact among different aspects of trust (Doney and Cannon 1997; Zaheer et al. 1998; Currall and Inkpen 2006) advocating a reciprocal and bi-directional effect between inter-personal and inter-organisational trust. There are a few studies in the literature that have tested reciprocal effects among constructs in marketing (Sirdeshmukh et al. 2002) and health care (Ahmed and Mosley 2002) literature. Testing such a reciprocal effect based on SEM involves developing and testing non-recursive models (Jöreskog and Sörbom 1993; Wong and Law 1999) for instance by means of comparing the reciprocal effect to the direct effects (see Sirdeshmukh et al. 2002). Future research using such a technique should investigate the impact of inter-personal and inter-organisational trust and contribute towards better understanding of these two aspects of trust. The author of this dissertation wishes to study this effect following her PhD research.

9.4.2 Seemingly Unrelated Regression Models

When there are strong linkages between constructs, the error terms can be correlated. Seemingly Unrelated Regression (SUR) allows such equations and uses the correlation in errors across equations. Conceptually it is assumed that some common unobserved variables affect the set of equations. When there is a possibility of some common factors influencing the disturbances in different equations that have not been specified explicitly, use of seemingly unrelated regression is helpful (Zellner 1962; Johnston and DiNardo 1997; Greene 1998; Menon et al. 1999). SUR models have been used in marketing investigating issues such as e-business adoption (Wu et al. 2003), job performance (Christen et al. 2006), marketing capabilities (Vorhies et al. 2009) and marketing managers’ conflict-handling behaviours (Song et al. 2000).
With regard to the constructs in this study, a pro-successful relationship (e.g. pro-trust-based relationship) bias can influence the respondents’ perception and therefore affect the equations’ errors. In the pretest (discussed in section 5.3.2: Stage Two: Quantitative Pretest) some cross-loading and strong linkages between items measuring trust-related constructs has been observed. Such an observation can be further examined by means of SUR models incorporating and testing the correlation between error terms. Testing the developed model and its underlying hypotheses using another technique such as seemingly unrelated regression helps to examine the robustness of the model and provides additional insight examining the error terms’ correlations. The author of this dissertation wishes to incorporate this technique to further investigate the effects of the constructs in this study following this PhD research.

9.5 Conclusions

Whereas traditionally business relationships have been studied by examining attitude-outcome relationships (e.g. trust-commitment theory based on social exchange theory: Morgan and Hunt 1994), and behaviour-safeguarding relationships (e.g. transaction cost theory: Williamson 1979), there is an ongoing attempt to bridge these two perspectives (Palmatier et al. 2007). On the other hand, in spite of the vast literature exploring the role of trust in inter-organisational relationships, there is an increasing attempt to shed light on how different aspects of this concept plays different roles in such relationships (Fang et al. 2008). This study addresses these issues by examining the role of two dimensions of trust (i.e. interpersonal and inter-organisational) and their interplay with commitment as a critical construct in ongoing business relationships. In addition, considering the attitude-behaviour-outcome relationships, the influence of trust dimensions on relationship behavioural characteristics
(relationship-specific investments and information sharing in addition to commitment) is examined. Consequently the impact of behavioural characteristics on relationship performance dimensions (i.e. financial performance and non-economic (soft) performance) is tested. Incorporating the other side of the relationship behaviour and its influence on trust dimensions, the antecedent role of opportunistic behaviour and the moderating role of dependence are examined. The length of the relationship is tested as a control variable and the model is tested controlling for the size of the company.

All hypothesised relationships, except for the relationship between opportunistic behaviour and relationship-specific investments, are supported significantly in the sample. This suggests that inter-personal trust influences inter-organisational trust; and that both trust dimensions influence commitment positively. Both dimensions of trust influence information sharing positively. Inter-organisational trust influences relationship-specific investments positively. Relationship-specific investments influence commitment positively. Behavioural characteristics influence relationship performance consequently, with information sharing impacting on soft performance and relationship-specific investments impacting positively on both financial and soft performance. The antecedent role of supplier opportunistic behaviour on inter-personal and inter-organisational trust is also supported significantly in a negative way. Supplier opportunistic behaviour influences relationship-specific investments significantly, but in a positive way, in contrast to the hypothesis suggested. The discussion section provided some potential explanations for this surprising result.

The remaining hypotheses are all supported. Commitment impacts on both financial and soft performance in a positive way and financial performance positively affects soft performance. Finally dependence moderates the relationship between inter-organisational trust and
relationship-specific investments and between relationship-specific investments and commitment, as dependence increases these two relationships decrease. Controlling for the size of the company shows that some aspects are not proving as strong in big companies, showing variance between big and small companies. The overall model of big companies’ business relationships are more complex and some impacts are not effective (i.e. the impact of inter-organisational trust on commitment and information sharing, and the effect of relationship-specific investments on financial and non-economic performance). Some potential explanation for these variances was discussed in previous sections.

Managers at supplier companies should be aware of the impact of customer trust on customer commitment and relational behaviour. Suppliers can improve cooperative behaviour by improving customer trust at both the personal and organisational level. They should avoid opportunistic behaviour that decreases the level of trust and commitment and endangers the continuation of the relationship. Customers on the other hand can enhance the supplier relationship performance by engaging in high-trust relationships, which supports their cooperative behaviour in terms of making relationship-specific investments and sharing information with the supplier.

This study provides evidence for the role of two different aspects of trust (i.e. inter-personal and inter-organisational) in business relationships. Overall it supports the suggested attitude-behaviour-outcome framework of business relationships. It also draws attention to some variances between big and small companies in terms of their business relationship models.
References


