RELATIONAL GOVERNANCE FORMS AND FIRM PERFORMANCE:

THE ROLE OF UNILATERAL AND COLLABORATIVE CAPABILITIES

by

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ABSTRACT

Firms in today's market environment compete as members of business-to-business relationship networks more commonly than as vertically integrated stand-alone entities. The core structure of those networks are the relational governance contracts between firms, which may be explicit (detailed), normative (informal), or a hybrid of both. The theories of how and why firms engage in such collective competition include transaction costs economics, and the resource-based view of the firm. While there are stark distinctions between these views, there are also commonalities. By deconstructing relational governance and supply chain management literature, this research proposes a broader view of the capabilities and structures that firms leverage to compete collectively, identifying a series of unilateral capabilities (internal to each firm), collaborative capabilities (derived from interactions between partnering firms), and relational contextual factors (imposed by the markets partner firms compete in and the characteristics of each relationship). Employing qualitative interviews and structural equation modeling to analyze firms involved in business-to-business relationships, this research finds that unilateral capabilities, collaborative capabilities, and relational contextual factors jointly shape value outcomes that firms experience as a result of business-to-business relationships. Futher, the effect of such capabilities and contextual factors is influenced by the tendency of firms to employ more explicit or more normative relational governance contracts. This research offers another step in integrating the transaction cost and resource-based theories, proposes a new way for scholars to examine the capabilities by which business relationships are built and managed,

and provides practitioners means of examining how effectively their practices fit with their capabilities in managing inter-organizational relationships.

LIST OF ABBREVIATIONS AND SYMBOLS

a	Cronbach's index of internal consistency
df	Degrees of freedom: number of values free to vary after certain restrictions have been placed on the data
χ^2	Chi-square Value: A measure of the significance of difference between statistical values
M	Mean: the sum of a set of measurements divided by the number of measurements in the set
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
γ	Gamma: the standardized path loading relationship of an exogenous variable with an endogenous variable in a structural equation model
β	Beta: the standardized path loading relationship of one endogenous variable with another endogenous variable in a structural equation model
r	Pearson product-moment correlation
t	Computed value of *t* test
$\leq$	Less than
=	Equal to

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I'm sure the interested reader of this is eager to get past my maudlin ramblings, and on to the absolutely mesmerizing research that follows.

Walking with a friend in the dark is better than walking alone in the light.

Helen Keller

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CHAPTER 1

INTRODUCTION

In today's business environment, firms more commonly compete as parts of a supply chain in business-to-business (B2B) relationships rather than as vertically integrated entities (Christopher 2005; Christopher and Towill 2000; Johnson and Lawrence 1988; Vickery, et al. 2003). As a result, understanding how firms coordinate their activities to develop superior performance outcomes is of critical importance to marketing scholars and practitioners. Scholars in different disciplines bring different theoretical views to the question of how firms pool their efforts by structuring B2B relationships (Williamson 2008).

The goals motivating firms to enter B2B relationships are often multidimensional, encompassing a wide range of objectives, including attainment of efficiencies and acquisition of external, complementary resources (Goerzen 2007; Gulati 1995). From a relational network perspective, it has been proposed that B2B relationships "take on a life of their own", with distinct capabilities arising from the relationship (Dyer and Singh 1988). The central question of this research is by what mechanisms do individual firms manage those relationships in a manner that influence performance outcomes?

Relational governance literature, grounded in Transaction Cost Economics (Williamson 1981), suggests that firms evaluate the costs of an exchange to set appropriate boundaries

between B2B partners to offset uncertainty in the make, buy, or make & buy (make/buy) decision (Heide 1994; 2003; Heide and John 1992; Heide, et al. 2007). Alternatively, supply chain management scholars, often working from Resource-Based theory (Barney 1991); have pointed to integration and collaboration as tools through which one achieves better firm performance (Chen, et al., 2009; Mentzer, et al., 2001; Olavarrieta and Ellinger, 1997). Although there are differences in the basic views of the governance and supply chain management literature streams, both are ultimately concerned with how and why firms coordinate their efforts to develop consolidated competitive offerings (Williamson 2008). Deconstructing governance and supply chain management literature offers a means of examining B2B relationships in a broader way, and a means of achieving a deeper, more meaningful integration of the two research approaches and their grounding theories. This research offers a view of the influences on the B2B relationship structures as an interaction of unilateral capabilities and collaborative capabilities, subject to relational contextual factors common to both capabilities.

As transaction cost economics (TCE) has tended to focus on maximizing firm efficiencies (Ménard 2004), while supply chain management (SCM) has usually concerned itself with cooperation (Chen, et al. 2009; Mentzer, et al. 2001), it is tempting to view a term like unilateral as another word for TCE, and a term like collaborative as another phrase for SCM, but that is not the case. There are points of intersection in the constructs that have been used to describe both of these domains (Williamson 2008). This research will also seek to demonstrate common

influences on both the efficiency-oriented and cooperative capabilities that are part of the context of any business-to-business relationship.

The overarching motivation of this research is to explore the question of why firms organize their B2B relationships in the manner that they do. The specific goal of the study is to offer a theoretical integration of the maximization capability-based approaches represented by TCE scholars, and a cooperative capability view represented by SCM and interorganizational scholars. Based on this integration, the study will demonstrate that both unilateral collaborative capabilities, interacting with one another and relational contextual factors, are used to derive firm performance through the instrument of relational governance structures.

CONTRIBUTION

The importance of this research is reflected in several calls for research. Williamson (2008) points out differences, such as the view of trust, between unilateral and collaborative perspectives and recommends a comparison of these points of view. Although Ghosh and Fedorowicz (2008) found a role for trust in governance frameworks in a case study, only limited empirical work has been offered in support of their conclusions (Zaheer and Venkatraman 1995). More research is needed on the different governance forms and the outcomes they yield (Ménard 2004), and Richey, et al. (2010a) question how the environment of B2B relationships influence the form of governance selected by firms in those relationships. Additionally, Wathne and Heide

(2004) call for further research on how governance forms are used to manage B2B relationships and the specific properties of such mechanisms. In examining norms and incentives, Kumar, et al. (2011) pointed out a need for more research into "the effects of different governance mechanisms by considering a given firm's competencies in using them," (pp. 13). Thus, there is a need in the literature for additional attention to the ways in which firms chose relational governance forms, the capabilities those governance forms require, and they ways in which those governance forms interact with the relational contextual factors with which all firms must contend.

Although efforts at integrating transaction cost and resourced-based theory has occurred in the literature, it has focused on specific contexts - outsourcing and technological capabilities (Mayer and Salomon 2006) and the role of individuals on one side of the interorganizational dyad (Davis, et al. 1997) - on resources as unilateral constructs in building capabilities (Griffith and Harvey 2001) – or has attempted to view resources and constructs associated with a collaborative view of B2B relationships as stemming from a unilaterally based perspective (Ghosh and John 2005; Ghosh and Fedorowicz 2008; Zaheer and Venkatraman 1995). This research will seek a broader, more fundamental point of common ground between the two theories by identifying elements that separate transaction cost economics views from resource-based views, and just as importantly, identifying elements the two have in common.

THEORETICAL DOMAIN

As the introduction of this research demonstrates, the mechanisms by which firms jointly influence performance outcomes and issues of such mechanisms have been of long time interest to both supply chain management and relational governance scholars. However, there are differences in the source theories and assumptions about relationships between the relational governance and supply chain management domains of research (Williamson 2008). Therefore, exploration of relationship management mechanisms at work in coordinating B2B relationships requires an understanding of the theoretical foundations of both governance and supply chain management scholarship.

Governance literature often cites Transaction Cost Economics (TCE) as a theoretical source (Leiblein 2003; Poppo and Zenger 2002; Williamson 1998; Zaheer and Venkatraman 1995). TCE is a view of the firm as an efficiency-maximizing entity that focuses on the "transaction as the basic unit of analysis and holds that an understanding of transaction costs economizing is central to the study of organizations" (Williamson 1981, pp. 548). TCE has been characterized as an attempt "to push beyond the theory of the firm as a production function (which is a technological construction) into a theory of the firm as a governance structure (which is an organizational construction)" (Williamson 1998, pp. 23), by examining the way in which the effort to economize costs as the main case of firm activities "resides in the details of transactions and governance" (Williamson 1998, pp. 53). The influences of interest in governing

firm actions according to TCE are “the lens of the contract, the description of human actors,” and “positive transaction costs” (Williamson 2008, pp. 5).

A distinction, however, must be drawn between relational governance and transaction cost economics. Relational governance studies grew out of TCE literature and the two terms - governance and TCE - have sometimes been used interchangeably. However, relational governance has been described as the means by which firms establish joint mechanisms to give form to B2B structural resources that can be leveraged to produce value (Ménard 2004; Williamson 1998). TCE, on the other hand, is a theoretical view of the firm as an efficiency-seeking entity that optimizes its outcomes through economizing the transactions required to obtain needed inputs in the make/buy decision (Williamson 1981).

Another distinction that is important to draw is between relational governance as an academic discipline, and as a construct that influences B2B relationship structures. The relational governance domain has a rich body of literature, which has not fully been integrated with SCM concepts (Williamson 2008). Relational governance forms, on the other hand, describe the contracts - or means by which actors establish a common understanding of the obligations each party assumes, and the benefits they may extract, as a consequence of participating in a relationship – that define relationships (Lusch and Brown 1996; Ménard 2004). Therefore, to minimize confusion, this research will characterize the relational governance forms as *governance contracts*. How the governance contracts relate to SCM will be discussed in more detail in Chapter Three.

SCM literature often relies on the Resource-based View of the Firm (RBV) as its theoretical lens (Kim, et al. 2006; Martens, et al. 2011; Min, et al. 2008; Richey, et al. 2010b; Stank, et al. 2005). Drawing from Penrose (1959), Barney (1991) and Wernerfelt (1984), Olavarrieta and Ellinger (1997) characterized RBV as a view of firms as "bundles of resources," including "all inputs that allow the firm to work and to implement its strategies (pp. 561)…which translate into sustained superior performance (pp. 564)." Thus, RBV describes the manner in which firms bundle resources that are rare, valuable, inimitable, and substitution-resistant into organizationally specific capabilities associated with attaining competitive advantage in a given market (Barney 1991; Olavarrieta and Ellinger 1997; Wernerfelt 1984). RBV has been used as a source of theory in supply chain management investigations of integration (Chen 2004; Hult et al., 2005; 2006; Kim et al. 2006; Stank, et al. 2005), knowledge (Hult, et al. 2006; Stank, et al. 2005; Zsidisin, et al. 2003; Rosenzweig and Roth 2007) and relationship quality (Paulraj and Chen 2007; Richey, et al. 2010b; Wagner 2006).

Examining relational governance and SCM literature illuminates obvious differences between the domains. Relational governance, rooted in TCE, focuses on individual-firm outcome maximization and inter-firm barriers (Williamson 1981), while SCM is concerned with cooperation among a larger body of firms for mutual gain (Mentzer, et al. 2001), yet both concern themselves with how firms coordinate their efforts in business-to-business relationships. Thus, this research looks to expand knowledge in both of these domains by determining how the capabilities described by both of these domains interact to contribute to firm value.

PURPOSE OF THE RESEARCH

The overarching goal of this dissertation is to examine and better define the relational capabilities that firms employ in pursuit of superior performance through establishment and maintenance of business-to-business relationships. The general goal of the research is to determine what capabilities the firm employs along with the influence of additional factors that comprise the context of a relationship and, following the strategy-structure-performance paradigm (DeFee and Stank 2005; Miles and Snow 1978), to determine how those capabilities and factors shape firm performance outcomes given the governance contract mechanisms that firms select. Specifically, this research will seek to accomplish four major goals:

1) Define *Unilateral Capabilities*, or relational competencies that firms – acting on their own, sole initiative – leverage in managing their business relationships.
2) Define *Collaborative Capabilities*, or the relational competencies – which firms obtain only in acting jointly with trade partners – that firms leverage in managing their business relationships.
3) Define *Relational Contextual Factors*, or those conditions imposed on a business-to-business relationship by the characteristics of a firm's trade partner, or the market in which a firm operates.
4) Determine how the *Relational Governance Form*, or the contractual structure of the relationships between firms, influences the interacting effect on firm value

outcomes of unilateral capabilities, collaborative capabilities and relational contextual factors.

The balance of this dissertation is organized in the following manner. The subject and relevant concepts are explored through qualitative research methods. Grounded in the qualitative findings, literature and key theory are discussed, and then a conceptual model and hypotheses are posed. Next, the quantitative research design and measurement systems used to test the hypotheses are presented, including discussion of the sampling frame employed, and the means of data collection and validation. Following this, an analysis of the data collected and the hypothesis tests are presented, along with potential alternative models, and an overview of the findings. Finally, the conclusions of the data analysis are discussed, including theoretical and managerial implications, limitations of the research, and future research possibilities.

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CHAPTER 2

STUDY ONE: QUALITATIVE RESEARCH

Although Chapter One defines the major questions and theoretical domain of interest of this research, before undertaking major literature review or conceptual development, it was deemed prudent to obtain a better understanding of the motivations of business managers in design and execution of business relationships. Chapter Two discusses the qualitative research study undertaken to better define the phenomenon being considered and identify the probable constructs for study with quantitative methods. Following is a discussion of the research design employed, the relevant literature review, the questionnaire development, the sample frame, steps taken to attain trustworthiness, data analysis, and a description of the key findings.

RESEARCH DESIGN

Qualitative research is especially valuable and appropriate in cases where the potential relationships are not precisely understood and the researcher needs to draw perspective from the view of subjects experiencing the phenomena (Corbin and Strauss, 2008), allowing the relevant theory to emerge from the data, rather than structure tests *a priori* to conform to a given theory (Flint, et al., 2005). Although an *a priori* model was devised during the early stages of

conceptualizing this research, it was held subject to the findings of a qualitative investigation of the subject. There were two major goals for the qualitative phase of the study.

First, the qualitative research attempted to identify the degree to which managers dealing with B2B relationships are aware of, and concerned with the type of governance contract they share with other firms, along with the degree to which those forms are employed, and to establish respondents' perceptions of the sort of costs that establishing and maintaining different kinds of relationships impose on the firm. Second, the qualitative interviews were intended to determine what kind of governance contracts firms tend to select in B2B relationships and the conditions influencing those selections.

LITERATURE REVIEW

In qualitative research, *a priori* literature review of a phenomenon should be modest, as the goal of the method is to allow concepts at work to emerge from the data, rather than set out in search of preconceived constructs within respondent statements (Flint, et al 2005). Some literature research was performed *a priori* in order to determine whether a contribution might exist in the general direction under consideration, and additional review of the applicable research was performed *post hoc*, in order to determine how the emerging themes compared to extant knowledge.

Separate from the *conceptual* literature review, a *methodological* literature review was conducted employing a variety of on-line resources (ABI – inform; Google Scholar;

Infotrac; JSTOR; and PSYC-Info), reading lists accumulated from doctoral training course work, consulting the bibliographies of identified works, and discussions with experienced researchers in the field of qualitative studies. The methodological approaches identified by this search are cited throughout this chapter.

RELATIONAL GOVERNANCE CONTRACTS

In order to establish parameters of the subject examined in this study, one definition was clearly determined among the research team *a priori*: relational governance contracts. Although the term contracts tends to be most closely associated with TCE and relational governance literature (Ghosh and John 1990; Heide 1994; 2003; Heide, et al. 2007; Williamson 1985; 1996; 1998), it has also been used as a means of defining the structures by which B2B relationships are managed in supply chain management research (Fugate, et al. 2006; Ketchen and Hult 2007; Min and Mentzer 2000; Pearcy, et al. 2007; Williamson 2008). Further discussion of governance contracts and their definitions is tendered in Chapter Three, but a working definition for contracts was deemed as necessary for this research.

Contracts have been described as a means of reducing the uncertainty that exists in relationships, including exchange relationships (Lusch and Brown 1996), arising from similar and/or competing objectives among actors in conditions where the actors cannot achieve their objectives individually and are aware of a future they cannot accurately predict (Macneil 1980).

In TCE literature, contracts have been described as the lens through which all B2B relationships are focused (Williamson 2008), and as the measure by which a firm's place in the continuum between vertically-integrated hierarchal and outsourced-market forms of exchange is determined (Williamson 1996). Further, in relational governance literature, contracts have been characterized as the means by which the firm initiates, maintains and ends relationships with other firms (Heide 1994). Ultimately, as will be further discussed in Chapter Three, the goal of contracts is to limit risk participants encounter in a relationship (Ménard 2004), and contracts may either be explicit – specifically detailing rights and obligations of a relationship (Ménard 2004) – or normative – implying the rights and obligations of a relationship based on mutual understandings (Lusch and Brown 1996).

For the purposes of this study then, *relational governance contracts are* defined as *the means by which partners in business-to-business relationships mutually establish the obligations incumbent upon each party as a consequence of participating in that relationship, and are further defined in terms of whether those contracts are explicit or normative in nature. Explicit contracts,* under this definition, *are relational governance contracts that are formally documented and specify the obligations of the relationship in detail, including how the contract may be amended in response to unforeseen circumstances.* In contrast, *normative contracts are relational governance contracts that rely on undocumented, or loosely documented mutual understandings and expectations between actors regarding the obligations of the relationship, including how each actor will behave in unforeseen circumstances.*

QUESTIONNAIRE DEVELOPMENT

Based on discussion of the research concept with other scholars a series of general questions was posed. These questions were intended to address two core questions 1) what sort of relationship structures do businesses use in managing their business-to-business relationships, and 2) what factors determine the relationship structures that firms employ in business-to-business relationships.

Stemming from these two research questions, a series of interview questions was devised through discussion with other scholars. Other questions - such as what core competencies a firm has, and who in the firm is responsible for monitoring the condition of a relationship - were deemed to have potential impact on the concepts that might emerge from the qualitative data. An interview guide was constructed, consisting of ten major questions, with potential follow up questions for six of the major interview questions. The questions in the interview guide were also designed to be flexible enough to apply to a respondent, regardless of which side of a buyer/seller dyad the respondent happened to occupy. A sample of the interview guide used is included in Table 2-1.

TABLE 2-1
Qualitative Interview Guide

Interview Questions	Follow-up Questions
1) What kind of business are you in?	
	What is your core competency?
2) What would you say your job in your company is?	
3) What kind of companies are your business-to-business customers (suppliers)?	

	How many customers (suppliers) would you say your company has?
4) Thinking of your business-to-business customers (suppliers), how formal are the arrangements you use in your business relationships?	
5) What are some of the differences in the arrangements you use with different customers (suppliers)?	
	What kind of customer (supplier) would you put more effort into forming a relationship with?
	What sort of costs do you consider when you think about establishing (maintaining) a relationship?
6) How does your company establish a working relationship with a new customer (supplier)?	
7) What makes it easier (harder) for you to establish (maintain) a business relationship with a customer (supplier)?	
	What makes your relationship with customers (suppliers) change? (good and bad)
	What do you think makes a relationship fail? (how hard are you willing to work to save a relationship)
	When a relationship fails, what sort of costs do you think that imposes on you?
8) Who monitors performance that affects the relationship?	
	How do you get information on that?

9)	What else do you think is important in evaluating and/or establishing a business relationship?
10)	Do you have any other thoughts about building (maintaining) business relationships with a customer (supplier)?

SAMPLE FRAME

Respondents for the qualitative research were managers, at a variety of different firm levels, from a variety of businesses involved in B2B relationships. Contact information for the sample was obtained by examining lists of contacts available through the LinkedIn website. A list of the positions and industries of the respondents to the qualitative research is provided in Table 2-2.

TABLE 2-2
Sample Characteristics

Name	Firm Industry	Firm Size	Position in the Dyad	Contract Type	Contract Variability
Ron	Medical Device	Small	Supplier	Explicit and Normative	Yes
Jack	Oil, Gas Production Suppliers	Large	Supplier	Explicit and Normative	Yes
Steve	Aluminum Manufacturer	Small	Customer	Explicit and Normative	Yes
Anna	Automotive Manufacturing	Large	Customer	Explicit and Normative	Yes
Thomas	Medical Industry Investing	Small	Supplier and Customer	Explicit	No
Jimmy	Pest Control	Small	Supplier	Normative	No
Mick	Pest Control	Small	Customer	Normative	No
Billy	Public Utility	Large	Customer	Explicit	No
Don	Process Consulting	Small	Supplier	Normative	No
Bobby	Defense Contracting	Small	Supplier	Explicit and Normative	Yes

(*Note: all respondent names are pseudonyms*)

The interview guide was structured to help the researchers identify several characteristics of each respondent's firm, in order to help contextualize the data drawn from the interviews

(Corbin and Strauss 2008). The firm characteristics of interest include firm size - defined as whether or not participants perceive their firm as being a “big” company or a “small” company - firm industry - the industry that each participants firm does business – and position in the dyad - defined as whether a participant discussed their firm dealing with customers or suppliers. Another characteristic of interest to the researchers was contract type, specifically, whether the structure of relationships described by the interviewees tended to be highly formalized and documented or more loosely framed and subject to easy revision; and contract variability. Contract variability was defined as whether all relationships with B2B partners described by the interviewees were structured with a similar degree of formality or not.

TRUSTWORTHINESS ASSESSMENT

Unlike quantitative research, which is chiefly concerned with issues of validity, qualitative research is not intended for generalization to a wider population, but to assist researchers in developing a basic understanding of the influences at work behind a given phenomenon and their potential relationships (Glaser and Strauss 1967). Although the data achieved through qualitative methods tend to be richer than those attained through quantitative methods, they are inherently subject to individual researcher interpretation, and lack the absolute mathematical properties that allow the statistical establishment of validity (Eby, et al. 2009). Thus, qualitative research is more heavily concerned with trustworthiness of findings, such as confirmability - meaning that the techniques of research allow different researchers to separately arrive at similar conclusions from analysis of interview data based on consistently applied

methods – and triangulation – meaning that findings of multiple researchers can be reconciled to a common meaning – and integrity – meaning that the findings are free of fabrications by the respondents (Wallendorf and Belk 1989).

Following Corbin and Strauss (2008) and Glaser and Strauss (1967), this research used depth interviews to uncover the phenomena at work among business managers. As recommended by Lincoln and Guba (1985) and Wallendorf and Belk (1989), several techniques were employed to ensure the trustworthiness of the data. To attain integrity, respondents were assured of both their anonymity and that of their employers; all respondent names discussed in this research are pseudonyms, and firms are identified only by size and industry. In an effort to strengthen confirmability, a second researcher assisted in coding the interview data. This second researcher was not involved with, or informed of the results of the *a priori* literature search and conceptual development, thus was able to examine the data with less chance of preconceived bias regarding the findings in the data. To ensure triangulation of the data, the researchers met multiple times to compare codes and comments. After the themes were identified each researcher went back through the data to determine if any of the findings refuted the data. Further, the findings from the data analysis were then reviewed by a third researcher, who was excluded from the data coding and interpretation process to help infer confirmability on the process and findings (Wallendorf and Belk 1989).

DATA ANALYSIS

Using a grounded theory approach, the themes discovered emerged directly from the data (Corbin and Strauss 2008; Flint et al. 2005). Open coding was used to identify major themes, and axial coding was used to identify any subcategories (Corbin and Strauss 2008). The researchers read and coded each transcript independently for broad themes. After the completion of the first phase of theme exploration, the researchers met to discuss differences. The initial round of coding provided an 80% agreement between coders. The differences were reconciled by discussion between the coders and the results were combined for further analysis.

As themes emerged, relevant literature was consulted to provide context to the interpretation of the data (Corbin and Strauss 2008). Three broad categories, with eleven subcategories, were discovered in the interviews that either directly or indirectly affects the governance relational form employed by the participant's firms. The three broad categories include unilateral capabilities, collaborative capabilities, and environmental factors; each category is discussed below.

Unilateral Capabilities

In the in-depth interviews, the respondents discussed capabilities by which their firms, acting on their own, internal resources, influenced the governance contract forms they used in B2B relationships. These internal resource bundles were termed as unilateral capabilities. Three different unilateral capabilities were identified: 1) transaction cost focus, 2) coopetition, and 3) power.

Transaction Cost Focus

One of the main areas of interest in this research was to determine how firms structure their relationships. Participants talked about the use of multiple cost forms that affect their relationships with customers or suppliers. In keeping with TCE, search cost, contracting cost, monitoring cost, and safeguarding cost were mentioned as a way to balance uncertainties and maximize the relational benefit of the business-to-business transaction (Dyer, et al. 1997; Williamson 1981).

According to Williamson (1996), search cost is the cost associated with the effort or investment required to identify a potential business-to-business partner. Repeatedly throughout the interviews, respondents talked about the cost incurred when they are trying to meet potential, and build relationships, with new business-to-business partners. Smith, Venkatraman, and Dholakia (1999) divide search cost into both external and internal cost. External cost includes the monetary cost that individuals invest or opportunity cost such as time lost. Internal cost includes the cognitive costs that individuals put forth in order to make a decision. Participants reported incurring more external cost when pursuing and maintaining positive relationships.

> "I have to convince the customer that is right across the hall, and to do that I have to put in overtime traveling…. You know if you go out and knock on all of these…" customer "… doors and people want your software and people hit you with their requirements and your projects grows. You do need help and that is where cost and certainly time and the dollars of traveling and such." - Bobby

> "It comes to us from all different channels, networking, friends of friends, people that you know who have been in the business. It is not somebody who you can

> just meet at Wal-Mart who says hey I want to start a medical device company, or a rental company. We kind of meet them through other channels. You know, through working on relationships." – Ron

The second cost mentioned by respondents is contracting cost. Contracting cost is the effort or investment required to establish mutually acceptable relationship terms with potential business-to-business partners (Williamson 1996). Contracting cost played a major role in the relationship when participants reported trying to avoid risk. Whether that risk comes in the form of a firm dealing with a struggling company or whether that risk is associated with setting specific contracting guidelines and not crossing boundaries.

> "If you have a supplier that falls within that category then they are paid on different terms and they are treated differently. It is almost like they are red flagged to the point where they get more aid and more help." – Anna

> "Yeah, we have to be really careful about telling them what we want them to do but not how to do it. There is really a hard to walk line there because you get into safety and liability issues." – Billy

Monitoring cost is the effort or investment required to determine if an existing partner adheres to the established relationship terms (Williamson 1996). Monitoring cost were the most influential to the participants when the participants firm was supplier. As suppliers the firm has to monitor their services in order to adhere to the contractual agreement. This monitoring cost was justified as a way to strengthen the relationship.

> "In some cases we try to look at it where they are outsourcing some of their quality controls to us, within our area of expertise. So we are working on documentation as well that they are going to be able to pass their audits that could shut them down or fine them heavily if they don't pass. It is not all about products and application. It is also about documentation and communication, organization, that sort of thing as well." – Mick

> "I think our initial cost is high because if they are just getting started there is a lot of hand holding. Product development needs to be done to make the customer aware of how to use our product to their advantage. It is going to be a scenario that is going to take a lot of time and energy, a lot of flights, a lot of hand holding. That takes time and money." – Ron

Finally the respondents mentioned safeguarding cost as an approach to maintain relationships. Safeguarding cost are the efforts or investments required to discourage an existing partner from deviating from the established contract, or alternatively, the effort or investment an existing partner requires of a firm to discourage deviation from the established contract (Williamson 1985). Interestingly safeguarding cost was mentioned the least by the participants. Billy mentioned safeguarding cost as a way to mitigate the risk involved in hiring contractors.

> "We are not going to allow them to do anything to the system that will jeopardize the system itself." - Billy

In this case, Billy places constraints on the relationship in order to protect his firm from future cost due to a lack of knowledge or capabilities.

Coopetition

Coopetition refers to simultaneously cooperative and competitive behaviors (Tsai 2002). Knowledge sharing among competition is a common form of coopetition. Participants acknowledged a worry about competitors taking their knowledge, either from purchasing or gaining from a relationship partner, and starting in the same business.

> "A lot of times you have competitors, our customers are potential competitors and they would love to get your software because they can get it for free at some level of the organization and then do what you do." – Bobby

Another form of coopetition that the participants acknowledged involved their distributors making deals with other suppliers and pushing the participants firm out of markets.

> "Backroom deals with our competitors where maybe to position themselves in a better situation. Let's say there is a huge account that they want, let's say it is seven hospitals. Because we may have some end users in those accounts already, and it is that customer that we kind of work with on the outside of the distributor themselves. They come in and they try to push another product because maybe it pays them more money for a procedure or it just positions them better so that they can bring in more products. That is a bad scenario." – Ron

Even with the volatile nature of coopetition relationships, the participants acknowledged that these competitive relationships could not be avoided. Participants chose to deal with these relationships in a number of ways including monitoring, safeguarding, and developing detailed contractual agreements.

Power

The second unilateral capability that emerged from the data was power. Power has been described in political science as influences where "one may try to change behavior of the other by creating the expectation of sizable rewards or deprivations" (Dahl 1963, pp. 8). In channels literature, the concept has been characterized as the "ability to influence the decision variables in the marketing strategy of another member at a different level, of distribution in a given channel" (El-Ansary and Robicheaux 1974, pp. 2). For this study, power was defined as the ability to influence the decisions of a relationship partner by producing the expectations of sizeable rewards or deprivations. Power is directly related to one firm's dependence on the other firm

(Wilson 1995). Therefore, the firm that is not dependent tends to have the power in the relationship. Participants talked about power dynamics when they had monetary dominancy over the relationship or when their firm had inimitable capabilities.

> New vehicles come on every year and our gaps grow our gaps fall off because we are balancing out programs. Closing those gaps is key in remaining competitive in the market… So if we need to give them 5 million dollars to restructure their company, you know retool a plant or move a plant to another area of the country, if we need to provide that type of capital so that they can do that (work with us) then they need to give us a cost reduction in turn for fronting the cash for that. Then that is what they need to do and it pays off for us in the long run. Then we are assured that the relationship really does payoff for us and that is the benefit in being the large company" – Anna

> "Unfortunately for them, unfortunately for us to because we have to work with them, we have superior technology in a couple of different areas that in order for them to get their simulator accredited in order for…" end customers "…to use to meet their minimums and to meet certain army standards. They have to use our stuff." – Bobby

It is interesting to note that Anna's discussion of power appears in discussion of how her firm collaborates with suppliers. Although Anna's firm is clearly providing resources that benefit the larger supply chain ultimately, her firm achieves collaboration by exercising reward power – the large dollar investments – and coercive power – the potential to withdraw rewards if suitable benefits are not shared with her firm – over less powerful trade partners.

Collaborative Capabilities

A very different set of capabilities that were revealed by the data were those resources that firms used to work across interfirm organizational boundaries, requiring some degree of joint action with their trade partners, to better achieve firm objectives. These resource bundles are defined as collaborative capabilities, were classified into five dimensions that influence the governance contract forms: (1) trust, (2) commitment, (3) collaboration, (4) relationship tenure, and (5) rapport.

Trust

The first and most cited by participants collaborative capability is trust. Morgan and Hunt (1994, pp. 23) conceptualize trust as "existing when one party has confidence in an exchange partner's reliability and integrity. Trust has been cited as a fundamental building block in relationships (Wilson 1995) and a critical element of economical exchange (Ring 1996; Gounaris 2005). Participants regarded trust as a major factor in determining the success of a business-to-business relationship. A violation of trust was seen as irrecoverable and the relationship would likely end. Participants also reported that if there was not a growth in trust throughout the relationship then the relationship became static.

> "There is so much flip flopping on the sides of companies these days, based on financial gains. If they think that they can get more money out of you then they change their minds. That is the worst possible thing. Trust is huge." – Ron

> "If you don't have that upward movement on the relationship curve of trust, it is just not going to work." - Thomas

Commitment

The marketing literature on commitment is extensive. Commitment has been defined as a belief that "an on-going relationship with another is so important as to warrant maximum efforts at maintaining it" (Morgan and Hunt 1994, pp. 23). Past research on commitment has demonstrated that suppliers are usually more concerned with the commitment of their customers than customers are concerned with the commitment of their suppliers (Gounaris 2005).

> "If they are loyal to us and they are not talking out or both sides of their mouths. Let's say that a customer asks for our equipment, they want to use it; if they are trying to convert them over to the other technology then that is not a good relationship. They take that lead and use it to their benefit, for something else. That is not a good working relationship. However, if they try to remain neutral, as far as they are going to go with whatever a customer asks for, that is a good relationship…. It is all about loyalty." - Ron

However, participants who are customers reported being concerned with maintaining a valued relationship with their suppliers.

> "We don't ever want to see a supplier go out of business. It is important for us to keep that relationship good. Because a working relationship is always better than one that is stressed, it works better for both parties. We get more out of it and so do they." – Anna

Collaboration

Fawcett et al. (2008a, pp.93) define collaboration as "the ability to work across organizational boundaries to build and manage unique value-added processes to better meet customer needs." When participants talked about collaboration they indicated putting forth a large amount of effort to achieve the desired goals of the relationship partner.

> "And some of that too maybe effort that I spent thinking creatively or innovatively as far as how are we going to document and manage products and how they are delivered and used in the field, and be able to afterwards to have the reporting capabilities to communicate back to our supplier so that there is a continue increase in trust and it warrants maybe a very fair price. Again, in a lot of cases, some might not need much dialogue, but again there maybe need for more communication and more dialogue" - Jimmy

A second form of collaboration discussed deals with the capability to talk to individuals across the organizational boundaries in order to achieve superior performance for the firm. Participants discussed collaborative work between organizational boundaries within their own firm and different organizational levels of a supplier or customer.

> "I go there. I go and I talk to them, I explain to them what I am trying to do and what role I play. I found that far too often, especially when you are in a corporate role, you send an email with a template and expect someone to execute it for you when they don't buy into it and they don't understand what you are doing. Which it works sometimes but it is painful because you get something back that is not what you wanted. If you go there and ask their opinion, whether you take it or not, just the fact that you asked gets buy-in from them. They feel like they have participated in the process and you develop a rapport which helps you get the work done much more quickly. It also creates an ally within the organization that you can go back to next time." – Steve

Relationship Tenure

In this research, relationship tenure refers to the length of time spanned by a given business-to-business relationship. Relationship tenure has seen conflicting views in the literature. Joshi and Stump (1999) found that the longer the relationship the more likely that inactivity sets in on relationship partners. Contrary to the view of inactivity, participants reported a high level of trust as the relationship tenure lengthened. This high level of trust moved the relationship structures from explicit to more normative contractual form.

> (our) "…industry has a very long history of the good-old-boy approach to things and usually the ones that come from, where there is just an email there is no purchase order there is no contract of any kind, those are long-term relationships with guys who are usually older" – Jack

Rapport

Rapport is defined as a customer's perception of having an enjoyable interaction with a service provider employee, characterized by a personal connection between the two interactants (Gremler and Gwinner 2000), and positive relationships between rapport and satisfaction and loyalty intent have been established (Gremler and Gwinner 2000). Similarly, respondents labeled a high level of interpersonal connectedness as a primary reason for strong relationships with suppliers or customers.

> "The interpersonal relationship, I have a guy in Iowa who works at the distributive tactical operations center. He is a retired marine – master sergeant – self-proclaimed knuckle dragger. I love him to death and he loves our software. We have a relationship. He sits in a node in Iowa and feeds our scenarios across the country. We reach out and touch the entire air national guard because of this guy. I can just work with this guy. Interpersonal relationships certainly." - Bobby

> "Yes, a lot of that comfort comes from the relationships that you build with the customers, the personal aspect of it… for some of the long-term small companies are the more local – I say local being regional not just in this town. We have guys who have long running relationships; I mean personal relationships, which they developed. That we will accept an order as an email and that is all we need and we will go with it." - Jack

Environmental Factors

The data also revealed a series of influences over which both the firm and its partners had limited control, separate from unilateral and collaborative capabilities, but with effects common to both, termed in this research as environmental factors. These environmental factors include: 1) opportunism, 2) uncertainty avoidance, and 3) dependence.

Opportunism

Opportunism has been described by Williamson (1996) as the tendency of an actor to pursue their own interests at the expense of others. Opportunistic behavior has been found to be one of the most damaging influences on business-to-business relationships (Crosno and Dahlstrom 2008; Richey et al. 2010a). Even with opportunisms' damaging influence on relationships, Williamson (1985) holds that firms will not exist without opportunism. In business-to-business relationships opportunism can be seen in two lights. The first is the firm that participates in opportunistic behaviors in order to control unforeseen risk. The second is the

firm that participates in opportunistic behavior for pure financial gain. The participants in this study tend to fall into the former category.

> "If the relationship changes we want to be able to duck tail and run and create a new customer. You know as far as the direct customers are concerned, that is more of a contractual basis because they are the direct customers. They are basically the end users and at that point you want to kind of lock them in to your products." – Ron

> "We try to make sure that we have dual sources as much as possible so that we can make sure our pricing options, if we found out someone was gouging us or something, if we found that out through a competitive bid process or any other way, we would probably leave them for that." – Mick

It is important to note that both Ron and Mick point out that opportunism as a feature of their relationships with trade partners with whom they collaborate. Such a statement runs contrary to theoretical assumptions in SCM literature (Christopher 2000; Richey, et al. 2010b). The degree of opportunism employed in those relationships did not emerge from the data, indeed, its presence in a discussion of collaborative relationships was not even noticed until the coding process was completed. However, the juxtaposition provokes interesting questions that will be explored later in this research.

Uncertainty Avoidance

Uncertainty avoidance is the degree to which an individual or a company prefers structure over unstructured situations (Hofstede 2001). In essence uncertainty avoidance revolves around a firms need for security. A firm's need for security drives decisions based on

risk maintenance and avoidance. In order to manage risk, participants placed an emphasis on research when searching for new clients and on safeguard measures.

> "We have a department that actually does the research on the new customers to figure out what their financial situation is before we ever accept an order from them. Once that is done and we feel that yes there is a reasonable risk, we will tell them how much credit we are going to extend them, as far as what kind of orders we will accept from them. Some (we) will only agree to a couple of hundred thousands, others we will go into the millions depending on their stability. And a lot of times we will ask new customers to take a letter of credit out so that money is somewhere in a bank that we know we are going to collect if they end up going bankrupt so that we don't lose out." – Jack

> "I try to work with companies who only have one product, because they know it better than anybody else. They are concentrating on it and trying to grow it, as opposed to the guy who has everything." – Ron

Dependence

Heide and John (1988) describe dependence as "the extent of replaceability of the exchange partner" (pp. 24), based on the importance of the resources exchanged with that partner, the relative outcome values versus alternatives to the resources exchanged, rarity of a given alternative resource, and rarity of potential alternatives of the resources exchanged from the focal firm's point of view. Essentially dependence is the direct opposite of power. The dependent company has to try harder to maintain the relationship because a relationship failure will result in harsher consequences for the dependent firm as compared to the firm with the power. The respondents reported becoming dependent on firms when they reach a certain monetary threshold, that is, the customer becomes so large that the firm can no longer afford to lose their business. Dependency can also arise when a firm is reliant upon a scarce resource that

the supplier possesses. It can be argued that a firm that is reliant upon a resource is more dependent that a firm that needs a large customer because the resource is inimitable.

> "Over time it can get to where they are a big enough customer and they are generating enough money for us that we will make exceptions for certain things and bend over backwards for them, because we want to make customers happy." – Jack

> "We didn't buy particularly a large number of dollars it was something that was hard to source the product that they provided and they knew that and they were hard to deal with. So we had a relationship, it wasn't always positive but I spent more time with that relatively small vender than I did with the millions that we purchased with other people." - Mick

CONCLUSIONS AND LIMITATIONS

The findings here offer valuable insight into the formation of multiple relational governance contract forms. A large number of participants reported using both explicit and normative contracts when dealing with business-to-business relationships. The use of a specific governance contract was influenced by the three major categories: unilateral capabilities, collaborative capabilities, and environmental factors.

Looking at the major categories, unilateral capabilities seem to be an understudied area in marketing research. This adds support to research into the role the transaction cost economics plays in the development of different governance contract forms. Specifically, different costs are likely to be associated with explicit or normative contracts. For example, a firm that is high in contract cost and safeguard cost are likely to have an explicit contract. In regards to power and

dependency, this study explores antecedents that might affect who has the power and who is dependent in a given relationship.

This study also expands the current thought on relational governance contract forms by identifying boundary conditions of collaborative capabilities. Interestingly, the findings indicate that the longer firms participate in a business-to-business relationship the more likely they are to engage in less stringent contractual agreements. Similarly the higher the levels of rapport and collaboration the more likely a firm will bend contracts to make customers or suppliers satisfied.

This study has examined how firms structure relationships by which they collectively compete along with other companies. Examination of depth interviews with business managers concerned with B2B relationship indicate that businesses employ a combination of unilateral and collaborative capabilities, subject to environmental influences that are common to both sets of capabilities. Unilateral capabilities bear close resemblance to the factors described and explored by extant relational governance literature, while collaborative capabilities are similar to factors described and explored in supply chain management literature. However, this research suggests a view of both sets of capabilities as part of an integrated whole, with neither particularly dominant, but each contributing to the way firms establish relationships.

Like all qualitative approaches, while the data examined in this study is rich, its sample is limited, and therefore, not generalizable. Although respondents came from a variety of industries, the number of respondents is far too low to accept themes identified from their comments as representative of all actors in their industries.

The purpose of this study was to identify the general constructs and nomological relationships describing how firms structure B2B relationships in comparison to extant literature views on the subject. In taking this broader view, industry specific influences were not considered. Thus, future research, both qualitative and quantitative, should explore this question by using industry-specific samples.

KEY FINDINGS

Based on the results of the discussion of the findings, five key findings seem especially relevant to the questions posed by the qualitative phase of this research. These findings guide all subsequent steps in this research, and it is important to specify them here.

First, interpretation of the qualitative data suggests that firms employ different governance contract forms in dealing with different B2B trade partners. Second, firms are cognizant of costs, risks and benefits associated with different contract forms that they employ. Third, firms variously exercise power over their supply chain partners, and seek to cooperate with those partners, based on conditions specific to each relationship. Fourth, the resources and conditions that shape selection of a governance contract form can be logically categorized into groups based on the degree of individual control a firm and/or its partners have over the those resources and conditions. Fifth, and perhaps most importantly, some firms engage in opportunistic behavior, even in cases where the trade partner in question is of critical importance to the firm, and some firms engage in collaborative behavior with trade partners, even when they have sufficient power to force the trade partner in question to comply with their wishes.

Based on these core phenomena of interest, it is appropriate to conduct a more thorough research of the literature to determine how the qualitative findings conform to known theory and identify constructs that can be employed for quantitative testing. Details of the conceptual development follow in Chapter Three.

RELATIONAL GOVERNANCE FORMS AND FIRM PERFORMANCE: THE ROLE OF UNILATERAL AND COLLABORATIVE CAPABILITIES

CHAPTER 3

REVIEW OF THEORY AND RELATED LITERATURE

As detailed in the qualitative study in Chapter Two, business practitioners dealing with B2B relationships indicate that the relational contracts between firms are determined by a series of resources, subject to contextual influences. The qualitative study also indicates that those resources can be classified into categories of those capabilities uniquely internal to the firm and those capabilities that require cooperation of B2B relationship partners in order to leverage. The question then becomes, what does extant theory and research in the relevant domains have to tell us about the findings from the qualitative research? Chapter Three is devoted to investigating the theories of transaction costs economics – with an emphasis its relationship to relational governance literature and relational governance contracts – and resource-based view – with an emphasis on its relationship to supply chain management literature, and to applying these theories to the definition of constructs that form the centerpiece of this research: unilateral capabilities, collaborative capabilities, and relational contextual factors.

TRANSACTION COST ECONOMICS AND RELATIONAL GOVERNANCE

Literature on exchange of goods and services began to reach beyond the boundaries of the firm with the work of Commons (1930), who proposed the transaction as the basic unit of economic analysis. Commons' work was expanded upon by Coase (1937), who posed the question of at what motivated firms to internalize the acquisition and/or production and/or distribution of goods and service as opposed to entrusting those functions to the market. Influences on this choice were posed to be bounded rationality, information asymmetry, and opportunism risk.

Bounded rationality describes the limits on the information with which actors may make the best possible decisions (Chiles and McMackin 1996). Information asymmetry represents a case where one actor in a given dyad (in the context of B2B relationships, a firm and its potential trading partner) possession more information relevant to the case than does the other (MacMillan 1990). Williamson (1981) described opportunism as the tendency of actors to pursue their own best interest at the expense of others. Each of these phenomena represents a hazard for any actor in an exchange relationship.

Hazard has been described as "an opportunity to lie, cheat, or misrepresent information in such a way that one party..." in an exchange relationship "…benefits and the other party loses" (Poppo and Lacity 2006, pp. 260). Drawing on Porter and Fuller (1986) and Williamson (1981) Heide (1984) has also characterized hazard as a risk that one party may expropriate, or lay claim to the profits of another party in an exchange relationship. Thus, bounded rationality,

information asymmetry and opportunism present hazard to the firm that impacts the choice between internalization or outsourcing of firm inputs and functions in the make/buy decision (Heide 1994; 2003; Heide and John 1992; Heide, et al. 2007).

A key contribution of Williams (1985) to thought in the transaction economics field was the concept of transaction specific investments (TSIs). TSIs refer to purchases of assets firms are required to make in order to enter a B2B relationship with a potential trade partner; those assets tend to be inherently configured in a manner that prevents the asset from being used with a different potential trade partner, driving the costs of both entering and leaving a given B2B relationship (Anderson and Weitz 1988; Heide and John 1990; Williamson 1985). The core goal of a TSI is to limit opportunism risks that accompany exchange between firms, particularly when there is an asymmetry of information or power between the two (Heide 2003).

As refined by Williamson TCE promoted a view of the firm as an efficiency maximizing entity that focuses on the "transaction as the basic unit of analysis and holds that an understanding of transaction costs economizing is central to the study of organizations" (Williamson 1981, pp. 548). TCE has been characterized as an attempt "to push beyond the theory of the firm as a production function (which is a technological construction) into a theory of the firm as a governance structure (which is an organizational construction)" (Williamson 1998, pp. 23), by examining the way in which the effort to economize costs as the main case of firm activities "resides in the details of transactions and governance" (Williamson 1998, pp. 53). The influences of interest in governing firm actions according to TCE are "the lens of the

contract, the description of human actors," and "positive transaction costs" (Williamson 2008, pp. 5).

Taken together, the influences on transaction costs of exchange – bounded rationality, information asymmetry, opportunism, and TSIs - motivate firms to internalize those activities where the cost of the transaction is high, and to outsource those where the costs are acceptably low. Williamson characterized the differences in these approaches as a continuum, with purely market exchanges – such as purchasing goods and services on an open market – on one end, and highly detailed, hierarchical contracts – such as the on-going relationship between a specialized manufacturer and a specialized supplier – at the other (Williamson 1996). How firms go about establishing and managing the relationships with firms to which low transaction cost activities are outsourced is a function of the relational governance forms that firms enact with their exchange partners (Heide 1994). As will be discussed in greater detail below, the governance forms are the contracts between actors in B2B relationships, that vary in the degree to which they are highly structured or based on informal, mutual understandings (Lusch and Brown 1996).

Relational Governance Literature

Following Williamson's (1981) Nobel-winning expansion of the TCE concept, scholars began to examine the relationship mechanisms by which the market-hierarchy contract by which B2B linkages were managed. Research in this field has examined how contractual forms

interact to influence uncertainty and opportunism (Crosno and Dahlstrom 2008; Ferguson, et al. 2005; Ghosh and John 2005; Poppo and Zenger 2002; Zhang, et al. 2003), the reciprocal role that contract forms and TSIs play in shaping one another (Heide, et al. 2007; Ménard 2005; Wathne and Heide 2004), what resources tend to be related to the governance forms that firms choose to employ (Ghosh and John 1999), the roles that market environmental dynamism has on contract form selection (Joshi and Campbell 2004), and the influences that cultural differences have on uncertainty, and therefore, contract forms (Wuyts and Geyskens 2005; Zhang, et al. 2003). However, this body of literature should not be confused with the relational governance contracts themselves.

Relational Governance Forms (Contracts)

Contracts are the means through which two or more individual actors commonly agree on how available desired benefits, and the efforts required to obtain those benefits, should be allocated among the concerned actors (Macneil 1980). In TCE, contracts are characterized as the lens that focuses the firm's perceptions of the costs of any given exchange (Williamson 1981), guiding its make/buy decision to outsource or internalize all required functions of the firm (Heide 1994; 2003; Heide and John 1992; Heide, et al. 2007).

Governance forms have been described as means of imposing order on relations to minimize the chance that conflicting interests will limit the potential of mutual gains (Williamson 1998), and as means of managing the "initiation, termination and ongoing

relationship maintenance between a set of parties" (Heide 1994, pp. 72). Different forms of relational contracts are employed by organizations to achieve the order required for developing mutual gain potential (Ménard 2004), and tend to be described in terms of one of two main approaches, explicit and normative relational contracts.

Explicit Contracts

One means of minimizing hazards in B2B relationships is by "reducing (hazards) through contracts requires (firms) to select partners and to design clauses that can efficiently constrain opportunism" (Ménard 2004, pp. 361). The uncertainty avoidance dimensions (Hofstede 2001) examined in the qualitative phase of this research (see Chapter Two) display the desire of actors to reduce such hazards by specifying the rewards and consequences of actions, and the codifying the power held in a relationship. Thus, *Explicit Relational Contracts refer to instruments that require compliance of partners in a B2B relationship to some set of reciprocal obligations through the use of structures of law or some other mutually recognized outside influence.*

A general example might be a contract that expresses, in writing, the amount to be paid from a customer to a supplier for a given good or service, and terms for delivery and quality specifications for that good or service. Each the contract clearly delineates the obligations inherent to each actor, the benefits expected to accrue to each actor and, potentially, the consequences of not adhering to those obligations. In the qualitative study described in Chapter Two, respondents spoke of specifying the amount of credit that they would extend to clients, or

requiring written purchase orders before undertaking constructions, these too are examples of explicit contracts.

Normative Contracts

In contrast to explicit contracts, "implicit or 'soft contracts' identify a set of mutual expectations and understandings between channel partners" (Lusch and Brown 1996, pp. 19). Importance and utility of approaches is expressed by the qualitative respondents of this research in the discussion of rapport and its importance in limit hazards (see Chapter Two). Thus, *normative relational contracts refer to the acquiescence of partners in a B2B relationship to some set of reciprocal obligations in accordance with mutually held beliefs, often developing over time, about the nature of the relationship or about relationships in general*.

General examples of normative contracts might include extending credit to a trade partner, without formal documentation, based on the assumption that the trade partner shares the credit-extending partner's view of what a reasonable period of repayment might be, or placing an order with a supplier, without specifying quality standards, on the assumption that both parties in the exchange hold a similar view of what constitutes a reasonable level of quality for a given price paid. A more specific example of normative contracts appears in the qualitative study (see Chapter Two). One respondent – Jack – spoke of "good-old-boy" approaches, in which purchases of expensive oil-drilling equipment were placed and filled with no documentation

other than an email from the buyer, without purchase orders to detail the obligations of either side in the exchange.

The existence of two such distinctly different forms of relational governance contracts lends itself to an assumption that a continuum exists between extreme examples of each. Such a tendency is, perhaps, amplified by Williamson's (1996) view of exchange relationships as a continuum between hierarchal and market exchange. However, Lusch and Brown (1996) hold that explicit and normative contracts are not mutually exclusive, but do concede that one may be dominant over the other. Thus, a hybrid contract form indicates a case where elements of both normative and explicit relational contracts are present, but potentially in different degrees or where one may have greater influence than the other. Heide (1994) measures such relational governance contract differences as three distinct contract forms, comprising individual nominal constructs rather than ranges within a single continuum.

Such hybrid contracts present the make/buy decision in terms of conditions where outputs might be explicitly specified, but the means through which they are achieved are normatively established (Heide, et al. 2007). An example might be a company that explicitly specifies performance requirements components that it purchases from a supplier, yet does not detail the required materials or production techniques used, trusting the supplier to have similar views of quality and human rights toward workers. Extending that example, while the purchasing company might entrust component manufacture to an outsource supplier, it might choose to internalize final assembly to better control quality manufacture and delivery to end customers.

Transaction costs and their role in efficiency maximization are efficacious for the study of a sweeping range of organizational issues, but even Williamson concedes, transaction costs are not necessarily efficacious for study of all of all organizational issues (1981). Addressing how organizations operate by employing multiple firms acting collectively as the operating unit of analysis offers a different view of how and why firms compete jointly. To be complete then, this literature review must also examine the research domain and theory of supply chain management.

THE RESOURCE-BASED VIEW OF THE FIRM AND SUPPLY CHAIN MANAGEMENT

Resource-based frameworks that evolved into the Resource-Based View of the firm are grounded in the work of Penrose (1955; 1959), who attempted to define the means by which firm growth is enabled or constrained, not merely as a function of economic environmental conditions (Prahalad and Hamel 1990), but as a result of the capabilities that the firm builds (Penrose 1959).

Within a marketing/management context, the capabilities that enable or constrain growth in Penrose's (1959) vision of the firm were seminally defined by Day (1994) as "complex bundles of skills and accumulated knowledge, exercised through organizational processes that enable firms to coordinate their activities and make use of their assets" (pp. 38). Capabilities of the firm can be leveraged to build core competencies (Coombs 1996; Day 1994; Morash, et al. 1996), which Prahalad (1993) described through three criterion questions: "1) Does it provide a

unique signature to the organization…2) Does it transcend a single business, and 3) Is it hard for competitors to imitate?" (pp. 45). In a turbulent market, in which change must be anticipated as a frequent challenge (Schumpeter 1942), competencies and the capabilities from which they are built must be continually updated, a process that Teece, et al. (1997) described as dynamic capabilities, or "the development of management capabilities and difficult-to-imitate combinations of organizational, functional skills…" that draw upon many areas of the firm to provide "…an aid to management endeavoring to gain competitive advantage in increasingly demanding environments" (pp. 510). As capabilities are the source of core competencies (Coombs 1996; Day 1994; Morash, et al. 1996), including the ability to effectively configure relational contracts (Ghosh and John 1999), it is the capabilities of the firm that are of interest to this research.

According to RBV, a resource has five key elements. These are imperfect mobility (Peteraf 1993), rarity, inimitability, resistance to substitution, and organizational specificity (Srivastava, et al. 2001). Meaning that assembling resources that bear these attributes, in an environment where such resources are heterogeneously distributed (Morgan and Hunt 1995) allows the firm to achieve competitive advantage because the resources enable construction of capabilities that cannot be easily copied, purchased, or leveraged by competitors (Barney 1991; Teece, et al. 1997). RBV differs from TCE in that it is less concerned with the barriers that prevent hazard (Christopher 2000) and focuses more on embracing partners (Williamson 2008) that can help assemble resources that can be configured into competitive advantage-producing

capabilities (Olavarrieta and Ellinger 1997). Thus, RBV by its very nature is well suited to application to supply chain management research.

RBV and Supply Chain Management

Supply chain management (SCM) has been characterized as a view of multiple, cooperative firms, synchronizing the effort to deliver value to a customer by coordinating the capabilities of all entities involved in contributing to that value delivery (Mentzer, et al. 2001). Such a view inherently requires that the firm regard all processes that might affect delivery of customer value - including those processes entirely within a single supply chain member, and those processes that interface or are shared between multiple supply chain members – within the context of the coordinated effort of the supply chain (Lambert, et al. 2005). Supply chain management, as an academic discipline therefore, relies on assumptions of shared risks and rewards between firms engaged in jointly delivering value to a customer (Lambert, et al. 1996).

SCM literature can be said to concern itself with the means by which individual firms compete as cooperating groups against other groups of firms in the same market (Christopher 2005; Christopher and Towill 2000; Johnson and Lawrence 1988; Vickery, et al. 2003). The supply chain management literature often employs the Resource-Based View of the Firm (RBV) as a theoretical lens (Kim, et al. 2006; Martens, et al. 2011; Min, et al. 2008; Richey, et al. 2010b; Stank, et al. 2005). Drawing from Penrose (1959), Barney (1991) and Wernerfelt (1984), Olavarrieta and Ellinger (1997) characterized RBV as a view of the firm as "bundles of

resources," including "all inputs that allow the firm to work and to implement its" (logistics) "strategies (pp. 561)…which translate into sustained superior performance (pp. 564)." Thus, RBV describes the manner in which firms bundle resources that are rare, valuable, inimitable, and substitution-resistant into organizationally specific capabilities associated with attaining competitive advantage in a given market (Barney 1991; Olavarrieta and Ellinger 1997; Wernerfelt 1984).

The Supply Chain Management Domain

The development of supply chain management began with emergence of logistics as a distinct research discipline of marketing, offering a view of the value firms can realize by addressing the place utility elements of the marketing mix (Bowersox, et al. 1968; Lambert and Burduroglu 2000). As the range of practitioner disciplines that logistics embraced expanded, the broader definition of supply chain management – or the processes by which firms jointly compete by integrating and synchronizing their collective efforts toward delivering value to a customer (Cooper, et al. 1997; Mentzer, et al. 2001) – emerged to describe the resource coordination that the logistics had addressed in the literature.

The resources that SCM generally speaks of leveraging tend to be inherently collaborative in nature (Chen, et al., 2009; Mentzer, et al., 2001; Olavarrieta and Ellinger, 1997), requiring that the firm consider not only its own welfare, but that of the supply chain as a whole (Christopher 2005). This draws an obvious contrast with TCE's view of establishing barriers with other businesses to promote the individual firm's welfare (Williamson 1981; 2008). From

this dichotomy, the question arises of how the capabilities described by TCE and RBV interact. To some degree, this expansive view of the role of the firm as part of a broader enterprise has been compromised by operations management scholarship, which under the epistemological umbrella of supply chain management, has tended to present a silo-oriented, optimization-centric view of business-to-business relationships, rather than adhering to a more applicable, strategic vision.

DEVELOPMENT OF NEW THEORY: UNILATERAL CAPABILITIES, COLLABORATIVE CAPABILITIES AND RELATIONAL CONTEXTUAL FACTORS

The preceding discussion of theory provides a lens through which to conceptualize the way that resources of the firm, and the conditions that the firm contends with, shape the relational governance contracts firms choose, and how those resources, conditions and contracts jointly influence the value outcomes firms realized in B2B relationships. Grounded in TCE and RBV theory, the following sections offer construct definitions of unilateral capabilities, collaborative capabilities, relational contextual factors, relational governance forms, and the dimensions that comprise those constructs.

Unilateral Capabilities

In extant relational governance literature, the term unilateral refers to the establishment of hierarchical structures with provisions that allow one party to dictate the actions of another

(Heide 1994; Stinchcombe 1985). In relational governance literature, capabilities are seen as an implementation of resources or "the imperfectly mobile skills or assets owned by a party to an exchange" (Ghosh and John 1999, pp. 135), and as "the determinants of a firm's efficiency or effectiveness in engaging in its current business activities" (Jacobides and Winter 2005, pp. 397). *Unilateral Capabilities,* then is used in this research to *describe the capabilities by which firms, acting on in their own, independent interests influence relational governance contract forms used in B2B relationships*. Although extant relational governance literature concerns itself with relationships between firms, it frequently, although not exclusively, relies on a unilateral view.

Transaction Costs Focus

As noted, relational governance literature often cites Transaction Cost Economics (TCE) as a theoretical source (Leiblein 2003; Poppo and Zenger 2002; Williamson 1998; Zaheer and Venkatraman 1995). TCE's view of the firm as an efficiency-maximizing entity (Williamson 1981) focused on the economization of costs (Williamson 1998, pp. 53) through contracts (Williamson 2008), lend themselves well to the study of relationships as a variety of contractual structures. As a construct, transaction costs are generally conceptualized as consisting of four dimensions: search costs, contracting costs, monitoring costs and enforcement costs. Each of these cost dimensions represents an attempt to reduce the hazard of a B2B relationship (Heide 1994; 2003; Heide and John 1992; Heide, et al. 2007) by influencing the firm's choice in the

make/buy decision (Williamson 1985; 1996). Dyer (1997, pp. 537) offers a seminal definition of each of the cost dimensions:

> Search costs include the gathering of information to identify and evaluate potential trading partners. Contracting costs refer to the costs associated with negotiating and writing an agreement. Monitoring costs refer to the cost associated with monitoring the agreement to ensure each party fulfills the predetermined set of obligations. Enforcement costs refer to the costs associated with *ex post* bargaining and sanctioning a trading partner that does not perform according to the agreement.

Although TCE addresses interfirm transactions, its central concerns are how "each make-or-buy decision…" is "…reduced to ascertaining whether the transaction should be mediated by an interfirm or by an intrafirm contract," (Williamson 2008, pp. 8), with the focal firm as a unilateral actor. From the TCE perspective then, the firm may be described as an efficiency-maximizing entity (Williamson 1991; 1998; 2008) seeking to economize search, contracting, monitoring and enforcement costs (Dyer 1997). This suggests that firms attempting to integrate, reconfigure, gain and release resources to achieve such economies under current or changing conditions (Dyer and Singh 1998; Eisenhardt and Martin 2000), may be characterized as having (or seeking) a transaction cost focus. Thus, *Transaction Cost Focus is the effort the firm exerts, in its function as an economy-maximizing entity, to establish the transaction costs associated with the relationships the firm will engage in or consider*.

Perceived Power

Given that TCE is principally concerned with transactions between firms (Williamson 1998), and the enforcement costs of those transactions is one of its key elements (Dyer 1997) in B2B relationships, it is natural to consider power as an influence on the behavior of firms in B2B relationships. Power has been described in political science as influences where "one may try to change behavior of the other...by creating the expectation of sizable rewards or deprivations" (Dahl 1963, pp.8). In channels literature, the concept has been characterized as the "ability to influence the decision variables in the marketing strategy of another member at a different level, of distribution in a given channel" (El-Ansary and Robicheaux 1978, pp. 2). Such phenomena were apparent in the qualitative phase of this research (see Chapter Two) as efforts to offset opportunism and dependency.

Power is generally accepted as stemming from five principal sources: Coercive, Expert, Legitimate, Referent and Reward (French and Raven 1968). Lusch (1976) recategorized the bases of power into two major types: coercive and non-coercive. Coercive power's influence are the result of conditions where one actor is subject to "potential punishment and therefore the individual begrudgingly yields power to another" (pp. 383), while non-coercive power, encompassing all other four types power types, describe conditions where "the individual willingly yields power to another" (pp.383). Nonetheless, the possession of power represents the ability of one actor to alter the motivations of another (El-Ansary and Robicheaux 1978). Hence building on the definition offered in Chapter Two, *Perceived Power is* described in this research

as *one firm's perception of its ability to require compliance of a B2B partner, regardless of that partner's wishes or interests*.

Internal Integration

A key to managing any firm outcome, including the details of a firm's relationships with business-to-business partner firms, is the ability of the firm to coordinate its internal assets (Hillebrand and Biemans 2003). From a transaction costs perspective, coordinating a firm's internal assets has been seen as a "… system of decision making and influence over resources and capabilities, or transfers of products, people, capital, knowledge and technology, which are aspects of internal organization, are intrinsic to *any* organization" (Sundaram and Black 1992, pp. 734). Thus, internal coordination is viewed in relational governance literature as a necessary condition for minimizing transaction costs. Internal coordination also plays a key role in examinations of the firm's ability to shape its relationships in resource-based SCM literature, particularly when describing firm integration (Defee and Stank 2005; Esper, et al. 2010a; Grawe, et al. 2008).

Integration has recently been characterized as "the firm's objective to achieve operational and strategic efficiencies through collaboration of its internal functions as well as with another firm" (Chen, et al. 2009, pp. 63), and is generally accepted to have internal and external dimensions. Ellinger (2000) has defined internal integration as "predominantly informal

processes based on trust, mutual respect and information sharing, the joint ownership of decisions, and collective responsibility for outcomes" (pp. 86) within the firm. Such definitions recall the influence of rapport on B2B relationships found in the qualitative phase of this research (see Chapter Two).

External integration, on the other hand, has been described as "integration that occurs across supply chain partners" (Richey, et al. 2010a, pp. 239). Thus, a firm could unilaterally integrate its activities internally, but not externally. Therefore, this research regards *Internal Integration* as *the ability of the firm to improve performance by linking the processes of various subordinate elements internal to the firm.*

Multiple studies of both internal and external firm integration have indicated that integration is associated with superior performance (Chen, et al. 2007; Droge 2004; Frolich and Westbrook 2002; Johnson 1999; Narasimhan and Kim 2002; O'Leary-Kelly and Flores 2002; Richey, et al. 2010b; Sanders and Premus 2005; Stank, et al. 1999; Vickery, et al. 2003). The dimensions of integration have been shown to share a joint relationship with performance outcomes, with external integration serving as a partial mediator for the influences of internal integration (Chen, et al. 2009; Stevens 1989). However, the definitions of internal integration focus on coordinating efforts of a single firm to achieve a unity of effort in pursuit of the firm's goals (Chen, et al. 2009; Ellinger, et al. 2000; Kahn and Mentzer 1998). As unilateral capabilities are viewed in this research as abilities exclusive to an individual firm that it can

leverage without assistance of others, this research regards internal integration as a unilateral capability of the firm.

Collaborative Capabilities

Capabilities have been described in management literature as "the firm's processes that use resources – specifically to integrate, reconfigure, gain and release resources – to match and even create market change" (Eisenhardt and Martin, 2000, pp. 1107). Drawing on Teece, et al. (1997) in supply chain management literature, Johnsen and Ford (2006) define capabilities "as invisible assets that are firm-specific and developed over time through complex interactions among the firm's resources" (pp. 1103). One resource-based capability frequently cited by supply chain management scholars is collaboration (Bowersox and Daugherty, 1995; Davis and Mentzer, 2006; Fawcett, et al. 2008a; Fugate, et al. 2006; Kahn, et al. 2006).

Collaboration was identified as a key unilateral capability during the qualitative phase of this research (see Chapter Two). Collaboration has been defined as "the ability to work across organizational boundaries to build and manage unique value-added processes to better meet customer needs" (Fawcett, et al. 2008a, pp. 93). Supply chain management literature is chiefly concerned with how groups of firms operate as a larger entity or the "extended enterprise, as it is often called" where "no boundaries and an ethos of trust and commitment must prevail" (Christopher 2000; pp. 39). In such a view, firms combine their efforts and capabilities to

achieve higher performance by jointly delivering offerings the customer finds more valuable (Handfield and Bechtel 2002; Vargo and Lusch 2004; 2008) in spite of dynamic market conditions and customer preferences (Day 1994; Teece, et al. 1997).

As such, this research will consider the resources described by the supply chain management literature as *Collaborative Capabilities*, or *those abilities allowing the firm to work across interfirm organizational boundaries to establish processes that enable partners in B2B relationships to collectively better serve customer needs*. These include external integration, knowledge sharing and relationship quality focus.

External Integration

As noted in the discussion of internal integration, external integration is a form of integration that occurs between B2B partners (Richey, et al. 2010a), rather than within the individual firms (Ellinger, 2000). Studies of external integration indicate that its influence on performance outcomes is partially dependent on internal integration as an antecedent variable (Chen, et al. 2007; Stevens 1989).

Along with internal integration, extant literature indicates that external firm integration is associated with superior performance (Chen, et al. 2007; Droge 2004; Frolich and Westbrook 2002; Johnson 1999; Narasimhan and Kim 2002; O'leary-Kelly and Flores 2002; Richey, et al. 2010b; Sanders and Premus 2005; Stank, et al. 1999; Vickery, et al. 2003), since external

integration reduces waste, duplication of effort and complexity that arise when multiple firms seek to coordinate their efforts (Chen, et al. 2009). However, by its very nature, external integration requires the cooperation of another entity (Mentzer, et al. 2001; Stank, et al. 2001b); constituting a collaborative capability, separate from its unilateral counter-part, internal integration. Thus, this research holds that *External Integration is the ability of the firm to improve performance by collaboratively linking processes with those of supplier and/or customer organizations to achieve more desirable outcomes for the entire B2B relational network.*

Knowledge Sharing

Knowledge has been defined as "a justified belief that increases an entity's capacity for effective action" (Alavi and Leidner 2001, pp. 109). Supply chain management literature often discusses knowledge as a key resource shared among partners in firm relationships to enhance performance of the entire B2B partnership (Handfield and Bechtel 2002; Hult, et al. 2004; Hult, et al. 2005, Lambert, et al. 1998).

Knowledge has been established as a capability rooted in all levels of the firm, "embedded in and carried through multiple entities including organization culture and identity, routines, policies, systems, and documents, as well as individual employees" (Alavi and Leidner 2001, pp. 108). The use of knowledge has also been characterized as a source of performance

for the firm: “Knowledge coordination across nodes (of the supply chain) reduces duplication, waste, and redundancy” (Hult, et al. 2004, pp. 243). The mechanism through which knowledge becomes an interorganizational resource has been described as knowledge spillovers, which are credited with “allowing more differentiated products to be introduced without a continual increase in the research resources that must be expended” (Branstettler 2001, pp. 54). Thus, from the collaborative perspective, *Knowledge Sharing is an ability to transfer and/or receive an understanding of some phenomenon – processes, artifacts, situations, contexts - that increases the firm's capabilities, and to promote growth of that understanding and/or the understanding of other phenomena as a result of the transfer of knowledge between firms.*

Relationship Quality Focus

Both trust and commitment were identified as phenomena that emerged from the data in the qualitative interviews as necessary components of B2B relationships (see Chapter Two), in line with the findings of Morgan and Hunt (1994). Kumar, et al. (1995) point out that “although there is no consensus on which constructs comprise relationship quality, the critical importance of trust and involvement with the supplier in developing long-term relationships has been emphasized” (pp. 54). They further describe relationship quality “as encompassing conflict, trust, commitment, and two constructs that represent the converse of disengagement – willingness to invest in the relationship and expectation of continuity” (Kumar, et al. 1995, pp. 54).

Supply chain management scholars exploring collaboration (Chen and Paulraj 2004; Christopher 2000; Ellram 1991; Fawcett, et al. 2008b; Hanfield and Bechtel 2002; Min, et al. 2005; Richey, et al. 2010a; Spekman, et al. 1998) and integration (Carter and Rogers 2008; Ellram and Cooper 1990; Flynn, et al. 2010, Mentzer, et al. 2001) frequently cite trust as an important element associated with B2B relationship effectiveness, quality and performance outcomes. Morgan and Hunt (1994, pp. 23) "conceptualize trust as existing when one party has confidence in an exchange partner's reliability and integrity." Those authors also define commitment as "believing that an on-going relationship with another is so important as to warrant maximum efforts at maintaining it" (Morgan and Hunt 1994, pp. 23). Their seminal paper views commitment as both a consequence of, and a co-mediator with trust in shaping the influences of relationship antecedents with relationship outcomes.

Relationships, however, are rarely free of disagreement (Dwyer, Schurr and Oh 1987). Yet, minimizing the detrimental effects of conflict, through what Morgan and Hunt (1994) refer to as functional conflict, has a beneficial effect on relationship performance. Such approaches to minimizing conflict consequences rely on trust as "it is trust that leads a partner to perceive that future conflictual episodes will be functional" (Morgan and Hunt 1994; pp. 26).

In spite of this, in writing of supply chain management as an economic outsourcing method, Williamson (2008) declared that TCE expressly excludes concepts such as trust, although more recent case studies have indicated that trust does have a role in governance forms (Ghosh and Fedorowicz 2008; Zaheer and Venkatraman 1995). Further, research suggests that if

facilitators of integrative B2B management practices, such as trust, are not at least as strong as barriers to integration, such as opportunism, integration is more difficult to achieve (Richey, et al. 2010b). Thus, when examining firms competing as larger entities, supply chain management scholars have viewed trust as the central element of relationship performance, while relational governance and TCE literature has looked to means of limiting hazard (Heide, et al. 2007; Williamson 1985) – occasionally including trust (Ghosh and Fedorowicz 2008; Zaheer and Venkatraman 1995) – as the means of achieving performance. *Relationship Quality Focus*, therefore, *is a capability of B2B relationships, including trust, commitment and approaches to minimizing detrimental conflict, which improves the collective effectiveness of the business-to-business partnerships by supplanting fear of opportunism with confidence in the firm's trade partners.*

Relational Contextual Factors

The qualitative phase of this research (see Chapter Two) identified a series of environmental conditions that shape the capabilities of firms in B2B relationships, including uncertainty avoidance (Hofstede 2001) and dependence (Heide and John 1988), both of which enhance reactions to potential opportunism (Williamson 1996). Several factors have been commonly identified in the literature relating to both unilateral and collaborative capabilities, that potentially shape what capabilities the firm choses – or is able – to bring to bear in developing B2B relationship structures. Thus, *Relational Contextual Factors are phenomena*

that influence the effect of both unilateral and collaborative capabilities on the firm's choice of relational governance forms. As conceptualized in this research, relational contextual factors represent the unique, environmental backdrop against which any given B2B relationship must be viewed. Such a conception could include an enormous range of potential constructs; the two considered in this research are opportunism, and competitive intensity.

Competitive Intensity

Williamson (1994) defined competitive intensity as the "concentration of competition in the industry" (pp. 178). Competitive intensity raises the opportunities for customers or suppliers in B2B relationships to find other partners, thus influencing transaction costs, power and dependency. (Dahlstrom, et al. 2009; Fein and Anderson 1997; Lang and Lockhart 1990; Myers and Harvey 2001). At the same time, supply chain scholars have employed competitive intensity as a control in their predictions (Fawcett, et al. 2008a; Myers, et al. 2000; Tokman, et al. 2007).

Opportunism

Opportunism has been described by Williamson (1996) as *the tendency of an actor to pursue their own interests at the expense of others*, and the concept is a central feature in relational governance literature (Antia and Frazier 2001; Brown, et al. 2009; Heide 1992; 1998;

Houston and Johnson 2000). Transaction costs are a reaction to, or an effort to minimize the potential effects of opportunistic behavior (Williamson 1981; 1996).

In a similar manner, supply chain management literature is concerned with using collaborative capabilities to limit, direct, or avoid opportunism (Carter and Rogers 2008; Ellram 1990; 1991; Fugate, et al. 2006; Handfield and Bechtel 2002; Min and Mentzer 2000). Work in supply chain literature has found opportunism to be one of the most damaging influences on quality of B2B relationships (Richey, et al. 2010b). Thus both unilateral and collaborative capabilities are means of minimizing the influence of opportunism on B2B relationships, but through differing methods.

Strategy-Structure-Performance

Having defined and discussed the major constructs of interest in this research, a question that arises is: in what manner do the constructs influence the outcomes that firms experience? The strategy-structure-performance paradigm suggests that strategies - including the assembly of resources (Barney 1991) – drive the structure that firms employ (Defee and Stank 2005). Relational governance contracts are clearly a structural concept, as indicated by Williamson's characterization of them as a tool through which order is imposed and risks are minimized (1994) in managing a relationship. It seems reasonable, therefore, to see relational governance forms as a consequence of, and conduit for firm capabilities.

The contracts that comprise relational governance forms emerged from the TCE and relational governance literature (Crosno and Dahlstrom 2008; Ferguson, et al. 2005; Ghosh and John 1999; 2005; Heide, et al. 2007; Joshi and Campbell 2004; Ménard 2005; Poppo and Zenger 2002; Wathne and Heide 2004; Williamson 2008; Wuyts and Geyskens 2005; Zhang, et al. 2003) and are closely associated with it. Thus, it also seems reasonable to view relational governance contracts as a consequence of unilateral capabilities – which are much more closely related to TCE-centric concepts – as those capabilities are influenced by collaborative capabilities and relational contextual factors. Given this concept of how the constructs defined in this chapter relate to one another based on RBV and TCE theory, it is possible to derive a series of empirical hypotheses about those relationships. Discussion of the relationships and hypotheses is detailed in Chapter Four.

RELATIONAL GOVERNANCE FORMS AND FIRM PERFORMANCE: THE ROLE OF UNILATERAL AND COLLABORATIVE CAPABILITIES

CHAPTER 4

CONCEPTUAL MODEL AND HYPOTHESES

The preceding discussions of capabilities and governance forms lend themselves to the central question of this research: considering both unilateral and collaborative capabilities along with the relational contextual factors inherent to business-to-business relationships, how do the relational governance forms that firms employ influence performance outcomes? The review of literature and theory presented in Chapter Three provides some indications from which we may hypothesize a series of relationships.

RESEARCH HYPOTHESES

The relational governance forms that structure B2B relationships are classified as explicit, normative and hybrid contracts (Ménard 2004), and Heide (1994) suggests that such forms should be regarded as distinct structures, rather than as points on a continuum, and most contracts are hybrids to at least some degree (Lusch and Brown 1996). Further, Lusch and Brown (1976) point out different governance forms are not necessarily mutually exclusive; a firm might be expected to display a high (or low) level of use of either normative or explicit

relationship means to structure its B2B relationships, but it might also employ a high (or low level of *both* normative *and* explicit means. This suggests that the manner in which unilateral and collaborative capabilities influence with relational governance forms should be explored based on the relationship of those specific capabilities with *both* normative *and* explicit relational contract components.

Unilateral Capabilities and Relational Governance Forms

As noted in Chapter Three, the term unilateral in relational governance literature is often used to indicate cases where hierarchical structures are employed to allow one party to dictate the actions, or constrain the behavior of another (Heide 1994; Stinchcombe 1985). Such definitions suggest an effort by one actor to impose the actor's will on another, which closely matches definitions of power (El-Ansary and Robicheaux 1978, French and Raven 1959). A key function of explicit governance contracts is to constrain undesirable behavior of trade partners (Ménard 2004), while normative governance contracts rely less on direct means of constraint than on commonly held understandings between relationship partners of acceptable behavior (Lusch and Brown 1996). Thus, unilateral capabilities, as an artifact of a tendency of the firm to employ hierarchical structures (Heide 1994; Stinchcombe 1985) in the effort to "integrate, reconfigure, gain and release resources – to match and even create market change" (Eisenhardt and Martin, 2000, pp. 1107), may be expected to be more positively associated with explicit

contracts than with normative contracts. Hypotheses of how specific unilateral capabilities related to relational governance forms follow.

Transaction Costs Focus and Relational Governance Forms

A principal function of transaction costs in TCE is maximizing efficiency (Williamson 1981) by reducing contextual effects, such as opportunism (Williamson 1996). From a unilateral perspective, the search costs, contracting costs, monitoring costs, and enforcement costs required to establish a relationship with a partner firm will motivate a focal firm to seek constraints on the probability that the firm will act in an undesirable manner (Dyer 1997). Explicit governance contracts tend to efficiently constrain relationship partners (Ménard 2004). In the unilateral perspective, "TCE eschews appeal to user-friendly concepts, such as the illusive concept of trust" (Williamson 2008, pp. 15), on which the collaborative perspective relies heavily (Carter and Rogers 2008; Chen and Paulraj 2004; Christopher 2000; Ellram 1991; Ellram and Cooper 1990; Fawcett, et al. 2008b; Flynn, et al. 2010; Hanfield and Bechtel 2002; Mentzer, et al. 2001; Min, et al. 2005; Richey, et al. 2010a; Spekman, et al. 1998). Firms attempting to integrate, reconfigure, gain and release resources to achieve such economies under current or changing conditions (Dyer and Singh 1998; Eisenhardt and Martin 2000) have been characterized in this research as having (or seeking) a transaction cost focus, or exerting an effort, as economy-maximizing entities, to establish the transaction costs associated with the relationships the firm will engage in or consider.. This suggests the first hypothesis of the research:

H_{1a}: Transaction Costs Focus is positively associated with use of Explicit Relational Contract Forms.

H_{1b}: Transaction Costs Focus is negatively associated with use of Normative Relational Contract Forms.

Perceived Power and Relational Governance Forms

Power has been characterized as a means of forcing the compliance of another (El-Ansary and Robicheaux 1978), thus, from a unilateral perspective it has a relationship with instruments that constrain undesirable behavior (Dyer 1997). However, Lusch (1976) pointed out that not all forms of power require one party to force the compliance of another. Coercive power refers to the ability to impose compliance on another (French and Raven 1959) while all other bases of power refer to cases where compliance is willingly given (Lusch 1976). Perceived power, in this research, has been defined as one actor's *perception* of the power that actor possesses. Yet, ultimately, power over another actor implies an ability to motivate compliance by that actor (El-Ansary and Robicheaux 1978; French and Raven 1959) which has been shown to degrade both trust and commitment in a relationship (Morgan and Hunt 1994). From this the hypotheses are posed:

H_{2a}: Perceived Power is positively associated with use of Explicit Relational Contract forms.

H_{2b}: Perceived Power is negatively associated with use of Normative Relational Contract forms.

Internal coordination is viewed in relational governance literature as a necessary condition for minimizing transaction costs (Hillebrand and Biemans 2003), and in the form of internal integration is seen as an important component of the firm's ability to achieve its objectives by effectively marshaling all of its full range of capabilities (Chen, et al. 2009; Defee and Stank 2005; Esper, et al. 2010a; Grawe, et al. 2008). Internal integration has been positively associated with firm performance in multiple studies (Chen, et al. 2007; Droge 2004; Frolich and Westbrook 2002; Johnson 1999; Narasimhan and Kim 2002; O'Leary-kelly and Flores 2002; Richey, et al. 2010b; Sanders and Premus 2005; Stank, et al. 1999; Vickery, et al. 2003). Definitions of internal integration from supply chain management focus on coordinating efforts of a single firm to achieve a unity of effort in pursuit of the firm's goals (Chen, et al. 2009; Ellinger, et al. 2000; Kahn and Mentzer 1998). These definitions align with relational governance definitions of internal coordination (Hillebrand and Biemans 2003), or a "system of decision making and influence over resources and capabilities, or transfers of products, people, capital, knowledge and technology, which are aspects of internal organization…intrinsic to *any* organization" (Sundaram and Black 1992, pp. 734) Such views of the construct associates internal integration with this study's definition of unilateral capabilities, or the ability of the firm, acting on its own independent interests to influence the relational governance contract forms used in B2B relationships. Thus:

> *H_{3a}: Internal Integration is positively associated with use of Explicit Relational Contract forms.*
>
> *H_{3b}: Internal Integration is negatively associated with use of Normative Relational Contract forms.*

The unilateral capabilities of the firm describe how the firm attempts to limit opportunism, motivates other firms to acquiesce to its desires, and focuses its resources on achievement of the firm's goals. However, as noted, firms less commonly compete as individual entities in today's market environment (Christopher 2005; Christopher and Towill 2000; Johnson and Lawrence 1988; Vickery, et al. 2003). Further, findings indicate, especially in cases of on-going relationships, that attaining individual efficiencies deteriorate as a goal within relationship networks over time (Goerzen 2007). Thus, in determining how and why firms collectively compete, one must consider what sources of competitive advantage a firm may leverage that are not internal to a single firm, but that require the cooperation of others.

Collaborative Capabilities and Relational Governance Forms

Collaboration is inherently a normative concept; referring as its definitions do to mutual understanding, shared responsibilities and outcomes (Ellinger 2000), and reliance on trust and commitment that ignores boundaries (Christopher 2000), which grow from the establishment of rapport (Gremler and Gwinner 2000). Thus, collaborative capabilities will tend to moderate unilateral capabilities in a way that weakens their positive relationship with explicit contracts, and weakens their negative relationship with normative contracts. It has been argued here that unilateral capabilities, on the other hand, encourage more hierarchical, explicit forms of relational governance. How each of these capabilities interacts with unilateral capabilities will be discussed in more detail.

External Integration, Unilateral Capabilities and Relational Governance Forms

External Integration – or the integration of functions and processes between firms in B2B relationships (Richey, et al. 2010a) - Requires a free exchange between partners to enable linkages of processes (Chen, et al. 2009). Such exchanges rely on the view of the firm as "extended enterprise…" where "…no boundaries and an ethos of trust and commitment must prevail" (Christopher 2000; pp. 39). As such external integration lends itself to less formal contracts, based on mutual understandings (Lusch and Brown 1996). Thus given the more explicit relational contractual tendency of unilateral capabilities as they have been presented here:

> H_{4a}: *External Integration moderates the positive relationship between Transaction Costs Focus and Explicit Relational Contract Forms in a manner that decreases the relationship.*
>
> H_{4b}: *External Integration moderates the negative relationship between Transaction Costs Focus and Normative Relational Contract Forms in a manner that decreases the relationship.*
>
> H_{4c}: *External Integration moderates the positive relationship between Perceived Power and Explicit Relational Contract Forms in a manner that decreases the relationship.*
>
> H_{4d}: *External Integration moderates the negative relationship between Perceived Power and Normative Relational Contract Forms in a manner that decreases the relationship.*
>
> H_{4e}: *External Integration moderates the positive relationship between Internal Integration and Explicit Relational Contract Forms in a manner that decreases the relationship.*

H_{4f}: External Integration moderates the negative relationship between Internal Integration and Normative Relational Contract Forms in a manner that decreases the relationship.

Knowledge Sharing, Unilateral Capabilities and Relational Governance Forms

Knowledge Sharing has been defined in this research as an ability to transfer and/or receive an understanding of some phenomenon – processes, artifacts, situations, contexts - that increases the firm's capabilities, and to promote growth of that understanding and/or the understanding of other phenomena as a result of the transfer of knowledge between firms. Knowledge sharing is frequently cited in supply chain literature as a means by which firms exchange capabilities, without concern for barriers (Christopher 2000). Firms accrue benefits from transfer of knowledge between B2B partners (Hult, et al. 2004), in part as a consequence of collaborative behavior by trade partners (Esper, et al. 2010b). As noted, collaboration is an inherently normative concept, as normative contracts rely on mutual expectations with less formal structures to govern those expectations (Lusch and Brown 1996). This contrasts with the more explicit relationships expected of unilateral capabilities as presented in this research. Given these views:

H_{5a}: Knowledge Sharing moderates the positive relationship between Transaction Costs Focus and Explicit Relational Contract Forms in a manner that decreases the relationship.

H_{5b}: Knowledge Sharing moderates the negative relationship between Transaction Costs Focus and Normative Relational Contract Forms in a manner that decreases the relationship.

H_{5c}: Knowledge Sharing moderates the positive relationship between Perceived Power and Explicit Relational Contract Forms in a manner that decreases the relationship.

H_{5d}: Knowledge Sharing moderates the negative relationship between Perceived Power and Normative Relational Contract Forms in a manner that decreases the relationship.

H_{5e}: Knowledge Sharing moderates the positive relationship between Internal Integration and Explicit Relational Contract Forms in a manner that decreases the relationship.

H_{5f}: Knowledge Sharing moderates the negative relationship between Internal Integration and Normative Relational Contract Forms in a manner that decreases the relationship.

Relationship Quality Focus, Unilateral Capabilities and Relational Governance Forms

Chapter Three defines Relationship Quality Focus as a capability of B2B relationships, including trust, commitment and approaches to minimizing detrimental conflict, which improves the effectiveness of the B2B relationships by supplanting fear of opportunism with confidence in the firm's trade partners. Relationship quality focus concepts, such as trust and commitment require high degrees of mutual understanding between relationship partners (Morgan and Hunt 1994). Normative contracts also require higher degree of mutual understanding (Ménard 2004). TCE, which provides the main theoretical grounding of unilateral capabilities in this research, has been said to inherently eschew concepts such as trust (Williamson 2008). This leads to the conclusion that:

H_{6a}: Relationship Quality Focus moderates the positive relationship between Transaction Costs Focus and Explicit Relational Contract Forms in a manner that decreases the relationship.

H_{6b}: Relationship Quality Focus moderates the negative relationship between Transaction Costs Focus and Normative Relational Contract Forms in a manner that decreases the relationship.

H_{6c}: Relationship Quality Focus moderates the positive relationship between Perceived Power and Explicit Relational Contract Forms in a manner that decreases the relationship.

H_{6d}: Relationship Quality Focus moderates the negative relationship between Transaction Costs Focus and Normative Relational Contract Forms in a manner that decreases the relationship.

H_{6e}: Relationship Quality Focus moderates the positive relationship between Internal Integration and Explicit Relational Contract Forms in a manner that decreases the relationship.

H_{6f}: Relationship Quality Focus moderates the negative relationship between Internal Integration and Normative Relational Contract Forms in a manner that decreases the relationship.

Relational Contextual Factors and Relational Governance Forms

Relational contextual factors are defined in this research as phenomena that influence the effects that both unilateral capabilities and collaborative capabilities have on relational governance contract forms. As conceptualized in this research, relational contextual factors heighten uncertainty in relationships (Dahlstrom, et al 2009; Dyer 1997, Goldsby and Eckert 2003; Williamson 1981), because those factors conceptually identified as common to both relational capabilities – competitive intensity (Fawcett, et al. 2008a; Myers, et al. 2000; Tokman, et al. 2007; Williamson 1994), and opportunism (Carter and Rogers 2008; Ellram 1990; 1991; Fugate, et al. 2006; Handfield and Bechtel 2002; Min and Mentzer 2000; Williamson 1996) - tend to be those that the unilateral capabilities and collaborative capabilities serve to minimize.

Use of explicit relational governance forms, in this research, has been posited to share a positive relationship with unilateral capabilities, resulting from unilateral capabilities' function as means of reducing the antecedent influences central to TCE theory – bounded rationality (Chiles and McMackin 1996), information asymmetry (MacMillan 1990), and opportunism (Williamson). Thus, relational contextual factors will tend to moderate unilateral capabilities in a way that strengthens their relationship with explicit contracts, and weakens their relationship with normative contracts.

Competitive Intensity, Unilateral Capabilities and Relational Governance Forms

Competitive intensity is described as the "concentration of competition in the industry" (Williamson 1994; pp. 178). Competitive intensity opens options to a firm for different relationship partners, since there are more firms in the market to choose from (Dahlstrom, et al. 2009; Fein and Anderson 1997; Lang and Lockhart 1990; Myers and Harvey 2001), increasing the uncertainty with which firms must contend and increasing transaction costs for a firm (Chiles and McMackin 1996). Firms determined to limit future transaction costs in replacing a partner firm then (Dyer 1997), would seek to secure their relationships in a competitively intense environment, especially if they believe they have the power compel a partner's continued cooperation (El-Ansary and Robicheaux 1978) and can effectively coordinate their internal resources (Chen, et al. 2009) to do so. This leads to the hypothesis:

H_{7a}: Competitive Intensity moderates the positive relationship between Transaction Costs Focus and Explicit Relational Contract Forms in a manner that increases the relationship.

H_{7b}: Competitive Intensity moderates the negative relationship between Transaction Costs Focus and Normative Relational Contract Forms in a manner that increases the relationship.

H_{7c}: Competitive Intensity moderates the positive relationship between Perceived Power and Explicit Relational Contract Forms in a manner that increases the relationship.

H_{7d}: Competitive Intensity moderates the negative relationship between Perceived Power and Normative Relational Contract Forms in a manner that increases the relationship.

H_{7e}: Competitive Intensity moderates the positive relationship between Internal Integration and Explicit Relational Contract Forms in a manner that increases the relationship.

H_{7f}: Competitive Intensity moderates the negative relationship between Internal Integration and Normative Relational Contract Forms in a manner that increases the relationship.

Opportunism, Unilateral Capabilities and Relational Governance Forms

Constraining opportunism is one of the concepts that TCE is most concerned with (Williamson 1981). Explicit contracts are a means of reducing hazards for the firm (Ménard 2004), such as opportunism. These conclusions lend themselves to the proposal that:

H_{8a}: Opportunism moderates the positive relationship between Transaction Costs Focus and Explicit Relational Contract Forms in a manner that increases the relationship.

H_{8b}: Opportunism moderates the negative relationship between Transaction Costs Focus and Normative Relational Contract Forms in a manner that increases the relationship.

H_{8c}: Opportunism moderates the positive relationship between Perceived Power and Explicit Relational Contract Forms in a manner that increases the relationship.

H_{8d}: Opportunism moderates the negative relationship between Perceived Power and Normative Relational Contract Forms in a manner that increases the relationship.

H_{8e}: Opportunism moderates the positive relationship between Internal Integration and Explicit Relational Contract Forms in a manner that increases the relationship.

H_{8f}: Opportunism moderates the negative relationship between Internal Integration and Normative Relational Contract Forms in a manner that increases the relationship.

Relational Governance Forms and Relationship Value Outcomes

The relationship value outcome variables in this research are well established constructs in marketing. They include firm performance, defined as the success of the focal firm measured in terms of financial and market measures, and partner satisfaction (Morgan and Piercy, 1998). It is not the contention of this research that unilateral capabilities are superior to collaborative capabilities or vice versa. Rather, *this research contends that unilateral and collaborative capabilities are better suited to different conditions*.

Unilateral capabilities, as defined here, are rooted in Transaction Cost Economics concepts (Williamson 1996), which are characterized as incompatible with more collaborative approaches that rely on relational concepts such as trust (Williamson 2008). A focus of TCE-grounded views is that the goal of the firm in engaging in B2B relationships to minimize both transaction costs and hazards such as opportunism (Heide 1984; Williamson 1981), through the

use of contracts whose explicit terms constrain undesirable behavior by a partner (Ménard 2004). Thus, one may expect use of unilateral capabilities to be more effective with use of explicit relational governance contracts.

On the other hand, collaborative capabilities, as conceptualized in this research, are more closely related to Resource-Based Views of B2B relationships, in which the firm seeks to assemble superior performance-enabling resources (Barney 1991; Olavarrieta and Ellinger 1997) through cooperation with trusted, committed partners in the pursuit of competitive advantage (Morgan and Hunt 1994). Rather than establishment of prudent barriers for the protection and betterment of the individual firm (Williamson 2008), collaborative capabilities – like supply chain management views of resource-based B2B relationships – are more concerned with establishing a larger entity that can jointly compete in the market (Christopher 2005; Christopher and Towill 2000; Johnson and Lawrence 1988; Vickery, et al. 2003), relying on trust instead of protective barriers (Christopher 2000). Normative relational governance contracts rely on mutual understandings between B2B partners (Lusch and Brown 1996), which in turn require a degree of trust between partners (Heide 1994). This suggests that use of collaborative capabilities will be more effective in conjunction with normative relational governance contracts. Hence, a ninth series of hypotheses is offered:

> *H_{9a}: Explicit Relational Contract Forms mediate a positive relationship between Unilateral Capabilities and Firm Performance.*
>
> *H_{9b}: Explicit Relational Contract Forms mediate a positive relationship between Unilateral Capabilities and Partner Satisfaction.*

H_{9c}: Normative Relational Contract Forms mediate a negative relationship between Unilateral Capabilities and Firm Performance.

H_{9d}: Normative Relational Contract Forms mediate a negative relationship between Unilateral Capabilities and Partner Satisfaction.

Table 4-1 includes a summary all hypotheses of this research.

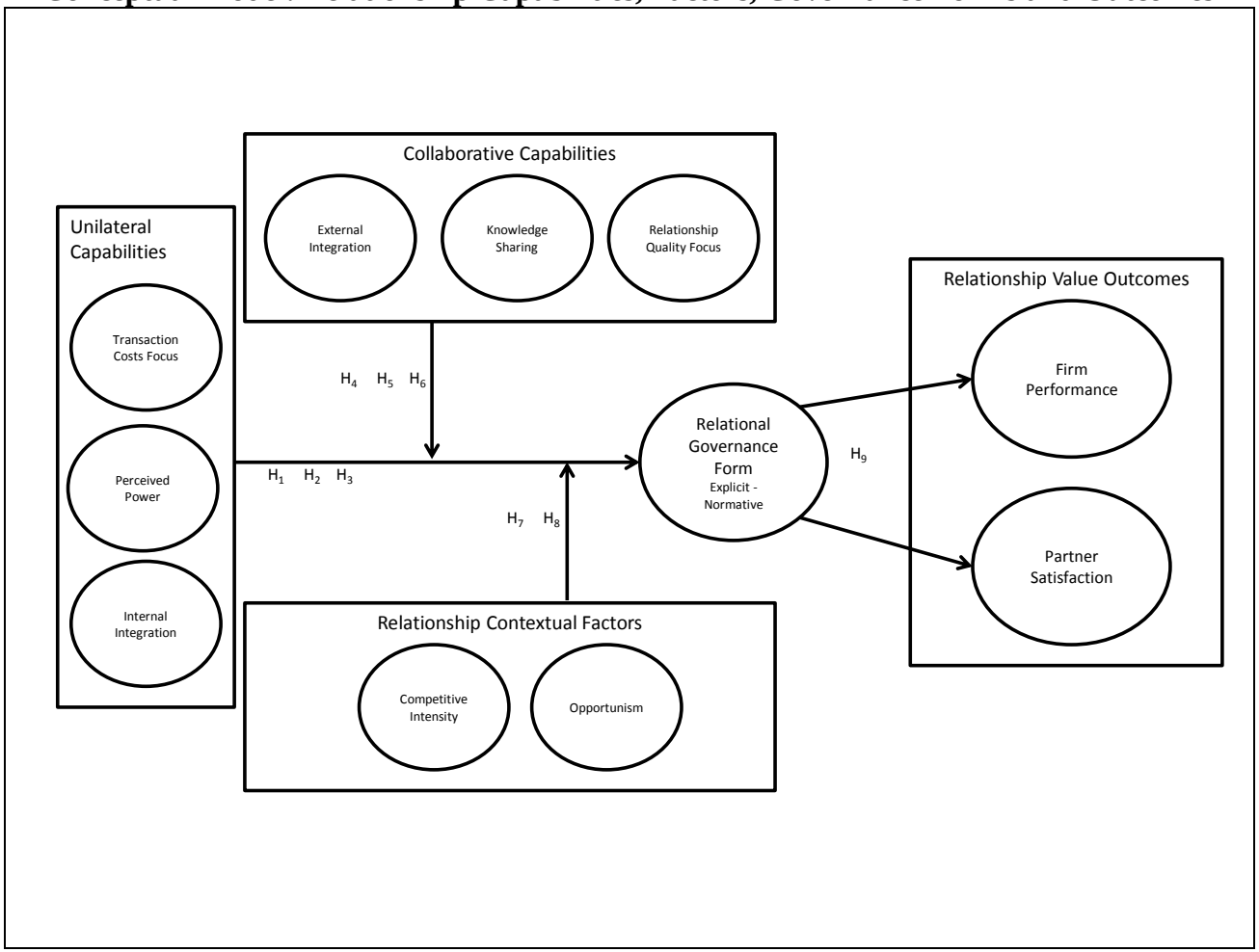
TABLE 4-1
Summary of Research Hypotheses

Hypothesis	IV	Moderator	Mediator	DV	Direct Effect	Interaction
H_{1a}	Transaction Cost Focus		Explicit Contracts		+	
H_{1b}	Transaction Cost Focus		Normative Contracts		-	
H_{2a}	Perceived Power		Explicit Contracts		+	
H_{2b}	Perceived Power		Normative Contracts		-	
H_{3a}	Internal Integration		Explicit Contracts		+	
H_{3b}	Internal Integration		Normative Contracts		-	
H_{4a}	Transaction Cost Focus	External Integration	Explicit Contracts		+	Reduces Relationship
H_{4b}	Transaction Cost Focus	External Integration	Normative Contracts		-	Reduces Relationship
H_{4c}	Perceived Power	External Integration	Explicit Contracts		+	Reduces Relationship
H_{4d}	Perceived Power	External Integration	Normative Contracts		-	Reduces Relationship
H_{4e}	Internal Integration	External Integration	Explicit Contracts		+	Increases Relationship
H_{4f}	Internal Integration	External Integration	Normative Contracts		-	Increases Relationship
H_{5a}	Transaction Cost Focus	Knowledge Sharing	Explicit Contracts		+	Reduces Relationship
H_{5b}	Transaction Cost Focus	Knowledge Sharing	Normative Contracts		-	Reduces Relationship
H_{5c}	Perceived Power	Knowledge Sharing	Explicit Contracts		+	Reduces Relationship
H_{5d}	Perceived Power	Knowledge Sharing	Normative Contracts		-	Reduces Relationship
H_{5e}	Internal Integration	Knowledge Sharing	Explicit Contracts		+	Increases Relationship
H_{5f}	Internal Integration	Knowledge Sharing	Normative Contracts		-	Increases Relationship
H_{6a}	Transaction Cost Focus	Relationship Quality Focus	Explicit Contracts		+	Reduces Relationship
H_{6b}	Transaction Cost Focus	Relationship Quality Focus	Normative Contracts		-	Reduces Relationship
H_{6c}	Perceived Power	Relationship Quality Focus	Explicit Contracts		+	Reduces Relationship
H_{6d}	Perceived Power	Relationship Quality Focus	Normative Contracts		-	Reduces Relationship
H_{6e}	Internal Integration	Relationship Quality Focus	Explicit Contracts		+	Increases Relationship

Hypothesis	IV	Moderator	Mediator	DV	Direct Effect	Interaction
H_{6f}	Internal Integration	Relationship Quality Focus	Normative Contracts		-	Increases Relationship
H_{7a}	Transaction Cost Focus	Competitive Intensity	Explicit Contracts		+	Increases Relationship
H_{7b}	Transaction Cost Focus	Competitive Intensity	Normative Contracts		-	Increases Relationship
H_{7c}	Perceived Power	Competitive Intensity	Explicit Contracts		+	Increases Relationship
H_{7d}	Perceived Power	Competitive Intensity	Normative Contracts		-	Increases Relationship
H_{7e}	Internal Integration	Competitive Intensity	Explicit Contracts		+	Reduces Relationship
H_{7f}	Internal Integration	Competitive Intensity	Normative Contracts		-	Reduces Relationship
H_{8a}	Transaction Cost Focus	Opportunism	Explicit Contracts		+	Increases Relationship
H_{8b}	Transaction Cost Focus	Opportunism	Normative Contracts		-	Increases Relationship
H_{8c}	Perceived Power	Opportunism	Explicit Contracts		+	Increases Relationship
H_{8d}	Perceived Power	Opportunism	Normative Contracts		-	Increases Relationship
H_{8e}	Dependency	Opportunism	Explicit Contracts		+	Reduces Relationship
H_{8f}	Dependency	Opportunism	Normative Contracts		-	Reduces Relationship
H_{9a}	Unilateral Capabilities		Explicit Contracts	Firm Perfomance	+	
H_{9b}	Unilateral Capabilities		Normative Contracts	Firm Perfomance	-	
H_{9c}	Unilateral Capabilities		Explicit Contracts	Customer Satisfaction	+	
H_{9d}	Unilateral Capabilities		Normative Contracts	Customer Satisfaction	-	

Figure 4-1 provides an illustration of the expected relationships. Having defined a framework of relationships between the constructs of interest, and having derived a series of hypotheses based on that framework, this dissertation will now turn its attention to the design of a study to test those hypotheses. Details of the study are addressed in Chapter Five.

FIGURE 4-1
Conceptual Model: Relationship Capabilities, Factors, Governance Forms and Outcomes



RELATIONAL GOVERNANCE FORMS AND FIRM PERFORMANCE: THE ROLE OF UNILATERAL AND COLLABORATIVE CAPABILITIES

CHAPTER 5

QUANTITATIVE RESEARCH DESIGN AND MEASUREMENT

The hypotheses and conceptual model posed in Chapter Four illustrate the expected relationships between the capabilities, contexts, structures, and relationship value outcomes of business-to-business relationships. The view of these relationships was formed based not only on literature review, but on a qualitative study to determine how business managers view the nature of their B2B relationships and what factors influence the establishment of those structures (see Chapter Three). Chapter Five discusses the methods employed in quantitative phase of the research, and the associated methodological issues. The subjects examined are the research design, the steps in developing a quantitative survey, a profile of the sample intended to test the hypotheses, a review of the data collection of that sample, a brief discussion of the management of the data, and the psychometric properties of the collected sample data.

RESEARCH DESIGN

Because of the highly perceptual nature of the constructs discussed in Chapter Three, particularly the opinion-based nature of concepts such as power and trust, survey research is most appropriate for this approach for this study. Secondary data is unlikely to yield scores measuring the range of constructs considered. Since this research requires responses from a large number of subjects involved in – and/or aware of – the B2B relationship mechanisms of

firms, obtaining a controllable sample for an experiment is problematic, since few conveniently available subjects possess "the ability, through training or experience, to understand and respond to experimental treatment conditions," (Thomas 2011, pp. 289). Fortunately, the constructs identified in Chapter Four all feature established measures, thus panel data will be used to acquire a suitable sample for the survey.

LITERATURE REVIEW

On developing a more grounded understanding of the phenomena of interest through the qualitative study (see Chapter Two), review of the applicable literature was developed. As in the qualitative phase of this research, the review employed a variety of on-line resources (ABI – inform; Google Scholar; Infotrac; JSTOR; and PSYC-Info), reading lists accumulated from doctoral training course work, consulting the bibliographies of identified works, and discussions with experienced researchers in the field of survey studies. However, the literature research was more extensive, owing to the stronger need for an *a priori* understanding of the expected constructs and relationships involved. Findings of this review are presented in Chapters Three and Four.

EMPIRICAL SURVEY DEVELOPMENT

The survey employed in this research was developed using the techniques described by Churchill (1979). A search of the key literature was conducted to identify those existing constructs that corresponded to the concepts confirmed through qualitative research, specifically,

transaction costs, power, trust and commitment, opportunism, competitive intensity, and normative and explicit forms of relational contracts. This search led to the conclusion that other factors also needed to be considered; specifically, internal and external integration and knowledge sharing. The literature search provided a series of measures corresponding to the constructs of interest that allowed for estimation of a model to test the expected relationships.

In all cases, measures for the constructs of interest were available from the established literature that could be modified for this study's needs. Scale development steps, therefore, were unnecessary. Each of the constructs measured is discussed briefly below. A consolidated list of the measures used is provided in Appendices A and B.

Unilateral Capabilities

Unilateral capabilities are those competencies by which the firm, acting independently, seeks to shape firm value outcomes through relationships with business-to-business partners. The measures identified to define unilateral capabilities in this research are transaction costs focus, perceived power, and internal integration.

Transaction Cost Focus

As described by Dyer (1997), transaction costs are the expenses associated with the functions of searching out B2B partners, crafting contracts with B2B partners, monitoring the adherence to established contracts by B2B partners, and enforcing the terms of the contract by penalizing a B2B partner for contractual transgressions. Transaction cost focus then, is intended

to describe the degree of effort that a firm gives to each of those four functions. Dyer's (1997) description was used as a direct guide in establishing this scale, which is presented in Table 5-1.

TABLE 5-1
The Transaction Cost Focus Items

Dimension	Item	Anchors/Type	Code
Transaction Cost Focus	Thinking about the typical business relationships your firm is involved in, please indicate how much managerial energy your firm generally expends in …	1 - 7: Very Little to A Great Deal	TCF
Search Costs	... researching potential trade partners		TCF1
Contracting Costs	... constructing contracts with new trade partners		TCF2
Monitoring Costs	... checking to see that trade partners live up to their agreements with your firm		TCF3
Safeguarding Costs	... making complaints and/or filing actions against trade partners who violate deals with your firm		TCF4

Perceived Power

Power is the ability to "influence the decision variables…" of another actor (El-Ansary and Robicheaux 1978, pp.2). Perceived power was measured in this research employing a scale by John (1984, pp. 287), featuring two-item measures of each of the five bases of power, legitimate, expert, referent, coercive and reward power, and adapted for this research context. The perceived power measure is provided in Table 5-2.

TABLE 5-2
The Perceived Power Items

Dimension	Item	Anchors/Type	Code
Power	Please indicate how much you agree/disagree with the following statements about why your trade partner complies with your wishes	1 - 7 Strongly Disagree to Strongly Agree	Pow
Legitimate	Our trade partner views complying with our requests as their duty.		LPow1
Legitimate	Our trade partner recognizes their obligation to go along with our requests.		LPow2
Legitimate	Our trade partner is aware of contract clauses that require them to comply with our requests.		LPow3
Expert	Our trade partner relies on our judgment regarding the requests that we make		EPow1
Expert	Our trade partner respects our expertise.		EPow2
Expert	Our trade partner believes that we have more information than they do regarding the requests that we make.		EPow3
Power	Please indicate how much you agree/disagree with the following statements about why your trade partner complies with your wishes	1 - 7 Strongly Disagree to Strongly Agree	Pow
Referent	Our trade partner admires the way we run our business		RfPow1
Referent	Our trade partner appears to be proud to be affiliated with our firm.		RfPow2
Referent	Our trade partner has feelings similar to our firm's feelings about the way a business should be run		RfPow3
Coercive	Our firm hints that we will take actions that might reduce our trade partner's business profits and/or volume		CoPow1
Coercive	Our trade partner believes we would get back at them if they disappoint us.		CoPow2
Coercive	Our trade partner believes that we might withdraw certain needed services (or cooperative terms)		CoPow3
Reward	Our trade partner believes that our firm might return a favor on another occasion		RwPow1
Reward	Our firm rewards our trade partners when they fulfill our requests.		RwPow2
Reward	Our trade partner believes that our firm can offer additional rewards in the future		RwPow3

Internal Integration

Internal coordination is viewed in governance literature as a necessary condition for minimizing transaction costs (Hillebrand and Biemans 2003), and in the form of internal integration is seen as an important component of the firm's ability to achieve its objectives by effectively marshaling all of its full range of capabilities (Chen, et al. 2009; Defee and Stank 2005; Esper, et al. 2010a; Grawe, et al. 2008). The internal integration construct in this research is measured by adapting the five-item internal integration measures developed by Closs and Savitskie (2003, pp. 76), as shown in Table 5-3.

TABLE 5-3
The Internal Integration Items

Dimension	Item	Anchors/Type	Code
Internal Integration	Please indicate how much you agree/disagree with the following statements about how well your firm coordinates its activities	1 - 7 Strongly Disagree to Strongly Agree	Integ
	My firm effectively shares operational information across departments		Integ1
	My firm maintains an easily accessed system to record information and facilitate information sharing across all departments		Integ2
	The information available in my firm is accurate, timely and formatted to facilitate use		Integ3

Collaborative Capabilities

Collaborative capabilities are those competencies of the firm derived from acting in concert with other firms, and by which the firm shapes relationship value outcomes. The

instruments identified to measure collaborative capabilities in this research are external integration, knowledge sharing and relationship quality focus.

External Integration

External integration refers to the ability of firms to coordinate their activities *between* B2B partners in much the same way that internal integration coordinates activities *within* an individual firm, and the two concepts are often related in the literature (Chen, et al. 2009). External integration in this research is measured by adapting the two-item external integration scale developed by Closs and Savitskie (2003, pp. 76), with two additional measures adapted from the internal integration items (Closs and Savitskie 2003) to an external relationship context. The items of the internal integration measure are included in Table 5-4.

TABLE 5-4
The External Integration Items

Dimension	Item	Anchors/Type	Code
External Integration	Please indicate how much you agree/disagree with the following statements about how well your firm coordinates its activities with its trade partners	1 - 7 Strongly Disagree to Strongly Agree	ExTeg
	My firm obtains information directly from trade partners to facilitate sales planning and improves forecasting		ExTeg1
	My firm is shares strategic information with selected trade partners		ExTeg2
	The information supplied to trade partners is timely, accurate and formatted to facilitate their use		ExTeg3
	The information my firm supplies to trade partners is used in their forecasting		ExTeg4

Knowledge Sharing

Knowledge Sharing has been cited in SCM literature as a means by which firms exchange capabilities, without concern for barriers (Christopher 2000). The ability of partners in a relationship to exchange knowledge is critical in adapting to one another's needs. The knowledge sharing construct is measured by adapting the fifteen-item scale by Kahn, et al. (2006, pp. 218), consisting of knowledge combination, knowledge creation, and knowledge documentation. The eleven knowledge sharing items adapted for analysis in this research are included in Table 5-5.

TABLE 5-5
The Knowledge Sharing Items

Dimension	Item	Anchors/Type	Code
Knowledge Sharing	Please indicate how much you agree/disagree with the following statements about information your company obtains from trade partners	1 - 7 Strongly Disagree to Strongly Agree	NoShr
Combination	Our firm uses information from our trade partner in combination with our own information.		NoCom1
Combination	Our firm combines order data with information from our trade partner to develop forecasts		NoCom2
Combination	Our firm combines our sales data with data from our trade partner to better understand sales trends		NoCom3
Combination	Our firm combines our sales data with data from our customers trade partner to better balance our inventory		NoCom4
Creation	Our firm develops new processes for managing inventory based on information from our trade partner		NoCre1
Creation	Our firm develops new processes for forecasting based on information from our trade partner		NoCre2
Creation	Our firm develops new processes for reducing costs based on information from our trade partner		NoCre3

Creation	Our firm develops new processes for communicating with other customers and/or suppliers based on information from our trade partner	NoCre4

Relationship Quality Focus

Relationship quality focus has been defined by the literature review of this research as the capabilities of the firm to improve effectiveness of B2B relationships by supplanting fear of opportunism with confidence of the relationship members in one another. The academy has not settled on constructs that define relationship quality (Kumar, et al. 1995), but trust and commitment (Morgan and Hunt 1994) have been widely employed as measures of relationship quality (Carter and Rogers 2008; Chen and Paulraj 2004; Christopher 2000; Ellram 1991; Ellram and Cooper 1990; Fawcett, et al. 2008b; Flynn, et al. 2010; Ghosh and Fedorowicz 2008; Hanfield and Bechtel 2002; Mentzer, et al. 2001; Min, et al. 2005; Richey, et al. 2010a; Spekman, et al. 1998). Further, the ability to minimize detrimental conflict through the use of functional conflict has been cited as important factor in the health of relationships (Dwyer, Schurr and Oh 1987, Kumar, et al. 1995; Morgan and Hunt 1994). Therefore, the relationship quality focus construct of this research will be measured by the well-established trust and commitment items (Hunt and Morgan 1994, pp. 35), and adapted items from the conflict management scale employed by Kumar, et al. (1995; pp. 64), as shown in Table 5-6.

TABLE 5-6
The Relationship Quality Focus Items

Dimension	Item	Anchors/Type	Code
Creation	In the following questions, please indicate how much you agree/disagree with the following statements about your relationship with your firm's trade partner		RQF
	In our relationship with our major customer (supplier), our customer (supplier)…	1 - 7 Strongly Disagree to Strongly Agree	Trst
	…can generally be trusted		Trst1
	…can be counted on to do what is right.		Trst2
	…has high integrity		Trst3
Commitment	Our relationship with our major trade partner…	1 - 7 Strongly Disagree to Strongly Agree	Comt
	...is something we are very committed to.		Comt1
	…is something our firm intends to maintain indefinitely		Comt2
	…deserves our firm's maximum effort to maintain.		Comt3
Manifest Conflict	Considering our firm’s relationship with our trade partner…	1 - 7 Strongly Disagree to Strongly Agree	MCnft
	A high degree of conflict exists between our firm and our trade partner		MCnft1
	Discussions between our firm and our trade partner often become contentious		MCnft2
	Our firm has major disagreements with our trade partner on several key issues		MCnft3

Relational Contextual Factors

Relational contextual factors are those phenomena - unique to each relationship and/or the market in which the firm and its B2B partners operate - that influence the firm's choices of the relational governance form that the firm chooses to employ in business-to-business relationships. The relational contextual factors explored in this research are competitive intensity and opportunism.

Competitive Intensity

Both relational governance (Dahlstrom, et al. 2009; Fein and Anderson 1997; Lang and Lockhart 1990; Myers and Harvey 2001) and supply chain management (Fawcett, et al. 2008a; Myers, et al. 2000; Tokman, et al. 2007) scholars have been concerned with the influence of competitive intensity of a market on the B2B relationships. The competitive intensity construct will be measured using the three item scale developed by Miller (1987, pp. 73), as shown in Table 5-7.

TABLE 5-7
The Competitive Intensity Items

Dimension	Item	Anchors/Type	Code
Competitive Intensity	For each of the following questions, please select the option that best completes the statements about your company's competition in general	1 - 7 Strongly Disagree to Strongly Agree	Comp
	Over the past five years, competitive hostility has become _____ predictable	1 - 7 Far Less to Far More	Comp1
	Over the past five years, marketing activities of our competition have become _____ hostile	1 - 7 Far Less to Far More	Comp2

	Over the past five years, marketing activities of our competition has affected _____ areas of our firm	1 -7 Many Fewer to Many	Comp3

Opportunism

Opportunism represents the danger that one firm in a B2B relationship will pursue its interests to the detriment of another (Williamson 1996), and has been viewed as an influence on both utility maximization-centric (Antia and Frazier 2001; Brown, et al. 2009; Heide 1992; 1998; Houston and Johnson 2000) and cooperation-centric (Carter and Rogers 2008; Ellram 1990; 1991; Fugate, et al. 2006; Handfield and Bechtel 2002; Min and Mentzer 2000) literature. As such it may be expected to interact with the influence of both unilateral and collaborative capabilities on relational governance forms. Opportunism will be measured using a six-item scale from Heide, Wathne and Rokkan (2007, pp. 432). The items for the opportunism measure are displayed in Table 5-8.

TABLE 5-8
The Opportunism Items

Dimension	Item	Anchors/Type	Code
Opportunism	Please indicate how much you agree/disagree with the following statements about your trade partner.	1 - 7 Strongly Disagree to Strongly Agree	Opp
	Our trade partner sometimes promises to do things without actually doing them later.		Opp1
	Our trade partner does not always act in accordance with our contract(s).		Opp2

	Our trade partner sometimes tries to breach informal agreements between our companies to maximize our their benefit.	Opp3
	Our trade partner tries to take advantage of "holes" in our contract to further their interests.	Opp4
	Our trade partner sometimes uses unexpected events to extract concessions from us.	Opp5

Relational Governance Forms

Relational Governance Forms describe, in essence, how participants in a relationship achieve an understanding of the obligations that the relationship imposes upon each of them. The means of achieving that understanding can be highly codified and specific (Ménard 2004), or extremely informal, personal and based on an assumption of a shared understanding (Lusch and Brown 1996). Although such a description would lend itself to viewing relational governance forms as a single, continuous measure, literature suggests that explicit and normative contract forms of relational governance are, in fact, independent (Heide 1994). It is possible to have a highly personal understanding of obligations with a partner with whom one also has a very extensive, detailed written contract. Indeed, empirical research by Lusch and Brown (1996), found measures of the two approaches can share a strong and significant, positive correlation. Thus, this research must include measures for both codified relational governance forms, or explicit contracts, and informal relational governance forms, or normative contracts.

Explicit Contracts

Explicit contracts refer to relational governance forms that are highly formalized, involving detailed, specifically stated terms of the obligations incumbent on each party in a B2B relationship (Ménard 2004). The construct Formalization is a frequent proxy measure for explicit contracts (Dwyer and Welsh 1985; Dwyer and Oh 1987; John 1984), and the formalization measure used in this research is an adaptation (Heide 2003, pp. 27) of a scale developed by Hage and Aiken (1967). The formalization measures are presented in Table 5-9.

TABLE 5-9
The Formalization Items

Dimension	Item	Anchors/Type	Code
Formalization	Thinking about the trade partner you were asked to consider, please indicate your level of agreement/disagreement with the following statements regarding your relationship with your trade partner.	1 - 7 Strongly Disagree to Strongly Agree	ExCnrt
	Our dealings with this trade partner are subject to a lot of rules and procedures stating how various aspects of the relationship are to be handled.		Form1
	Orders from this customer (or to this supplier) must be placed periodically according to a formalized routine.		Form2
	Deliveries to this customer (or from this supplier) must be made on fixed days and times.		Form3
	The interaction with this trade partner involves doing things "by the rule book."		Form4

Normative Contracts

Normative contracts describe relational governance forms that rely on informal, mutually held understandings of the obligations of a relationship by both parties involved (Lusch and

Brown 1996). Measures of Flexibility have been used to represent normative contracts in the relational governance literature (Heide 1994). The flexibility items employed in this research were adapted from the scale by Kaufman and Stern (1988, pp. 550) as detailed in Table 5-10.

TABLE 5-10
The Flexibility Items

Dimension	Item	Anchors/Type	Code
Flexibility	Thinking about the trade partner you were asked to consider, please indicate your level of agreement/disagreement with the following statements regarding your relationship with your trade partner.	1 - 7 Strongly Disagree to Strongly Agree	NmCnrt
	The agreement with this trade partner is very informal.		Flex1
	Flexibility in response to requests for changes is a characteristic of this relationship.		Flex2
	Both we and our trade partner expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances.		Flex3
	When some unexpected situation arises, we and our trade partner would rather work out a new deal than hold each other to the original terms.		Flex4

Relationship Value Outcomes

The relationship value outcomes examined in this research include both firm performance and measures of customer satisfaction, adapted to measure partner satisfaction. The market and financial performance items were adapted from Morgan and Piercy (1998, pp. 205). The items of partner satisfaction were adapted from Daugherty, et al. (2002; pp. 106). The relationship value outcome measures are displayed in Table 5-11.

TABLE 5-11
The Relationship Value Outcome Items

Dimension	Item	Anchors/Type	Code
Performance	Think about a main competitor of your firm. For the following comments, please indicate how your firm's performance compares to that of your competitor. All of your answers are confidential.	1 - 7 Much Less Than to Much More Than	Perf
Financial	Your Return on Investment		FnPrf1
Financial	Your Return on Assets		FnPrf2
Financial	Your Anticipated Average Profits per Customer		FnPrf3
Market	Your Market Share		MktPrf1
Market	Your Customer Retention		MktPrf2
Market	Your Sales Growth		MktPrf3
Partner Satisfaction	Please indicate your feelings about the following statements regarding your relationship with your trade partner:		PartSat
	Overall, we are satisfied with our relationship with our trade partner.	1 - 7 Strongly Disagree to Strongly Agree	PartSat1
	Our feelings about our interaction with our trade partner over the past year can be described as:	1 - 7 Displeased to Pleased	PartSat 2
	Our feelings about our interaction with our trade partner over the past year can be described as:	1 - 7 Dissatisfied to Contented	PartSat 3

Control Variables

In empirical research, it is necessary to consider factors that, while not central to the question explored, may impose confounding or biasing variance on the relationships measured through the use of control variables (Shadish, Cook and Campbell 2002). Marketing practice has been shown to differ in firms based on relative firm size (Coviello, et al. 2000), suggesting that

variance in respondent firm size may influence the capabilities firms leverage in establishing relational governance contracts. In a similar manner, a relationships have been found between the size of a trade partner relative to the firm's other trade partners, and the negotiating strength of that partner (Blois 1972). Further, the number of relationships that a firm engages in creates more opportunities for firms to engage in opportunistic behavior, impact the transaction costs, power and dependency of firm relationships (Dahlstrom, et al. 2009; Fein and Anderson 1997; Lang and Lockhart 1990; Myers and Harvey 2001). Although firm and business-unit effects have been more substantial, industry effects have also been found to have significant influence on firm performance outcomes (Rumelt 1991).

Thus, the control variables for this research include respondent firm size, respondent firm industry, relationship exchange size, and the number of relationships managed. Sample firm size is estimated by respondent reports of number of employees, and estimated annual firm sales (Verfhoef and Leefang 2009). Sample firm industry determined from respondent reports, compared against the NAICS code classifications of industry (Ellinger, et. al 2011). Relationship exchange size is determined from respondent reports of the amount (in sales or purchases) that the respondent attributes to the trade partner discussed, compared to the firm's estimated annual sales (Ferrer, et al 2010). The number of relationships managed is estimated by respondent reports of how many customers (or vendors) the firm deals with (Ferrer, et al. 2010).

Bias Measurement Variables

As will be discussed later in this chapter, respondents in this research were members of an on-line data panel. Because collection of data was not under direct control of the researcher, and incentives were provided to respondents who completed the survey, risks of a form of mortality bias, based on respondents who completed the survey without due attention to the items (Schwab 2005) were a concern. Safeguards were employed to ensure accuracy by the respondents. Attention measures were randomly inserted in at three points in the survey instrument, as demonstrated in the excerpt of perceived power measures displayed in Table 5-12.

TABLE 5-12
Example of Attention Measure (embedded in the measure of perceived power)

Item
Our trade partner believes we would get back at them if they disappoint us
Our trade partner believes that we might withdraw certain needed services (or cooperative terms)
Please mark "Strongly Disagree" on this line
Our trade partner believes that our firm might return a favor on another occasion
Our firm rewards our trade partners when they fulfill our requests

(*note:* ***underlined -bolded*** *font in this table does not appear in the survey instrument*)

An additional concern for the research design was common method variance (Podsakoff, et al. 2003), with will be discussed in greater detail later in this chapter. To assess the potential of common method variance, marker variables were placed within variable measures throughout the survey instrument. Marker variables are individual measurement items that are added to the

items of a variable to which they are conceptually unrelated, and allowing any existing covariance with the items to be partialed out of the relationships (Lindell and Whitney 2001). No significant impact the findings was identified. Table 5-13 provides an example of a marker variable item, top management support, which was inserted into the measures of formalization.

TABLE 5-13
Example of Marker Variable (embedded in the measure of formalization)

Item
Our dealings with this trade partner are subject to a lot of rules and procedures stating how various aspects of the relationship are to be handled.
Orders from this customer (or to this supplier) must be placed periodically according to a formalized routine.
Management provides personal leadership in developing trade partner relationship policies.
Deliveries to this customer (or from this supplier) must be made on fixed days and times.
The interaction with this trade partner involves doing things "by the rule book."

(*note:* ***underlined-bolded*** *font in this table does not appear in the survey instrument*)

PROFILE OF THE SAMPLING FRAME

The sample of interest for this research are business employees who manage, or are aware of the policies behaviors of the firm in establishing and maintaining B2B relationships, and who are aware of the performance outcomes identified in the sections above. How firms manage their relationships - without regard to whether a specific firm functions as a buyer or a seller in a relationship - is the question of interest here, so no effort was exerted to obtain dyadic information, nor was the sample constrained based on the position of the firm in the B2B

relationship dyad. To maximize generalizability, the panel data provider was requested to obtain respondents from as broad a set of industries as possible. (Shadish, Cook and Campbell 2002).

DATA COLLECTION

Data was collected through the online service, Zoomerang[1]. Zoomerang is an internet survey host service that also provides panel data services for both general population and targeted sample research. Panel members are recruited through word of mouth, an advertised link on the company's main site (Zoompanel[2]), and through a marketing partner the firm employs as a consultant.

Survey requests to applicable panel members are distributed to potential respondents via email. Targeted samples – such as those required by this research – are selected based on prequalification questions submitted to Zoomerang when the panel-member enrolls with Zoomerang. Panel respondents receive an incentive in the form of Zoompoints, which are redeemable for a variety of rewards on the Zoomerang website.

Internet panels have received criticism in academic discourse due to concerns over generalizability. However, those concerns have decreased and the use of panel data has increased in the wake of findings that results derived from panel data do not display significant differences from those derived from random mail surveys, suggesting the potential for biased results that threaten generalizability are insubstantial (Dennis 2001; Deutskens et al. 2004; Pollard, 2002). In recent years, internet panels have been accepted in the literature for such

[1] http://www.zoomerang.com/
[2] www.zoompanel.com

wide-ranging research topics as resources and collaborative technologies (Richey and Autry 2009; Richey, et al. 2010b), sustainable tourism marketing (Dolnicar and Leisch 2008), pricing and channel discrimination (Maxwell and Garbarino 2010), experimental design (Scheufele and Bennett (2012), and consumer behavior (Sanguanpiyapan and Jasper 2010).

Data Management

On completion of data collection, data from the panel data provider were downloaded in comma-separated-value (spreadsheet) form, and then subjected to both data cleaning and descriptive statistical analysis. Tasks performed in this stage of the research included matching of survey questions to the codes that better lend themselves to empirical data analysis, identification of potentially biased respondents, identification of potential outliers in the data, and the categorization and calculation of respondent descriptive data. Because the contract with the panel data provider specified completed surveys only, missing data is not a concern in this study.

Following cleaning of the data, appropriate items were reverse coded for analysis – specifically the first item of the competitive intensity measure, and EFA was conducted on the items of interest, a correlation matrix of all major variables was calculated, centered variables for estimation of moderator interaction terms were calculated, and an item level correlation matrix was computed for use in structural equation modeling analysis (SEM). All of these steps were performed using the PASW statistical software package (formerly known as SPSS).

Most of the analysis of relationships was conducted using SEM. A chief benefit of SEM is that it allows a researcher to simultaneously calculate all of the relationships in multiple-stage models – such as the model hypothesized in this research – without the need to rely on more cumbersome means, such as testing a model one stage at a time, while also accounting for potential measurement error (Schumacker and Lomax 2010). The SEM tool employed in this research was LISREL 8.8 (Jöreskog and Sörbom 2006).

Given the moderation model devised in this research (see Chapter Four), all items were centered, as recommended by West, et al. (1996). Further, because the covariance matrix implied by the conceptual model called for continuous moderation of a mediated relationship, a recently developed technique – double-mean centering (Lin, et al. 2010) – was employed. In double-mean-centering, all survey items are mean-centered, and the mean-centered measures comprising the moderator interaction term are centered again before calculating the interaction items. Using this technique, tests of relationships between independent, mediating, moderating and dependent variables employ latent variables reflecting mean-centered items, but the items reflecting the interaction terms are comprised of the product of double-mean-centered items. Among its other benefits, double-mean-centering reduces undesirable effects of multicollinearity between moderator variables and continuous interaction measures at least as well as single-mean-centering and orthogonalizing strategies, but is more robust to violations of non-normality assumptions than other techniques for calculating moderator interaction terms (Lin, et al. 2010).

Attention Bias

An advantage of employing panel data is that responses collection times are extremely short. Zoomerang conducted a total of three waves of email invitations, and the total time required to collect an adequate sample was ten days. Zoomerang distributed the survey to a total of 24,000 potential panelists. A total of 2,084 panelists replied. Of those 741 respondents did not complete the survey and were disqualified from the study by the panel provider, resulting in a final sample of 1,343 completed surveys.

A total of 692 responses contained inaccurate answers to at least one of the attention measures. The average mean score of items for the subsample that incorrectly answered attention measures was 4.517 with an average standard deviation of 1.4807, while the average mean score of items for only those respondents who correctly answered the attention measures (n=651) was 4.370 with an average standard deviation of 1.5432. This results in a significant difference in both the mean and standard deviation of response scores to the individual items, as demonstrated in 5-14.

TABLE 5-14
Mean Response Differences Based on Attention Measures

Attention	Unbiased	Biased	Difference	*t*-value	*p*-value
n	651	692	41		
Mean	4.370	4.517	0.146	2.329	0.025
StDev	1.5432	1.4807	0.0625	2.157	0.037

Concern about the differences in those sufficiently engaged in the research survey to correctly respond to the attention measures, and those that were not, raised questions about the accuracy of the data contributed by respondents who failed to correctly respond to attention measures (Rogelberg and Stanton 2007). Consequently, all responses containing any incorrect answers to the attention measures were dropped from the analysis, and the panel data provider was instructed to continue data collection until a sufficient sample of respondents who correctly answered attention measures was collected.

Access to the survey by potential panelists was terminated once a number of respondents within a predetermined range –minimum 630, determined by *a priori* power analysis – provided completed responses. Following assessment of attention measures, all respondents were screened to ensure no respondent had taken the survey twice. Zoomerang's security measures forbid release of respondent email information to Zoomerang clients, therefore this was accomplished by examining details of questions inserted in the survey such as the general location of the firm headquarters, and the answers to control variables such as gross sales and number of employees in the firm. An additional 6 subjects were eliminated from the dataset as potential duplicate respondents.

To ensure that respondents did indeed possess the necessary knowledge and/or insight to respond to the research measures (Thomas 2011), an inspection was made of responses to questions about the industry of a respondent's firm, position in the firm, the gross sales of the firm, and the number of employees on staff, and the general location of the firm headquarters. A total of 4 additional respondents were eliminated from the sample for providing answers that

indicated a case of suspect expertise/knowledge of a currently operating firm (i.e. one eliminated respondent stated "don't work" as the industry in which his firm operated).

Clearing the data of suspect cases resulted in a final sample of 635, or a response rate of 2.7%. Such a low percentage of response from the potential panel respondents seems alarming, but is not necessarily so. As Newman (2009) statistically demonstrates, "there is no magical response rate below which an observed mean, standard deviation, or correlation becomes automatically invalid" (pp. 17). The true concern is whether *nonresponse bias* exists within the sample (Newman 2009; Rogelberg, et al. 2003). Indeed, Rogelberg, et al. (2003) suggest that higher response rates may only inflate the findings with data from passive respondents, those who meant to return the survey but did not, and whose measured responses tend to closely resemble respondents in attitudinal surveys. Thus, the focus shifts to estimating the effects of nonresponse bias on the sample.

Nonresponse Bias

Nonresponse bias is the possibility that those potential members of the population of interest that are *not* – for any reason – included in the survey may, in sufficient number, offer responses to the survey items that significantly differ from those captured by the survey, calling the findings of the research into question (Armstrong and Overton 1977). A variety of means of assessing survey research have been posed, all of which rely on the ability estimate the opinions of subjects to whom the researcher has not access (Rogelberg, et al. 2003). However, the data collected by the panel data provider offer a solution to the issue.

Rogelberg and Stanton (2007), suggest that employing "worst case resistance" – or estimating the number of respondents required to refute a study's findings – may be used to assess nonresponse bias. The formula for such calculations is given as: $X = n(r_n / r_c - 1)$, where X represents the number of nonresponding potential subjects of interest required to substantively alter the findings of the study, n indicates the number of respondents in the observed sample, r_n is the observed correlation of the sample, and r_c indicates the alternative correlation of the potential nonrespondents.

As will be discussed later in this chapter, an analysis was conducted to determine the correlations of the variables representing each of the major constructs of this research; that correlation was 0.267. Employing the worst-case resistance technique (Rogelberg and Stanton 2007), every individual invited to participate in the research who did not provide a completed response – including those who failed at least one of the attention measures, totaling 23,365 individuals - would have to present an average correlation among variables of less than 0.007054 to disprove the results of the determined model [$23365 = 635(0.267/r_c - 1) | r_c = 0.007054$]. The likelihood of attaining such radically different results seems unlikely, particularly given the probability of passive nonrespondents in the sample (Rogelberg, et al. 2003), thus nonresponse bias is inferred to represent only a minimal issue for this research.

PSYCHOMETRIC CONCERNS

Before attempting any statistical analysis of the data, it is necessary to assess the psychometric properties of the model and data tested in order to evaluate any potential issues of reliability, bias or error (Hair, et al. 2005, Shadish; Cook and Campbell 2002). Specifically, the data and model were evaluated in terms of their statistical validity, their construct validity, their internal validity, and their external validity.

Statistical Validity

Items of interest in the research, including the marker variables, were all assessed for outliers, based on three times the standard deviation and mean of each item, and no significant item-level outliers were detected in the response data. Since the statistical method employed in this research is SEM, it is important that the data be normally distributed, requiring examination of both skew and kurtosis.

Skew refers to a condition of data nonnormality in which the position of the mean and the median of the data significantly differ. Kurtosis indicates the concentration of respondents near at least one of the tails of the data distribution is significantly large relative to the concentration of the respondents near the mean of the data distribution (Hair, et al. 2005). Table 5-15 presents the results of the tests of normality.

TABLE 5-15
Descriptive Analysis of Individual Indicators

Indicator	N	Mean	Std. Deviation	Skewness	Kurtosis
cTCF1	635	.0044	1.91802	-.192	-1.078
cTCF2	635	-.0001	1.93492	-.045	-1.127
cTCF3	635	.0027	1.87664	-.289	-.897
cTCF4	635	-.0002	1.85512	.871	-.407
cLPow1	635	-.0022	1.51079	-.962	.676
cLPow2	635	-.0024	1.43452	-1.093	1.054
cLPow3	635	.0039	1.65529	-.828	.066
cEPow1	635	.0043	1.44231	-.946	.830
cEPow2	635	-.0019	1.42119	-1.222	1.502
cEPow3	635	-.0034	1.56249	-.642	-.061
cRfPow1	635	.0003	1.52213	-.688	.161
cRfPow2	635	-.0020	1.42471	-.907	.792
cRfPow3	635	-.0031	1.42770	-.844	.543
cRlCap3	635	-29.4674	7.65293	1.118	1.236
cCoPow1	635	.0038	1.77085	.506	-.834
cCoPow2	635	.0024	1.70726	.509	-.813
cCoPow3	635	.0009	1.81326	.123	-1.087
cRwPow1	635	.0047	1.51636	-.572	.113
cRwPow2	635	.0043	1.54850	-.454	-.125
cRwPow3	635	.0004	1.51563	-.526	-.001
cInteg1	635	-.0030	1.61591	-.764	-.001
cInteg2	635	-.0038	1.62985	-.784	-.041
cInteg3	635	.0001	1.49533	-.934	.575
cExteg1	635	.0046	1.48407	-.777	.358
cExteg2	635	.0039	1.64902	-.493	-.497
cExteg3	635	-.0001	1.43987	-.878	.633
cExteg4	635	-.0049	1.58834	-.598	-.079
cNoCom1	635	.0008	1.48045	-1.020	.830
cNoCom2	635	.0047	1.62482	-.636	-.236
cNoCom3	635	.0009	1.74575	-.514	-.596
cNoCom4	635	-.0017	1.72835	-.346	-.744
cNoCre1	635	.0013	1.69508	-.310	-.712
cNoCre2	635	.0040	1.65680	-.494	-.494
cNoCre3	635	.0038	1.58670	-.585	-.182

Indicator	N	Mean	Std. Deviation	Skewness	Kurtosis
cNoCre4	635	.0019	1.57991	-.624	-.118
cTrst1	635	-.0045	1.29664	-1.775	3.818
cTrst2	635	-.0002	1.33299	-1.608	3.063
cTrst3	635	-.0029	1.35702	-1.593	2.934
cComt1	635	-.0009	1.32445	-1.635	3.199
cComt2	635	-.0013	1.36453	-1.423	2.374
cComt3	635	-.0001	1.40640	-1.392	1.963
cMCnft1	635	.0016	1.69551	1.145	.158
cMCnft2	635	-.0043	1.65962	1.085	.136
cMCnft3	635	.0008	1.63149	1.218	.480
cOpp1	635	.0003	1.74245	.390	-1.029
cOpp2	635	.0022	1.66855	.671	-.633
cOpp3	635	.0031	1.70890	.793	-.485
cOpp4	635	-.0041	1.70116	.871	-.309
cOpp5	635	-.0019	1.72774	.739	-.513
cComp1	635	.0034	1.20451	-.013	.816
cComp2	635	-.0042	1.03265	-.145	2.122
cComp3	635	-.0029	1.11819	-.212	1.347
cForm1	635	-.0001	1.84170	-.239	-1.025
cForm2	635	-.0016	1.90922	-.200	-1.090
cForm3	635	-.0028	2.01978	-.071	-1.274
cFrom4	635	-.0020	1.79382	-.369	-.740
cFlex1	635	-.0011	1.86186	-.123	-1.162
cFlex2	635	-.0002	1.48933	-.808	.397
cFlex3	635	-.0030	1.40520	-1.096	1.433
cFlex4	635	-.0016	1.49921	-.707	.367
cFnPrf1	635	-.0043	1.25695	-.266	.542
cFnPrf2	635	.0004	1.24276	-.221	.778
cFnPrf3	635	.0009	1.26225	-.249	.479
cMkPrf1	635	-.0046	1.38562	-.148	.059
cMkPrf2	635	-.0004	1.35450	-.417	.374
cMkPrf3	635	-.0005	1.32170	-.345	.409
cPrtSat1	635	-.0016	1.69551	-1.145	.158
cPrtSat2	635	-.0057	1.65962	-1.085	.136
cPrtSat3	635	-.0008	1.63149	-1.218	.480

Of particular concern among the indicators are items comprising trust and commitment – cTrst 1-3 and cComt 1-3 – all of which display a high degree of kurtosis. As the double-mean centering technique to be employed here, however, is particularly robust against violations of non-normality assumptions, these items are retained for this study.

Construct Validity

Having assessed the statistical properties of the data, it is also essential to assess the construct validity of the proposed model – or the degree to which proposed constructs measure the phenomena they are intended to measure (Shadish, Cook and Campbell 2002) – based on the data employed to measure them. Assessing construct validity requires assessment of convergent validity – or the degree to which items in a construct correlate with one another – and convergent validity - or the degree to which the constructs are statistically distinct from one another (Fornell and Larker 1981). Attention must also be paid to the influence of common method variance (Podsakoff 2003). Examination of these issues was assessed using both exploratory factor and confirmatory factor analyses were employed to assess convergent validity.

Exploratory Factor Analysis

To gain a basic understanding of the convergent validity of the constructs, an abbreviated exploratory factor analysis (EFA) was performed on each of the variables and the individual observed items expected to reflect them. Owing to the intention to employ double-mean centering as discussed earlier (Lin et al. 2010), centered values for all items were used.

Results of the analysis indicate that both the perceived power and relationship quality focus scale have items that do not load on a single factor. Further, both the competitive intensity and flexibility scales exhibit items that did not load with sufficient strength on their expected factors. All marker variables load with sufficient strength, but negatively on the variables in which they were inserted.

The next step in the process would be to eliminate individual items that load on their individual constructs with a strength of less than 0.6, or that load on more than one factor (Nunally 1978). However, as all eigenvalues exceed 1, to better assess the validity of these constructs, all items except for the marker variables, will be retained for analysis by confirmatory factor analysis. Table 5-16 displays the latent variables, the loading values of the observed items related to each, and the resulting eigenvalues, and total variance explained, of each latent variable.

TABLE 5-16
Preliminary Scale Factor Loadings

Item/Factor	Transaction Cost Focus	Perceived Power			Internal Integration	External Integration	Knowledge Sharing	Relationship Quality Focus		Opportunism	Competitive Intensity	Formalization	Flexibility
Factors		1	2	3				1	2				
TCF1	0.855												
TCF2	0.884												
TCF3	0.865												
TCF4	0.725												
LPow1		0.705		0.445									
LPow2		0.770		0.046									
LPow3		0.670											
RlCap1*		-0.758											
EPow1		0.797											
EPow2		0.862											
EPow3		0.714											
RlCap2*		-0.817											
RfPow1		0.839											
RfPow2		0.833											
RfPow3		0.823											
RlCap3*		-0.862											
CoPow1			0.814										
CoPow2			0.862										
CoPow3			0.804										
RwPow1		0.604		-0.499									

Item/Factor	Transaction Cost Focus	Perceived Power			Internal Integration	External Integration	Knowledge Sharing	Relationship Quality Focus		Opportunism	Competitive Intensity	Formalization	Flexibility
Factors		1	2	3				1	2				
RwPow2		0.570		-0.542									
RwPow3		0.635		-0.505									
Integ1					0.853								
Agl1*					-0.840								
Integ2					0.906								
Integ3					0.907								
ExTeg1						0.800							
ExTeg2						0.831							
Agl5*						-0.842							
ExTeg3						0.829							
ExTeg4						0.816							
NoCom1							0.723						
NoCom2							0.824						
Agl6*							-0.649						
NoCom3							0.848						
NoCom4							0.810						
NoCre1							0.835						
NoCre2							0.874						
Agl3*							-0.719						
NoCre3							0.820						
NoCre4							0.832						
Trst1								0.874					
Trst2								0.894					

Item/Factor	Transaction Cost Focus	Perceived Power			Internal Integration	External Integration	Knowledge Sharing	Relationship Quality Focus		Opportunism	Competitive Intensity	Formalization	Flexibility
Factors		1	2	3				1	2				
TCF1	0.855												
TCF2	0.884												
TCF3	0.865												
TCF4	0.725												
LPow1		0.705		0.445									
LPow2		0.770		0.046									
LPow3		0.670											
RlCap1*		-0.758											
EPow1		0.797											
EPow2		0.862											
EPow3		0.714											
RlCap2*		-0.817											
RfPow1		0.839											
RfPow2		0.833											
RfPow3		0.823											
RlCap3*		-0.862											
CoPow1			0.814										
CoPow2			0.862										
CoPow3			0.804										
RwPow1		0.604		-0.499									

Item/Factor	Transaction Cost Focus	Perceived Power			Internal Integration	External Integration	Knowledge Sharing	Relationship Quality Focus		Opportunism	Competitive Intensity	Formalization	Flexibility
Factors		1	2	3				1	2				
Trst3								0.900					
Comt1								0.894					
Comt2								0.855					
Comt3								0.858					
MCnft1								-0.472	0.935				
MCnft2								-0.431	0.938				
MCnft3								-0.497	0.928				
Opp1										0.869			
Opp2										0.911			
Opp3										0.939			
Opp4										0.924			
Opp5										0.896			
Comp1											#		
Comp2											0.862		
Comp3											0.850		
Form1												0.771	
Form2												0.783	
TMS1*												-0.603	
Form3												0.785	
Form4												0.829	
Flex1													0.537
Flex2													0.844
TMS3*													-0.725

Item/Factor	Transaction Cost Focus	Perceived Power			Internal Integration	External Integration	Knowledge Sharing	Relationship Quality Focus		Opportunism	Competitive Intensity	Formalization	Flexibility
Factors		1	2	3				1	2				
Flex3													0.869
Flex4													0.833
Eigenvalue	2.787	8.690	2.458	1.356	3.706	3.393	6.342	5.084	2.329	4.126	1.502	2.873	2.976
Total Variance Explained	51.26%	24.70%	2.96%	2.61	2.99%	3.25%	5.05%	2.33%	1.00%	1.44%	0.71%	1.01%	0.70%

**indicates item is a marker variable, #indicates a loading below 0.40*

Confirmatory Factor Analysis

With some understanding of the potential issues in the constructs obtained through EFA, the variables were subjected to confirmatory factor analysis (CFA), to further assess the validity of the constructs. The statistical method for this step was structural equation modeling to estimate a measurement model, employing the LISREL 8.8 program (Jöreskog and Sörbom 2006). CFA was conducted in three stages.

The first stage examined items for significant loading of items on their expected variables – including control and outcome items - in sufficient strength, in this case, a minimum loading of 0.6 was deemed acceptable. Next, model fit was examined to determine how well the covariance matrix of the relationships of items and variables implied by the conceptual model presented in Chapter Four fit the covariance matrix produced by the observed items in the sample, including any high correlations of error terms. Finally, the distribution of the observed covariance matrix item residuals was examined to assess normality of the measurement model.

Scale Reduction and Error Covariance

CFA was conducted in a series of iterations. After each estimate of a measurement model, items that loaded insignificantly – p-value>0.05 – or with insufficient strength – path loading<0.6 – were dropped from the model. A total of 19 iterations were completed, resulting in a reduction of the scales. During the first 15 iterations, items eliminated included Flex1 from the flexibility scale, all coercive and reward power items from the perceived power scale, all manifest conflict items from the relationship quality focus scale – essentially reducing it to the

trust and commitment scale – and the control items industry, sales size, employee size, relationship tenure, and the number of relationships a firm manages. The competitive intensity measures Comp1 and Comp2 did not load significantly, and the scale was eliminated rather than employ a one-item measure. Significant improvement in the model was obtained during three subsequent iterations by allowing the error variances of items FnPerf1 and FnPerf2, LPow1 and LPow2, and Comt1 and Comt 3 to correlate. An additional iteration was performed to estimate the impact of the double-mean centered interaction items on the measurement model.

Measurement Model Fit

The measurement model estimated provided excellent fit ($\chi^2_{(df=3096)}$=11,116; RMSEA = 0.0541; CFI = 0.970; SRMR = 0.0514). Having finalized a measurement model, an estimate of model normality was inferred by examining distribution of the model standardized item residuals. Figure 5-1 displays a stem-and-leaf plot of the item residuals calculated in the measurement model of the data, and the distribution appears generally normal.

FIGURE 5-1
Distribution of Standardized Covariance Matrix Residuals

```
- 8|651
- 6|987401
- 4|98876655554444333332111099999988888777776666666665555555443333332222222+28
- 2|99999999888888888888888877777777777777777666666666666666665555555555555+95
- 0|9999999999999999999999999999999999999999999999999999988888888888888888+95
  0|1111111111111111111111111111111111111111111111111111111111111111111111+97
  2|0000000000000000000000000000000000000011111111111111111111111111111111+91
  4|0000000000011111111111222222222222333333334444444445555555556666666667888+56
  6|00000011111144445666677777899900123334455889 9
  8|022357939
 10|22
 12|
 14|18
```

Common Method Variance

As an assessment of common method variance in the data (Podsakoff, et al. 2003), Harman's one-factor test (Podsakoff and Organ 1986) was performed. The measurement model was recomputed, allowing all items to load on a single factor, and the χ^2 fit of the two models were compared. As can be seen in Table 5-17, the two models display a significant difference, and the fit statistics of the conceptual model proved superior, although the χ^2 value of the single factor model was higher.

TABLE 5-17
Test of Measurement and One-Factor Models

Model	χ^2	Df	χ^2_{diff}	df_{diff}	*p*-value
Measurement Model	11156	3906			
One-Factor Model	92505	4182			
Model Difference			81349	276	0.000

It should be noted, however, that One-factor analysis loses efficacy as the number of variables in the model increase (Podsakoff 2003). However, other measures of validity, which will be discussed below, limit the likelihood of CMV presenting a factor. Further, additional research has emerged indicating that CMV is less of any issue that has been previously thought (Goffin and Gellatly 2001; Jo 2000; Howard 1994; Spector 1994).

Internal Validity

With a measurement model established, individual scale reliabilities were calculated. Table 5-18 details the path loadings, standard errors, and significance of the final measurement model, and the reliabilities of each scale. Per Nunnally (1978), all variables in the model displayed a Cronbach's α exceeding 0.6, suggesting that the variables have strong internal consistency. The sole exception to this is the scale of competitive intensity, which as noted, was eliminated from the model during CFA procedures, thus convergent and internal validity are inferred.

TABLE 5-18
Measurement Model and Scale Reliabilities

Constructs Measured		Scale Reliabilities				Measurement Model Loadings			
Variables	Item	Cronbach α^*	Item Mean	Item Std. Dev.	α if deleted	Std. Estimate	Std. Error	Test Statistic	*p*-value
Controls		na							
	Partner Size		4.39	1.99	na	0.52	0.05	10.90	0.00
	Exchange Size		4.38	1.16	na	0.75	0.06	13.59	0.00
	Tenure		123.00	322.67	na	dropped			
	Relationships Managed		328217.55	5611168.05	na	dropped			
Relational Governance Forms									
Formalization		0.82							
	Form1		4.03	1.84	0.79	0.73	0.04	19.64	0.00
	Form2		4.00	1.91	0.78	0.72	0.04	19.27	0.00
	Form3		3.88	2.02	0.78	0.71	0.04	19.01	0.00
	Form4		4.35	1.79	0.75	0.78	0.04	21.61	0.00
Flexibility		0.79							
	Flex1		4.02	1.86	0.85	dropped			
	Flex2		4.89	1.49	0.69	0.75	0.04	21.24	0.00
	Flex3		5.34	1.41	0.71	0.87	0.03	26.44	0.00
	Flex4		5.00	1.50	0.71	0.79	0.04	22.81	0.00

*n=635; Measurement Model Fit: $\chi^2_{(df=3906)}$=7250, RMSEA=0.054, CFI=0.97, SRMR=0.051; *Reliabilities are calculated for reduced scale except for dropped items*

Reliabilites are calculated using uncentered items; Measurement Model is calculated using centered variables; Interaction items have been double-centered

Constructs Measured		Scale Reliabilities				Measurement Model Loadings			
Variables	Item	Cronbach α^*	Item Mean	Item Std. Dev.	α if deleted	Std. Estimate	Std. Error	Test Statistic	*p*-value
Unilateral Capabilities									
Transaction Costs Focus		0.85							
	TCF1		3.92	1.92	0.80	0.83	0.03	24.34	0.00
	TCF2		3.83	1.94	0.78	0.87	0.03	26.56	0.00
	TCF3		4.18	1.88	0.79	0.79	0.04	22.75	0.00
	TCF4		2.69	1.86	0.87	0.60	0.04	15.89	0.00
Perceived Power		0.93							
	LPow1		5.04	1.51	0.92	0.65	0.04	17.91	0.00
	LPow2		5.13	1.44	0.92	0.73	0.04	20.85	0.00
	LPow3		4.90	1.66	0.93	0.62	0.04	17.08	0.00
	EPow1		5.15	1.44	0.92	0.78	0.03	23.21	0.00
	EPow2		5.52	1.42	0.92	0.87	0.03	27.44	0.00
	EPow3		4.89	1.56	0.92	0.69	0.04	27.44	0.00
	RfPow1		5.08	1.52	0.92	0.85	0.03	26.14	0.00
	RfPow2		5.18	1.43	0.92	0.83	0.03	25.30	0.00
	RfPow3		5.17	1.43	0.92	0.83	0.03	25.44	0.00
	CoPow1		2.96	1.77	0.90	dropped			
	CoPow2		2.90	1.71	0.90	dropped			
	CoPow3		3.44	1.81	0.89	dropped			
	RwPow1		4.60	1.52	0.88	dropped			
	RwPow2		4.38	1.55	0.88	dropped			
	RwPow3		4.65	1.52	0.88	dropped			

Constructs Measured		Scale Reliabilities				Measurement Model Loadings			
Variables	Item	Cronbach α^*	Item Mean	Item Std. Dev.	α if deleted	Std. Estimate	Std. Error	Test Statistic	*p*-value
Unilateral Capabilities									
Internal Integration		0.89							
	Integ1		4.94	1.62	0.89	0.79	0.03	23.16	0.00
	Integ2		5.04	1.63	0.82	0.87	0.03	26.90	0.00
	Integ3		5.17	1.50	0.81	0.91	0.03	28.07	0.00
Collaborative Capabilities									
External Integration		0.85							
	Exteg1		4.86	1.48	0.82	0.76	0.04	21.97	0.00
	Exteg2		4.53	1.65	0.80	0.77	0.03	22.33	0.00
	Exteg3		5.23	1.44	0.82	0.76	0.04	21.82	0.00
	Exteg4		4.66	1.59	0.80	0.78	0.03	22.65	0.00

n=635; Measurement Model Fit: $\chi^2_{(df=3906)}$*=7250, RMSEA=0.054, CFI=0.97, SRMR=0.051;* **Reliabilities are calculated for reduced scale except for dropped items*

Reliabilites are calculated using uncentered items; Measurement Model is calculated using centered variables; Interaction items have been double-centered

Constructs Measured		Scale Reliabilities				Measurement Model Loadings			
Variables	Item	Cronbach α^*	Item Mean	Item Std. Dev.	α if deleted	Std. Estimate	Std. Error	Test Statistic	*p*-value
Collaborative Capabilities									
Knowledge Sharing		0.94							
	NoCom1		5.10	1.48	0.94	0.69	0.04	19.31	0.00
	NoCom2		4.60	1.63	0.93	0.82	0.03	24.77	0.00
	NoCom3		4.47	1.75	0.92	0.84	0.03	26.04	0.00
	NoCom4		4.23	1.73	0.93	0.80	0.03	23.94	0.00
	NoCre1		4.12	1.70	0.93	0.83	0.03	25.51	0.00
	NoCre2		4.27	1.66	0.92	0.88	0.03	27.93	0.00
	NoCre3		4.56	1.59	0.93	0.76	0.03	22.42	0.00
	NoCre4		4.48	1.58	0.93	0.81	0.03	24.27	0.00
Relationship Quality Focus		0.95							
	Trst1		5.71	1.30	0.93	0.94	0.03	31.53	0.00
	Trst2		5.66	1.33	0.93	0.96	0.03	32.61	0.00
	Trst3		5.71	1.36	0.93	0.95	0.03	32.26	0.00
	Comt1		5.76	1.32	0.93	0.77	0.03	22.78	0.00
	Comt2		5.68	1.37	0.94	0.72	0.03	20.93	0.00
	Comt3		5.63	1.41	0.94	0.70	0.04	20.12	0.00
	MCnft1		2.40	1.70	0.77	dropped			
	MCnft2		2.42	1.66	0.76	dropped			
	MCnft3		2.30	1.63	0.77	dropped			

Constructs Measured		Scale Reliabilities				Measurement Model Loadings			
Variables	Item	Cronbach α^*	Item Mean	Item Std. Dev.	α if deleted	Std. Estimate	Std. Error	Test Statistic	*p*-value
Relational Contextual Factors									
Opportunism		0.95							
	Opp1		3.08	1.74	0.94	0.82	0.03	24.80	0.00
	Opp2		2.76	1.67	0.93	0.88	0.03	27.95	0.00
	Opp3		2.63	1.71	0.93	0.94	0.03	31.20	0.00
	Opp4		2.56	1.70	0.93	0.92	0.03	30.17	0.00
	Opp5		2.72	1.73	0.94	0.87	0.03	27.34	0.00
Competitive Intensity		0.41							
	Comp1		4.11	1.20	0.66	dropped			
.	Comp2		4.19	1.03	0.05	dropped			
	Comp3		4.11	1.12	0.16	dropped			

n=635; Measurement Model Fit: $\chi^2_{(df=3906)}$=7250, RMSEA=0.054, CFI=0.97, SRMR=0.051; *Reliabilities are calculated for reduced scale except for dropped items
Reliabilites are calculated using uncentered items; Measurement Model is calculated using centered variables; Interaction items have been double-centered

Constructs Measured		Scale Reliabilities				Measurement Model Loadings			
Variables	Item	Cronbach α^*	Item Mean	Item Std. Dev.	α if deleted	Std. Estimate	Std. Error	Test Statistic	*p*-value
Relationship Value Outcomes									
Firm Performance		0.91							
	FnPrf1		4.25	1.26	0.89	0.82	0.03	24.53	0.00
	FnPrf2		4.25	1.24	0.89	0.81	0.03	23.77	0.00
	FnPrf3		4.24	1.26	0.89	0.84	0.03	25.09	0.00
	MktPrf1		3.97	1.39	0.90	0.74	0.04	20.97	0.00
	MktPrf2		4.75	1.36	0.91	0.72	0.04	20.24	0.00
	MktPrf3		4.38	1.32	0.89	0.80	0.03	23.65	0.00
Satisfaction with Partner		0.94							
	PrtSat1		5.60	1.70	0.90	0.91	0.03	29.56	0.00
	PrtSat2		5.58	1.66	0.91	0.90	0.03	29.14	0.00
	PrtSat3		5.70	1.63	0.91	0.92	0.03	30.00	0.00
Moderator Interactions		na							
	TcfXtg1		1.06	3.28	na	0.71	0.04	19.77	0.00
	TcfXtg2		1.02	3.33	na	0.69	0.04	18.88	0.00
	TcfXtg3		1.02	3.22	na	0.75	0.04	21.16	0.00
	TcfNoS1		1.29	3.30	na	0.75	0.04	20.97	0.00
	TcfNoS2		1.32	3.46	na	0.75	0.04	20.79	0.00
	TcfNoS3		1.00	3.44	na	0.65	0.04	17.43	0.00
	TcfRqf1		0.40	2.92	na	0.91	0.03	29.10	0.00
	TcfRqf2		0.57	2.96	na	0.86	0.03	26.50	0.00
	TcfRqf3		0.46	3.09	na	0.84	0.03	25.90	0.00

Constructs Measured		Scale Reliabilities				Measurement Model Loadings			
Variables	Item	Cronbach α^*	Item Mean	Item Std. Dev.	α if deleted	Std. Estimate	Std. Error	Test Statistic	*p*-value
Moderator Interactions		na							
	TcfOpp1		0.56	3.21	na	0.84	0.03	24.48	0.00
	TcfOpp2		0.41	3.18	na	0.80	0.04	23.01	0.00
	TcfOpp3		0.56	3.10	na	0.71	0.04	19.32	0.00
	PowXtg1		0.94	3.04	na	0.85	0.03	26.59	0.00
	PowXtg2		1.24	3.14	na	0.73	0.03	21.38	0.00
	PowXtg3		0.92	2.98	na	0.85	0.03	26.31	0.00
	PowNoS1		0.81	2.95	na	0.87	0.03	27.47	0.00
	PowNoS2		1.02	3.22	na	0.82	0.03	24.64	0.00
	PowNoS3		0.88	2.89	na	0.80	0.03	23.98	0.00
	PowRqf1		1.29	3.62	na	0.96	0.03	32.86	0.00
	PowRqf2		1.27	3.48	na	0.95	0.03	31.90	0.00
	PowRqf3		1.28	3.57	na	0.95	0.03	31.98	0.00
	PowOpp1		-0.60	2.67	na	0.81	0.03	23.59	0.00
	PowOpp2		-0.47	2.75	na	0.83	0.03	24.73	0.00
	PowOpp3		-0.55	2.71	na	0.78	0.04	22.66	0.00

n=635; Measurement Model Fit: $\chi^2_{(df=3906)}$=7250, RMSEA=0.054, CFI=0.97, SRMR=0.051; *Reliabilities are calculated for reduced scale except for dropped items

Reliabilites are calculated using uncentered items; Measurement Model is calculated using centered variables; Interaction items have been double-centered

Constructs Measured		Scale Reliabilities				Measurement Model Loadings			
Variables	Item	Cronbach α^*	Item Mean	Item Std. Dev.	α if deleted	Std. Estimate	Std. Error	Test Statistic	*p*-value
Moderator Interactions		na							
	NtgXtg1		0.92	3.08	na	0.82	0.03	24.82	0.00
	NtgXtg2		1.01	3.27	na	0.76	0.03	22.10	0.00
	NtgXtg3		1.08	3.16	na	0.72	0.04	20.65	0.00
	NtgNoS1		0.86	2.89	na	0.87	0.03	26.97	0.00
	NtgNoS2		1.01	3.40	na	0.77	0.03	22.68	0.00
	NtgNoS3		0.85	3.22	na	0.72	0.04	20.36	0.00
	NtgRqf1		0.86	3.29	na	0.95	0.03	32.13	0.00
	NtgRqf2		0.83	3.34	na	0.94	0.03	31.70	0.00
	NtgRqf3		0.93	3.25	na	0.89	0.03	28.50	0.00
	NtgOpp1		-0.25	2.65	na	0.83	0.03	24.71	0.00
	NtgOpp2		-0.16	2.86	na	0.84	0.03	25.14	0.00
	NtgOpp3		-0.25	2.84	na	0.73	0.04	20.36	0.00

n=635; Measurement Model Fit: $\chi^2_{(df=3906)}$=7250, RMSEA=0.054, CFI=0.97, SRMR=0.051; *Reliabilities are calculated for reduced scale except for dropped items

Reliabilites are calculated using uncentered items; Measurement Model is calculated using centered variables; Interaction items have been double-centered

External Validity

Estimates of external validity were attained by examining the degree of discriminant validity in the model (Fornell and Larcker 1981; Hair, et al. 2005). Following Fornell and Larcker (1981), to ensure constructs of interest were distinct, the standardized path loadings from this model were used to determine the average variance explained (AVE) of each variable. If the square root of an AVE, which describes the amount of variance captured by the items of a variable, as opposed to variance resulting from measurement error, exceeds a variable's correlation with other variables in the model, discriminant validity is indicated.

Table 5-19 presents the correlation of the variables of interests, along with their means and standard deviations. The square root of AVE for each variable appears on the diagonal of the matrix. The value of each square root of AVE exceeds the value of that variable's correlation with the other variables in the matrix, thus, discriminant validity of the constructs, and therefore the external validity may be inferred.

TABLE 5-19
Correlation Matrix of Major Constructs

	Variables	Means	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11
1)	Transaction Cost Focus	0.0017	1.5804	**(0.78)**										
2)	Perceived Power	-0.0007	1.1842	0.394**	**(0.77)**									
3)	Internal Integration	-0.0022	1.4296	0.249**	0.546**	**(0.86)**								
4)	External Integration	0.0009	1.2810	0.418**	0.635**	0.594**	**(0.77)**							
5)	Knowledge Sharing	0.0020	1.3606	0.479**	0.524**	0.463**	0.763**	**(0.80)**						
6)	Relationship Quality Focus	-0.0016	1.1946	0.231**	0.769**	0.496**	0.607**	0.496**	**(0.85)**					
7)	Opportunism	-0.0001	1.5524	0.269**	-0.184**	-0.101**	0.042	0.130**	-0.271**	**(0.89)**				
8)	Formalization	-0.0016	1.5245	0.456**	0.255**	0.184**	0.396**	0.450**	0.189**	0.301**	**(0.74)**			
9)	Flexibility	-0.0016	1.2808	0.161**	0.649**	0.459**	0.532**	0.439**	0.657**	-0.182**	0.060	**(0.81)**		
10)	Firm Performance	-0.0027	1.5667	-0.277**	0.202**	0.077*	-0.048	-0.161**	0.259**	-0.730**	-0.310**	0.173**	**(0.79)**	
11)	Partner Satisfaction	-0.0014	1.0833	0.330**	0.416**	0.360	0.435**	0.426**	0.399**	0.088*	0.248**	0.333**	-0.112**	**(0.91)**

*n=635; *p<0.05; **p<0.01; All variables based on mean-centered items; Bolded number on the diagonal are Sqrt AVE*

With the psychometric properties of the measures examined, and the potential issues assessed, it is appropriate to commence analysis of a structural model derived from the sample data. Discussion of that analysis, and the subsequent test of the hypotheses presented in Chapter Four, follows in Chapter Six.

RELATIONAL GOVERNANCE FORMS AND FIRM PERFORMANCE: THE ROLE OF UNILATERAL AND COLLABORATIVE CAPABILITIES

CHAPTER 6

STUDY TWO: QUANTITATIVE DATA ANALYSIS AND HYPOTHESIS TESTS

Chapter Five detailed the design and implementation of measurement instruments and procedures for analysis of the quantitative data collected in this research. Chapter Six will discuss the demographics information of the sample, estimates of the statistical relationships between constructs, and the tests of the hypotheses based on the statistical relationship estimates.

DEMOGRAPHICS

The sample respondents were asked in the survey instrument to describe the industry in which their firm operates. The responses were grouped into a total of twenty-three different industries. The largest numbers of respondents - 62 subjects - were employed in consulting businesses. The smallest numbers of respondents – 3 subjects - reported operating in the advertising industry. The average number of respondents in any one industry was 24.12. Twenty-five respondents reported a variety of unique responses, which could not be properly reconciled with the twenty-three industries identified (i.e. “community service,” “association,” and “non-profit”). These responses were categorized as “Other”. Table 6-1 lists the industries, the count of respondents reporting each, the percentage of total sample each industry represented, and the range of respondents in each industry.

TABLE 6-1
Sample Members by Industry

Industry	Count	Percentage
Grand Total	635	
Advertising	3	0.47%
Agribusines	7	1.10%
Automotive	14	2.20%
BioTech	12	1.89%
Communication	20	3.15%
Construction	33	5.20%
Consulting	62	9.76%
Education	30	4.72%
Energy	6	0.94%
Engineering	17	2.68%
Entertainment	27	4.25%
Financial Services	35	5.51%
Food Services	12	1.89%
Government	26	4.09%
Healthcare	20	3.15%
Home Services	22	3.46%
Insurance	13	2.05%
Legal	9	1.42%
Logistics	15	2.36%
Manufacturing	59	9.29%
Other	25	3.94%
Real Estate	20	3.15%
Retail	59	9.29%
Services	33	5.20%
Wholesale	24	3.78%

Range	Max	Median	Mean	Min
Count	62	20	24.12	3
Percentage	9.76%	3.15%	3.80%	0.47%

In addition to the total number of respondents and the industries of each, it was anticipated that knowing how many members of the sample, by industry, employed high use of explicit contract forms, and how many employed high levels of normative contract forms. To determine this, median averaged values for responses to the formalization and flexibility items

were determined. The median score was 4.25 for formalization indicators and 5.0 for flexibility indicators.

Those members of the sample employing median or higher levels of formalization, and less than median levels of flexibility were defined as employing explicit-oriented governance structures. Those respondents reporting median or higher levels of flexibility, and lower than median levels of formalization were defined as employing normative-oriented governance structures. Respondents reporting median or higher levels of both formalization and flexibility measures were defined as employing a hybrid-oriented governance structure (Ménard 2004). Those who reported lower than median levels of both flexibility and formalization were viewed as employing low levels of governance.

In the sample analyzed, 166 (~26%) of the respondents were classified as representing explicit-oriented firms, 172 (~27%) were classified as representing normative-oriented firms, 152 (~24%) were classified as representing hybrid-oriented firms, and the remainder (145; ~23%) reported low governance levels. The single largest industry employing explicit-oriented structures was retailing, which contained 17 explicit-oriented respondents. The largest industry reporting normative-oriented structures was consulting, 19 respondents of which reported above median flexibility scores and below median formalization scores. The industry reporting the largest number of hybrid-oriented structures was manufacturing, with 22 respondents reporting median or greater levels of both formalization and flexibility. Perhaps unsurprisingly, the "Other" group reported the highest number of low governance structure cases with 16 subjects.

However, it was surprising that retailers – who reported the highest number of explicit-oriented structures – also reported 13 low governance cases.

The numbers of respondents classified in each type of governance structure orientation is relatively evenly distributed. The complete distribution of governance structure orientation is provided in Table 6-2.

TABLE 6-2
Sample Members by Industry and Governance Orientation

Industry	Explicit Contract-Oriented		Normative Contract Oriented		Hybrid Contract Oriented		Low Governance Levels	
Grand Total	166	26.14%	172	27.09%	152	23.94%	145	22.83%
Advertising	1		2		0		0	
Agribusines	1		6		0		0	
Automotive	8		3		1		2	
BioTech	5		1		3		3	
Communication	5		4		7		4	
Construction	5		12		11		5	
Consulting	9		19		19		15	
Education	5		11		4		10	
Energy	2		1		2		1	
Engineering	8		3		2		4	
Entertainment	7		8		7		5	
Financial Services	16		4		7		8	
Food Services	4		3		3		2	
Government	12		3		2		9	
Healthcare	8		6		2		4	
Home Services	3		3		5		11	
Insurance	5		2		3		3	
Legal	2		1		3		3	
Logistics	4		4		5		2	
Manufacturing	13		16		22		8	
Other	5		16		4		16	
Real Estate	5		9		5		1	
Retail	17		12		17		13	

Industry	Explicit Contract-Oriented	Normative Contract Oriented	Hybrid Contract Oriented	Low Governance Levels
Services	12	15	8	14
Wholesale	4	8	10	2

Although explicit and normative relational contracts do not exist on a continuum, there are cases where one form may be dominant over another (Lusch and Brown 1996). A point of interest in this research is whether the greater use of a particular form of governance structure tends to lend itself toward varying levels of firm outcomes based on the capabilities with which a given firm operates, and the conditions to which a given firm is subject. This requires also determining if firms have a tendency to rely more heavily on one form of governance over another.

To assess this difference, the average of mean scores reported by the sample for both the formalization and flexibility items were compared, without regard to governance structure orientation. Cases where the averaged mean scores of the formalization measure were larger than those of the averaged mean flexibility item scales were classified as cases where the firm displayed an explicit governance tendency. Opposite cases, where the averaged mean scores of the flexibility items exceeded those of the formalization measures were termed cases where the firm displayed a normative governance tendency. Cases where there was no difference in the averaged mean formalization and flexibility measures were defined as equivalent governance tendencies.

Over half the sample – 358 respondents; ~56% - displayed a normative governance tendency. Nearly 31% of the sample - 194 respondents - held an explicit governance tendency. Only a small percentage of the sample - 82 respondents; ~13% - displayed an equivalent governance tendency. The distribution of the respondent sample by industry and governance tendency is presented in Table 6-3.

TABLE 6-3
Sample Members by Industry and Governance Tendency

Industry	Explicit Tendency		Normative Tendency		Equivalent Tendency	
Grand Total	194	30.55%	358	56.38%	83	13.07%
Advertising	1		2		0	
Agribusines	1		6		0	
Automotive	6		7		1	
BioTech	5		4		3	
Communication	6		11		3	
Construction	8		22		3	
Consulting	13		44		5	
Education	9		18		3	
Energy	4		2		0	
Engineering	6		7		4	
Entertainment	4		20		3	
Financial Services	18		14		3	
Food Services	7		3		2	
Government	14		10		2	
Healthcare	8		11		1	
Home Services	5		13		4	
Insurance	5		6		2	
Legal	4		4		1	
Logistics	4		8		3	
Manufacturing	14		35		10	
Other	5		22		14	
Real Estate	7		11		2	

Industry	Explicit Tendency	Normative Tendency	Equivalent Tendency
Retail	17	34	8
Services	14	30	5
Wholesale	9	14	1

The demographic findings indicate that there are differences in the governance structures firms use in their B2B relationships. Exactly how those structures are influenced, and how they impact firm value outcomes is examined next.

STRUCTURAL MODEL RESULTS

With the demographics of interest determined, the sample covariance matrix from the measurement model (See Chapter Five) was compared to an implied structural model (Schumacker and Lomax 2010) based on the conceptual model posed in Chapter Four. The latent variables reflecting the mean-centered items composed of formalization and flexibility were regressed on the latent variables reflecting the mean-centered items composed of the control variables, transaction cost focus, perceived power, internal integration, external integration, knowledge sharing, relationship quality focus, and opportunism. Also, the formalization and flexibility latent variables were regressed on latent interaction terms comprised of products of the double-mean centered items computed by multiplying the highest loading items from each of the unilateral capabilities (transaction cost focus, perceived power, and internal integration) by the collaborative capabilities (external integration, knowledge sharing, and relationship quality focus), and the relational contextual factor (opportunism) (Lin, et al.

2010). The latent relationship value outcome variables – the mean-centered items comprised of financial performance, market performance and partner satisfaction items, were regressed on the formalization and flexibility latent variables. Results from each relevant analyzed path are discussed below.

Control Variables

Control variables, size of the trade partner relative to the firm and size of the exchange with the trade partner relative to the exchanges with other trade partners, do not produce a significant effect size on either Formalization (γ= 0.061, p=0.82) or Flexibility (γ= 0.31, p=0.92). Thus, the control variables of the research are assumed to have no meaningful influence on the sample relationships. The standardized loading estimates, standard error, t-statistics and p-values for these relationships are presented in Table 6-4.

TABLE 6-4
Influence of Control Variables on Relational Governance Forms

Relationship	Std. Estimate	Std. Error	Test Statistic	*p*-value
Control Variables → Formalization	0.06	0.28	0.22	0.82
Control Variables → Flexibility	0.31	3.10	0.10	0.92

Antecedent Effects

Transaction Costs Focus

As show in Table 6-5, the influence of the transaction cost focus effects displays a significant effect on both of the relationship value outcomes, firm performance (γ= 0.23, p<0.01), and partner satisfaction (γ= -0.42, p<0.01). However, no significant relationship exists between TCF and the items reflecting either formalization (γ= 0.25, p=0.23) or flexibility (γ= -0.15, p=0.89).

TABLE 6-5
Influence of Transaction Cost Focus on Relational Governance Forms and Outcomes

Relationship	Std. Estimate	Std. Error	Test Statistic	*p*-value
Transaction Cost Focus → Formalization	0.25	0.21	1.19	0.23
Transaction Cost Focus → Flexibility	-0.15	1.06	0.14	0.89
Transaction Cost Focus → Firm Performance	0.23	0.05	5.09	0.00
Transaction Cost Focus → Partner Satisfaction	-0.42	0.05	9.08	0.00

Perceived Power

The influence of perceived power is significant on both firm performance (γ= 0.21, p<.01) and partner satisfaction (γ= 0.45, p<0.01), as shown in Table 6-6. But, like TCF, perceived power has no impact on either formalization (γ= 0.47, p=0.45) or flexibility (γ= -1.39, p=0.91).

TABLE 6-6
Influence of Perceived Power on Relational Governance Forms and Outcomes

Relationship	Std. Estimate	Std. Error	Test Statistic	*p*-value
Perceived Power → Formalization	0.47	0.62	0.75	0.45
Perceived Power → Flexibility	-1.39	12.23	0.11	0.91
Perceived Power → Firm Performance	0.21	0.06	3.83	0.00
Perceived Power → Partner Satisfaction	0.45	0.06	7.87	0.00

Internal Integration

Internal Integration shows a direct effect on firm performance (γ= 0.19, p<0.01), but interestingly, displays no such effect on the satisfaction with a partner (γ= 0.06, p=0.21). Neither does internal integration share any significant relationship with formalization (γ= -0.33, p=0.54), or flexibility (γ= 0.32, p=0.93). The details of the estimated paths from internal integration can be found in Table 6-7.

TABLE 6-7
Influence of Internal Integration on Relational Governance Forms and Outcomes

Relationship	Std. Estimate	Std. Error	Test Statistic	*p*-value
Internal Integration → Formalization	-0.33	0.54	0.62	0.54
Internal Integration → Flexibility	0.32	3.96	0.08	0.93
Internal Integration → Firm Performance	0.19	0.05	3.69	0.00
Internal Integration → Partner Satisfaction	0.06	0.05	1.26	0.21

Having examined latent path relationships between the antecedents of the structural model – the unilateral capabilities, and the mediator – relational governance forms – and the relationship value outcomes, attention turns to the expected moderating effects. The estimated

paths between collaborative capabilities and relational contextual factors, and their interactions with unilateral capabilities are examined next.

Moderator Effects

External Integration

Table 6-8 illustrates the path relationships of external integration with the relational governance forms, and those of its interactions with the unilateral capabilities. External integration shows no direct effect on formalization (γ= -0.36, p=0.62), nor do its interactions with TCF (γ= -3.60, p=0.23), perceived power (γ= 1.83, p=0.25), or internal integration (γ= 2.81, p=0.28). Further, external integration shows no significant direct (γ= 3.79, p=0.88), nor interacting effect on flexibility (w/TCF: γ= 16.84, p=0.89; w/perceived power: γ= -7.36, p=0.88; w/internal integration: γ= -16.85, p=0.89).

TABLE 6-8
Moderating Influence of External Integration on Relational Governance Forms

Relationship	Std. Estimate	Std. Error	Test Statistic	*p*-value
External Integration → Formalization	-0.36	0.74	0.49	0.62
External Integration → Flexibility	3.79	25.15	0.15	0.88
Transaction Cost FocusXExternal Integration → Formalization	-3.60	3.03	1.19	0.23
Transaction Cost FocusXExternal Integration → Flexibility	16.84	116.71	0.14	0.89
Perceived PowerXExternal Integration → Formalization	1.83	1.57	1.16	0.25
Perceived PowerXExternal Integration → Flexibility	-7.36	50.19	0.15	0.88
Internal IntegrationXExternal Integration → Formalization	2.81	2.62	1.07	0.28
Internal IntegrationXExternal Integration → Flexibility	-16.85	117.07	0.14	0.89

Knowledge Sharing

Knowledge sharing does not display a significant direct relationship with formalization (γ= 0.70, p=0.24), nor do its interactions with TCF (γ= 3.21, p=0.25), perceived power (γ= -1.21, p=0.49), or internal integration (γ= -2.68, p=0.22). Similarly, no significant relationship is found with flexibility (γ= -2.27, p=0.15) directly, or in interaction with TCF (γ= -15.39, p=0.89), perceived power (γ= 10.77, p=0.89), or internal integration (γ= 10.30, p=0.88). The results of the knowledge sharing path analysis are presented in Table 6-9.

TABLE 6-9
Moderating Influence of Knowledge Sharing on Relational Governance Forms

Relationship	Std. Estimate	Std. Error	Test Statistic	*p*-value
Knowledge Sharing → Formalization	0.70	0.59	1.18	0.24
Knowledge Sharing → Flexibility	-2.77	19.22	1.43	0.15
Transaction Cost FocusXKnowledge Sharing → Formalization	3.21	2.78	1.16	0.25
Transaction Cost FocusXKnowledge Sharing → Flexibility	-15.39	110.63	0.14	0.89
Perceived PowerXKnowledge Sharing → Formalization	-1.21	1.74	0.70	0.49
Perceived PowerXKnowledge Sharing → Flexibility	10.77	77.58	0.14	0.89
Internal IntegrationXKnowledge Sharing → Formalization	-2.68	2.21	1.21	0.22
Internal IntegrationXKnowledge Sharing → Flexibility	10.30	69.20	0.15	0.88

Relationship Quality Focus

Among this sample, RQF does not directly influence levels of formalization significantly (γ= -0.32, p=0.45), nor by interaction with TCF (γ= 0.06, p=0.93), perceived power (γ= -0.28, p=0.88), or internal integration (γ= -0.14, p=0.93). Also, no direct effect is found between RQF and flexibility (γ= 0.85, p=0.84). Further, there is no significant interaction effect between RQF

and the unilateral capabilities on flexibility (w/TCF: γ= 2.18, p=0.88; w/perceived power: γ= -7.40, p=0.89; w/internal integration: γ= 6.55, p=0.90). Results from the RQF relationship path analysis are displayed in Table 6-10.

TABLE 6-10
Moderating Influence of Relationship Quality Focus on Relational Governance Forms

Relationship	Std. Estimate	Std. Error	Test Statistic	*p*-value
Relationship Quality Focus → Formalization	-0.32	0.43	0.75	0.45
Relationship Quality Focus → Flexibility	0.85	4.30	0.20	0.84
Transaction Cost FocusXRelationship Quality Focus → Formalization	0.06	0.67	0.09	0.93
Transaction Cost FocusXRelationship Quality Focus → Flexibility	2.18	14.63	0.15	0.88
Perceived PowerXRelationship Quality Focus → Formalization	-0.28	1.88	0.15	0.88
Perceived PowerXRelationship Quality Focus → Flexibility	-7.40	56.21	0.13	0.89
Internal IntegrationXRelationship Quality Focus → Formalization	-0.14	1.54	0.09	0.93
Internal IntegrationXRelationship Quality Focus → Flexibility	6.55	49.85	0.13	0.90

Opportunism

As shown in Table 6-11, the relational contextual factor, opportunism, does not significantly influence the degree of formalization in this sample (γ= 0.70, p=0.16), nor do its interactions with TCF (γ= -0.31, p=0.55), perceived power (γ= -0.06, p=0.97), or internal integration (γ= -0.06, p=0.96). Direct relationships between opportunism and flexibility (γ= -3.03, p=0.88), as well as interacting effects with TCF (γ= 2.46, p=0.88), perceived power (γ= -6.52, p=0.89), and internal integration (γ= 5.45, p=0.90) are also insignificant.

TABLE 6-11

Moderating Influence of Opportunism on Relational Governance Forms

Relationship	Std. Estimate	Std. Error	Test Statistic	*p*-value
Opportunism → Formalization	0.70	0.50	1.39	0.16
Opportunism → Flexibility	-3.03	20.93	0.15	0.88
Transaction Cost FocusXOpportunism → Formalization	-0.31	0.53	0.59	0.55
Transaction Cost FocusXOpportunism → Flexibility	2.46	16.98	0.15	0.88
Perceived PowerXOpportunism → Formalization	-0.06	1.49	0.04	0.97
Perceived PowerXOpportunism → Flexibility	-6.52	48.74	0.13	0.89
Internal IntegrationXOpportunism → Formalization	-0.06	1.29	0.04	0.96
Internal IntegrationXOpportunism → Flexibility	5.45	41.64	0.13	0.90

Relational Governance Form Mediator Effects

The relational governance forms do share significant effects with the relationship value outcome variables, as shown in Table 6-12. Formalization is significantly and positively related to firm performance (β= 0.32, p<0.01), but is negatively related to partner satisfaction (β= -0.46, p<0.01). Flexibility, on the other hand, bears significant relationships with firm performance (β= 0.39, p<0.01) and partner satisfaction (β= 0.29, p<0.01) that are both significant, and positive.

TABLE 6-12
Influence of Relational Governance Forms on Relationship Value Outcomes

Relationship	Std. Estimate	Std. Error	Test Statistic	*p*-value
Formalization → Firm Performance	0.32	0.04	7.36	0.00
Formalization → Partnership Satisfaction	-0.46	0.05	10.34	0.00
Flexibility → Firm Performance	0.39	0.04	8.95	0.00
Flexibility → Partnership Satisfaction	0.29	0.04	7.14	0.00

Alternative Model Comparisons

Best practices in SEM methodology call for the use of alternatives to hypothesized models. The statistics employed to estimate fit between implied and sample data covariance matrices do not account for all possible implied covariance matrices that might be examined in any given sample of data. Therefore, models that maybe theoretically and statistically equivalent to the tested model are possible, and should be considered (McCoach, et al. 2007). Since the point of this research is to pose new means of examining firm capabilities, tests against models reflecting extant theory are called for in this case (Vandenberg and Grell 2009).

The Role of Opportunism and Relational Governance Forms

A key function of relational governance contracts is to minimize opportunism risk (Heide and John 1990; Williamson 1981; 1996). Although hypothesized in this research as a mediator of unilateral and collaborative capabilities' relationship with firm performance, there are other interpretations of the role that relational governance forms play.

Direct relationships between opportunism and contract mechanisms have been studied in the literature. These include different forms of monitoring (Heide, et al. 2007), relational norms (Ghosh and Fedorowicz 2008; Heide and John 1992; Morgan and Hunt 1994), and transaction specific investments (Brown, et al. 2009; Zaheer and Venkatraman 1995; Zhang, et al. 2003).

Thus the role that relational governance forms play in relation to opportunism may be more direct than that of separate moderators of relational capabilities.

Alternative Model Structure and Fit

Mediating relationships describe cases where a the variance of an independent variable is related to that of a dependent variables through a third, intervening variable, while moderating relationships refer to cases where a third variable alters the direction or strength of a relationship between the variance in an independent variable and that of a dependent variable (Edwards and Lambert (2007). As contracts are an effort to minimize the effect of opportunism (Heide and John 1990; Williamson 1981; 1996), it stands to reason that measures of opportunism might alter the strength of unilateral and collaborative capabilities on dependent variables of interest, and the variance of opportunism in that relationship would be subject to mediation by the relational governance form employed by the firm.

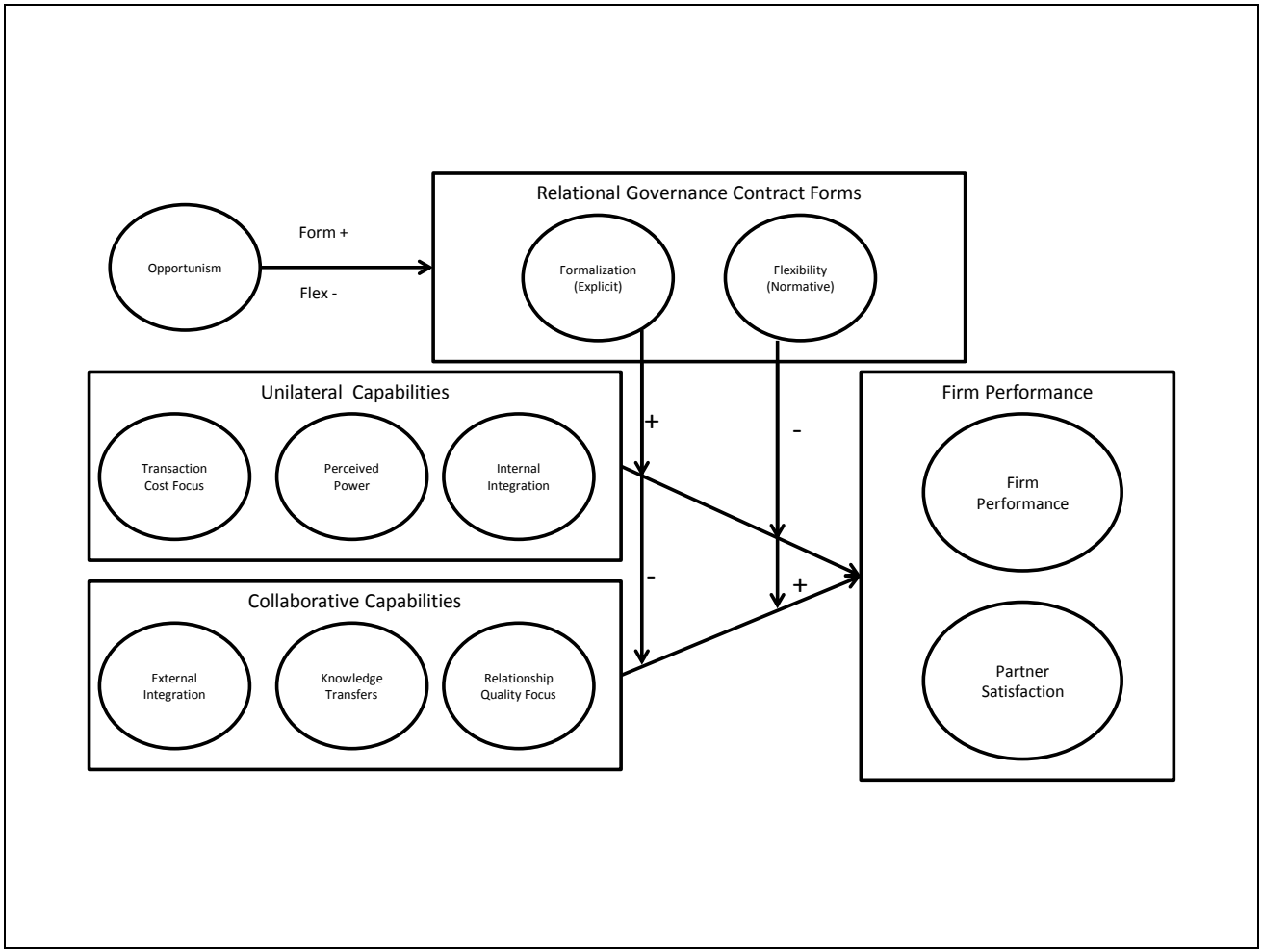
Thus, an alternative model is posed for testing, as illustrated in Figure 6-1. This view of the relationships also conforms to the strategy-structure-performance paradigm (Defee and Stank 2005) in that its configuration places unilateral and collaborative capabilities – the strategies in this conceptualization – as antecedents of the relationship value outcomes, and views relational governance forms – the structure of this model – in an interceding effect the delivery of strategy

influences to performance outcomes. Its sole differences are its view that relational governance forms are a moderating, rather than mediating influence on the relationships.

As with the hypothesized model, the items included in this model were subjected to CFA to derive a measurement model (see Chapter Five). There were no differences in the items that were retained for measurement in the alternative model, since the same series of items were used in different configurations for both models. The only difference lies in the combinations of double-mean centered items employed to calculate interaction terms (Lin, et al. 2010).

The alternative model displayed an acceptable fit ($\chi^2_{(df=3909)}$=13786, RMSEA=0.06, CFI=0.96, SRMR=0.05), and a significant difference from the hypothesized model ($\Delta\chi^2_{(\Delta df=1)}$=2630, p<0.05). An implied structural covariance matrix based on the alternative structural model was applied to the sample covariance matrix and the results analyzed.

FIGURE 6-1
Alternative Model Structure



Unilateral Capabilities and Relationship Value Outcomes

As demonstrated in table 6-13, almost all unilateral capabilities display direct effects on relationship value outcomes, at strong levels of significance ($p<0.05$), with two exceptions. Perceived power shows no significant direct effect on firm performance ($\beta= 0.01$, $p=0.87$), and internal integration displays no significant direct effect on partner satisfaction ($\beta= 0.02$, $p=0.69$). Interestingly, transaction cost focus shares a significant and *negative* relationship with partner satisfaction ($\beta= -0.16$, $p<0.01$). Also noteworthy, the strongest direct effect is the positive influence of perceived power on partner satisfaction ($\beta= 0.32$, $p<0.01$).

TABLE 6-13
Influence of Unilateral Capabilities on Relationship Value Outcomes

Relationship	Std. Estimate	Std. Error	Test Statistic	p-value
Transaction Cost Focus → Firm Performance	0.18	0.05	3.30	0.00
Transaction Cost Focus → Partner Satisfaction	-0.16	0.05	3.56	0.00
Perceived Power → Firm Performance	0.01	0.05	0.17	0.87
Perceived Power → Partner Satisfaction	0.32	0.05	6.84	0.00
Internal Integration → Firm Performance	0.13	0.05	2.53	0.01
Internal Integration → Partner Satisfaction	0.02	0.04	0.39	0.69

Collaborative Capabilities and Relationship Value Outcomes

The collaborative capabilities also have a significant direct effect on performance outcomes, but as in the case of unilateral capabilities, with two exceptions and some surprising directionalities. External integration shows no direct effect on firm performance ($\beta =0.09$, $p=0.09$), and relationship quality focus has no significant influence on firm performance

(β =0.06, p=0.25). Further, both external integration (β= -0.10, p<0.05), and knowledge sharing (β= -0.17, p<0.01) display significant *negative* relationships with partner satisfaction. The paths tested between collaborative capabilities and relationship value outcomes are displayed in Table 6-14.

TABLE 6-14
Influence of Collaborative Capabilities on Relationship Value Outcomes

Relationship	Std. Estimate	Std. Error	Test Statistic	p-value
External Integration → Firm Performance	0.09	0.05	1.67	0.09
External Integration → Partner Satisfaction	-0.10	0.05	2.21	0.03
Knowledge Sharing → Firm Performance	0.10	0.05	1.96	0.05
Knowledge Sharing → Partner Satisfaction	-0.17	0.04	3.88	0.00
Relationship Quality Focus → Firm Performance	0.06	0.05	1.15	0.25
Relationship Quality Focus → Partner Satisfaction	0.30	0.04	6.92	0.00

Opportunism and Relational Governance Forms

In the alternative model, the relational contextual factor, opportunism, exhibits significant effects on the use of relational governance forms. As demonstrated in Table 6-15, opportunism is positively related with formalization measures (γ= 0.36, p<0.01), and negatively related to flexibility indicators (γ= -0.23, p<0.01). Because the relational contextual factor competitive intensity items were dropped during CFA, they are not estimated in this structural model.

TABLE 6-15
Influence of Relational Contextual Factors on Relational Governance Forms

Relationship	Std. Estimate	Std. Error	Test Statistic	p-value
Opportunism → Formalization	0.36	0.06	5.95	0.00
Opportunism → Flexibility	-0.23	0.06	3.92	0.00
Competitive Intensity → Formalization (dropped during CFA)				
Competitive Intensity → Flexibility (dropped during CFA)				

Relational Governance Forms and Relationship Value Outcomes

Table 6-16 illustrates the relationships between relational governance forms and relationship value outcomes. Neither the use of explicit governance contracts ($\beta_{Formalization}$= 0.03, p=0.56) nor use of normative governance contracts ($\beta_{Flexibility}$= 0.06, p=0.29) have any significant effect on firm performance. However, both formalization (β= -0.26, p<0.01), and flexibility (β= 0.09, p<=0.05) influence partner satisfaction, although the effects are in opposite directions. The main relationships of interest in this alternative model, however, are not the direct effects of relational governance forms, but their functions as moderators of unilateral and collaborative capabilities.

TABLE 6-16
Influence of Relational Governance Forms on Relationship Value Outcomes

Relationship	Std. Estimate	Std. Error	Test Statistic	p-value
Formalization → Firm Performance	0.03	0.06	0.59	0.56
Formalization → Partnership Satisfaction	-0.26	0.05	5.28	0.00
Flexibility → Firm Performance	0.06	0.05	1.06	0.29
Flexibility → Partnership Satisfaction	0.09	0.05	2.00	0.05

Capabilities/Governance Interactions

In general, this research posits that unilateral capabilities are more beneficial in conjunction with use of explicit governance contracts (formalization), and less beneficial in conjunction with normative governance contracts (flexibility), while collaborative capabilities are more beneficial in conjunction with flexibility and less beneficial in conjunction with formalization. The findings displayed in Table 6-17 and Table 6-18 support these contentions, but only to a limited degree.

Measures of perceived power moderated by flexibility measures have a significant negative influence on firm performance ($\beta = -0.12$, $p<0.05$). Additionally, internal integration, when moderated by flexibility, also exhibits a negative relationship with firm performance ($\beta = -0.17$, $p<0.01$). Surprisingly, the formalization moderator did not demonstrate any significant impact on relationship value outcomes when interacting with any unilateral capability.

TABLE 6-17
Moderating Influence of Relational Governance Forms on Unilateral Capabilities

Relationship	Std. Estimate	Std. Error	Test Statistic	p-value
Transaction Cost FocusXFormalization → Firm Performance	0.06	0.06	0.98	0.33
Transaction Cost FocusXFormalization → Partner Satisfaction	0.07	0.05	1.29	0.20
Transaction Cost FocusXFlexibility → Firm Performance	0.04	0.06	0.67	0.50
Transaction Cost FocusXFlexibility→ Partner Satisfaction	0.04	0.05	0.75	0.46
Perceived PowerXFormalization → Firm Performance	-0.07	0.06	1.26	0.21
Perceived PowerXFormalization → Partner Satisfaction	0.05	0.05	0.94	0.35
Perceived PowerXFlexibility → Firm Performance	-0.12	0.05	2.20	0.03
Perceived PowerXFlexibility → Partner Satisfaction	0.00	0.04	0.10	0.92
Internal IntegrationXFormalization → Firm Performance	0.04	0.06	0.68	0.50
Internal IntegrationXFormalization → Partner Satisfaction	-0.03	0.05	0.61	0.54
Internal IntegrationXFlexibility → Firm Performance	-0.17	0.05	3.26	0.00
Internal IntegrationXFlexibility → Partner Satisfaction	0.06	0.04	1.40	0.16

The findings are even more contradictory when turning to collaborative capabilities, most of which, like unilateral capabilities, had no significant interaction with relational governance forms. As expected, external integration, when moderated by flexibility, has a positive influence on partner satisfaction (β =0.11, p<0.05). Yet, knowledge sharing, interacting with flexibility, has a positive effect on firm performance (β= 0.24, p<0.01), but surprisingly, shows a *negative* effect on partner satisfaction (β= -0.10, p<0.05). Further, relational quality focus demonstrates a *positive* influence on partner satisfaction when interacting with *both* formalization (β= 0.19, p<0.01) and flexibility (β= 0.16, p<0.01).

TABLE 6-18

Moderating Influence of Relational Governance Forms on Collaborative Capabilities

Relationship	Std. Estimate	Std. Error	Test Statistic	p-value
External IntegrationXFormalization → Firm Performance	-0.08	0.06	1.34	0.18
External IntegrationXFormalization → Partner Satisfaction	-0.01	0.05	0.13	0.90
External IntegrationXFlexibility → Firm Performance	-0.03	0.06	0.51	0.61
External IntegrationXFlexibility→ Partner Satisfaction	0.11	0.05	2.31	0.02
Knowledge SharingXFormalization → Firm Performance	-0.01	0.06	0.21	0.83
Knowledge SharingXFormalization → Partner Satisfaction	-0.09	0.05	1.69	0.09
Knowledge SharingXFlexibility → Firm Performance	0.24	0.06	4.34	0.00
Knowledge SharingXFlexibility → Partner Satisfaction	-0.10	0.05	2.19	0.03
Relationship Quality FocusXFormalization → Firm Performance	-0.08	0.05	1.44	0.15
Relationship Quality FocusXFormalization → Partner Satisfaction	0.19	0.05	4.19	0.00
Relationship Quality FocusXFlexibility → Firm Performance	-0.10	0.05	1.85	0.07
Relationship Quality FocusXFlexibility → Partner Satisfaction	0.16	0.04	3.67	0.00

Explicit versus Normative Governance Tendencies

One focus of this research is determining how differences in the relational governance form that firms employ interact with the capabilities that firms possess, and how those interactions influence firm outcomes. As noted earlier, (see Table 6-3) firms display differences in their tendency to employ more explicit or more normative governance forms (Lusch and Brown 1996). To examine if there are differences in the relationships based on these tendencies, the sample was divided between respondents reporting a higher use of explicit versus normative governance contracts, termed here as explicit contract tendency, and respondents reporting higher levels of normative versus explicit governance contracts, referred to here as normative contract tendency. The implied structural covariance matrix was applied to separate sample covariance matrices computed from explicit contract tending and normative contract tending

subsamples of the respondents. As demonstrated in Table 6-19, χ^2-difference tests indicate that there are significant differences in the subsample covariance matrices ($\Delta\chi_{(\Delta df=1)}$= 15663, p<0.01).

TABLE 6-19
Comparison of High Explicit and High Normative Contract Tendency Firm Models

Model	χ^2	df	χ^2_{diff}	df_{diff}	*p*-value
Explicit Tendency	27494.7	4140			
Normative Tendency	11832	4140			
Comparison			15663	1	0.0000

A comparison of the effect sizes estimated in the structural model of each governance contract subsample is illustrated in Table 6-20. Several noteworthy differences are apparent in the influence of the contract forms, capabilities and relational contextual factors on relationship value outcomes, subject to governance contract tendencies.

TABLE 6-20
Differences in Outcomes Between Explicit and Normative Contract Tendency

Relationship	Relational Contract Form Tendency				
	Explicit	Normative	Difference	Q-Value	χ^2
Relational Contextual Factors → Capabilities/Contracts					
Opportunism → Explicit Contracts		0.367	0.367		
Opportunism → Normative Contracts		-0.211	-0.211		
			NA		
Relational Goverance Forms → Firm Value Outcomes			NA		
Explicit Contracts → Firm Performance	0.128		0.128		
Explicit Contracts → Partnership Satisfaction		-0.288	-0.288		
Normative Contracts → Firm Performance	-0.105	0.208	0.313	0.717	7102.06**
Normative Contracts → Partnership Satisfaction		0.137	0.137		

*Blank spaces indicate insignificant relationships, *p<0.05, **p<0.01*

Among this sample, opportunism does not present a significant relationship in determining use of either governance mechanism for respondents with explicit tendencies, but does have a significant relationship with both types of relational contract for respondents reporting normative tendencies. For normative tendency firms, opportunism enhances the use of explicit contracts ($\beta = 0.367$, $p<0.01$) and decreases reliance on normative contracts ($\beta = -0.211$, $p<0.01$). Governance forms are a means of reducing risk (Williamson 1981); therefore, one would expect that opportunism has less effect on contracts based on clearly delineated obligations, and more effect on contracts that rely on mutual understandings.

Formalization among firms with explicit tendencies is positively related to firm performance ($\beta = 0.128$, $p<0.01$) but firm performance is negatively related flexibility in these firms ($\beta = -0.105$, $p<0.05$). Normative tendency firms, on the other hand, show a positive correlation between firm performance ($\beta = 0.208$, $p<0.01$) and flexibility. Firms with explicit tendencies have no significant relationship between relational contract type and partner satisfaction, but firms with normative tendencies tend to strongly influence partner satisfaction based on the contract form they employ ($\beta_{Explicit} = -0.288$, $p<0.01$; $\beta_{Normative} = 0.137$, $p<0.01$). These findings are consistent with the effects one would anticipate from the use of explicit and normative governance contracts for firms with explicit or normative tendencies, but the more important focus is how the interaction of use of these contractual governance forms with the unilateral and collaborative capabilities influence relationship value outcomes.

Having examined the influence of the relational governance forms and opportunism on firm outcomes, based on tendencies of firms to employ more explicit or more normative relational contracts, a similar analysis was performed on the relational capabilities and their interactions with relational governance forms. Table 6-21 illustrates the differences found in unilateral capability effects and interactions based on firm governance contract tendencies.

TABLE 6-21
Differences in Unilateral Outcomes Between Explicit and Normative Contract Tendency

Relationship	Relational Contract Form Tendency				
	Explicit	Normative	Difference	Q-Value	χ^2
Unilateral Capabilities → Firm Performance					
Transaction Cost Focus → Firm Performance	0.145	0.157	0.012	0.986	301.42**
Transaction Cost FocusXExplicit Contracts → Firm Performance					
Transaction Cost FocusXNormative Contracts → Firm Performance					
Perceived Power → Firm Performance	-0.199		-0.199		
Perceived PowerXExplicit Contracts → Firm Performance	0.209		0.209		
Perceived PowerXNormative Contracts → Firm Performance	-0.428		-0.428		
Internal Integration → Firm Performance	0.173	0.141	0.032	0.963	809.59**
Internal IntegrationXExplicit Contracts → Firm Performance					
Internal IntegrationXNormative Contracts → Firm Performance	-0.120	-0.143	0.023	0.980	433.49**
Unilateral Capabilities → Partner Satisfaction					
Transaction Cost Focus → Partner Satisfaction	-0.244	-0.089	0.155	0.732	6643.68**
Transaction Cost FocusXExplicit Contracts → Partner Satisfaction		-0.199	-0.199		
Transaction Cost FocusXNormative Contracts→ Partner Satisfaction					
Perceived Power → Partner Satisfaction	0.323	0.148	0.175	0.795	4902.49**
Perceived PowerXExplicit Contracts → Partner Satisfaction					
Perceived PowerXNormative Contracts → Partner Satisfaction					
Internal Integration → Partner Satisfaction	0.119	-0.078	0.197	0.817	4303.49**
Internal IntegrationXExplicit Contracts → Partner Satisfaction		-0.124	-0.124		
Internal IntegrationXNormative Contracts → Partner Satisfaction	0.222		0.222		

*Blank spaces indicate insignificant relationships, *p<0.05, **p<0.01*

The transaction cost focus (TCF) capability has a positive relationship with firm performance for firms with both governance contract tendencies, but surprisingly, the relationship is stronger among firms with a normative contract tendency (β= 0.158, p<0.01) than among firms with an explicit tendency (β= 0.145, p<0.01). In a similar fashion, although TCF has a negative relationship with partner satisfaction, regardless of governance contract tendency, the effect is stronger for firms with an explicit tendency (β= -0.224, p<0.01) than for firms with a normative tendency(β= -0.089, p<0.05). This suggests that firms that engage in efforts to minimize transaction costs *a priori* may have perceive less risk from their interactions with trade partners (Heide 1994; Williamson 1981), but that those efforts need not necessarily be formalized, but achieved through mutual understandings developed with trade partners (Lusch and Brown 1996; Ménard 2004). Further, different types of contractual interactions between firms tend to result in different levels of trade partner discontent (Heide, et al. 2007), thus the negative relationships between TCF and partner satisfaction, particularly among firms with an explicit contract tendency, may represent a degree of discomfort at the potential risk that firms feel in the *need* to carefully vet trade partners *a priori*.

Transaction cost focus is significantly moderated only by formalization only in its relationship with partner satisfaction, and only among respondents that report an explicit contract tendency (β= -0.199, p<0.01). This suggests that exercise of the ability of firms to identify and minimize relationship risks in firms that rely more on formal instruments of relationship management may reflect a firm-cultural concern for bounded rationality, or information

asymmetry or the potential opportunism in a B2B partnership (Chiles and McMackin 1996; MacMillian 1990; Williamson 1981).

Perceived power also demonstrates surprising results, in that its effect on firm performance is negative for firms with an explicit governance tendency (β= -0.199, p<0.01). However, perceived power's relationship with partner satisfaction is positive, regardless of the firm's governance contract tendency, but its effect is higher for firms with an explicit tendency (β= 0.323, p<0.01) than for firms with a normative tendency (β= 0.148, p<0.01). Power is an ability of one actor to compel the acquiescence of another to the focal actor's wishes (El-Ansary and Robicheaux 1974). These findings open the question of whether the *exercise* or the *establishment* of power represents a cost that degrades firm performance. Further, the higher levels of partner satisfaction found in the alternative model open the question of whether the perception of power – or perhaps the acquiescence to that power – engender a sense of comfort in the relationship.

The interaction of relational governance forms have no impact on the relationship of perceived power on partner satisfaction, nor does it moderate the relationship with firm performance among firms with a normative contract tendency. However, among firms with an explicit contract tendency, the effect of power on firm performance is increased when moderated by formalization (β= 0.209, p<0.01), and decreased when moderated by flexibility (β= -0.428, p<0.01). The ability to clearly, and specifically delineate a view of obligations (Ghosh and John 2005; Heide 1994) between trade partners, without the ambiguity that can enter assumed mutual

understandings of relationships (Williamson 2008) is clearly important to the development of superior firm performance.

Internal integration tends to have a stronger influence on relationship value outcomes form firms with explicit contract tendencies ($\beta_{\text{Firm Performance}}$= 0.173, p<0.01; $\beta_{\text{Partner Satisfaction}}$= 0.119, p<0.05) than for firms with normative contract tendencies ($\beta_{\text{Firm Performance}}$= 0.141, p<0.05; $\beta_{\text{Partner Satisfaction}}$= -0.078, p<0.05). Interestingly, internal integration increases firm performance regardless of governance contract tendency, but has a negative effect on partner satisfaction for firms with normative contract tendencies. Internal integration, as a collaborative capability, represents the ability of the firm to marshal all of its internal resources, to present a "unified front" to external actors (Hillebrand and Biemans 2003; Sundaram and Black 1992) and to attain superior efficiencies (Chen, et al. 2009), accounting for the findings in performance. Additionally, for firms with an tendency to employ more explicit forms of relational governance contracts, the attainment of greater efficiencies in B2B relationships may represent a greater degree of comfort in dealings with trade partners (Defee and Stank 2005; Esper, et al. 2010a; Grawe, et al. 2008), while firms that rely more on normative relational governance forms may be acting against their preferred competencies in accommodating the operational needs of other entities.

Internal integration has no significant effect on firm performance when moderated by formalization. It has a negative effect on performance when moderated by flexibility, regardless of the governance contract tendency, although the impact of the interaction is somewhat stronger

on firms with normative contract tendencies ($\beta_{Explicit}$= -0.120, p<0.05; $\beta_{Normative}$= -0.143, p<0.05). Further, among firms with a normative contract tendency, the influence of internal integration on partner satisfaction when moderated formalization is also negative (β= -0.124, p<0.05). However, surprisingly, internal integration has a positive relationship with partner satisfaction among firms with an explicit contract tendency when moderated by flexibility (β= 0.222, p<0.01). As noted, internal integration reflects the firm's ability to focus its resources on its goals (Hillebrand and Biemans 2003; Sundaram and Black 1992), a normative approach to managing relationships, relying on informal means of coordinating efforts (Lusch and Brown 1996) that require higher levels of rapport between actors (Gremler and Gwinner 2000), may degrade the ability of firms to properly leverage their capabilities, but may enhance the relationship between actors.

Just as unilateral capabilities demonstrate differences based on firm governance form tendencies, similar differences impact the influences and interactions of collaborative capabilities. Table 6-22 displays the results of this analysis.

TABLE 6-22
Differences in Collaborative Outcomes Between Explicit and Normative Contract Tendency

Relationship	Relational Contract Form Tendency				
	Explicit	Normative	Difference	Q-Value	χ^2
Collaborative Capabilities →Firm Performance					
External Integration → Firm Performance	-0.102		-0.102		
External IntegrationXExplicit Contracts → Firm Performance					
External IntegrationXNormative Contracts → Firm Performance	-0.246		-0.246		
Knowledge Sharing → Firm Performance	0.139		0.139		
Knowledge SharingXExplicit Contracts → Firm Performance					
Knowledge SharingXNormative Contracts → Firm Performance	0.365	0.194	0.171	0.788	5085.13**
Relationship Quality Focus → Firm Performance	0.207		0.207		
Relationship Quality FocusXExplicit Contracts → Firm Performance	-0.214		-0.214		
Relationship Quality FocusXNormative Contracts → Firm Performance	0.201		0.201		
Collaborative Capabilities →Partner Satisfaction					
External Integration → Partner Satisfaction					
External IntegrationXExplicit Contracts → Partner Satisfaction					
External IntegrationXNormative Contracts→ Partner Satisfaction	0.322		0.322		
Knowledge Sharing → Partner Satisfaction	-0.157	-0.144	0.013	0.989	240.96**
Knowledge SharingXExplicit Contracts → Partner Satisfaction	-0.104		-0.104		
Knowledge SharingXNormative Contracts → Partner Satisfaction	-0.195		-0.195		
Relationship Quality Focus → Partner Satisfaction	0.285	0.135	0.150	0.827	4061.28**
Relationship Quality FocusXExplicit Contracts → Partner Satisfaction	0.228	0.228	NA		
Relationship Quality FocusXNormative Contracts → Partner Satisfaction	0.188		0.188		

*Blank spaces indicate insignificant relationships, *p<0.05, **p<0.01*

External integration show significant effects only on firm performance, only in cases of respondents in the sample reporting explicit contract tendencies, and the relationship is negative ($\beta_{\text{Firm Performance}}$= -0.102, p<0.05). Establishing the linking of processes required by external integration (Chen, et al. 2009; Mentzer, et al. 2001; Stank, et al. 2001b) may require firms to sacrifice efficiencies for the benefit of the greater B2B extended enterprise (Christopher 2000).

Thus, firms with a tendency to employ explicit relational governance forms, which inherently establish more definitive obligations between B2B partners (Ménard 2004), may sacrifice some flexibility in responding to the market.

External integration's influence on the outcome variables is moderated only by flexibility and only in cases of firms with explicit contract tendencies. Flexibility decreases the influence of external integration on firm performance (β= -0.120, p<0.01), but increases its influence on partner satisfaction (β= 0.322, p<0.05). Thus, among firms that tend to rely on more explicit relationship management means, adapting the functions of a firm (Richey, et al. 2010a) to enable linkage of those processes to other firms (Chen, et al. 2009) may impede the efficiencies that the firm is able to achieve, while also providing the firm with a higher sense of compatibility with a trading partner.

Knowledge sharing capabilities also produce some surprising results. This capability demonstrates no significant effect on firm performance among firms with normative contract tendencies, yet presents a significant positive relationship (β= 0.139, p<0.01) among firms with explicit contract tendencies. Further, the influence of knowledge sharing on partner satisfaction is negative, regardless of the governance contract tendency, although it is somewhat more negative for explicit tending firms (β= -0.157, p<0.01) than for normative tending firms (β= -0.144, p<0.05). These findings that the means of exchanging knowledge between firms works best when the means of, and obligations inherent to sharing information when clearly established between firms (Heide and John 1990), but that the level of risk in a relationship, and therefore

the comfort with that relationship, decreases with the degree of knowledge that B2B partners exchange.

Among firms with a normative contract tendency, knowledge sharing is moderated only by flexibility, and then only in its effects on firm performance (β= 0.194, p<0.01). Further, this moderation effect is less than that seen among firms with explicit contract tendencies (β= 0.365, p<0.01). Interestingly, the effects among firms with explicit contract tendencies, the moderating influence of both formalization and flexibility on partner satisfaction is negative ($\beta_{Formalization}$= -0.104, p<0.05; $\beta_{Flexibility}$= -0.195, p<0.01). To be effective then, knowledge sharing clearly requires a collaborative atmosphere between firms in which information may be freely exchanged (Christopher 2000) in order to enhance efficiency, limit redundancy (Hult, et al. 2004), and engage in more creative efforts to serve the customer (Branstettler 2001).

Equally counter-intuitive were the findings regarding relationship quality focus (RQF). The relationship between this capability and firm performance was significant for firms with an explicit contract tendency (β= 0.207, p<0.01), but not for firms with a normative contract tendency. Further, RQF's influence on partner satisfaction proved higher for explicit tending firms than for normative tending firms ($\beta_{Explicit}$= 0.285, p<0.01; $\beta_{Normative}$= 0.135, p<0.01). Clear understandings, such as those delineated by more formal contracts (Lusch and Brown 1996) may provide expectations that promote both trust and commitment, increasing both satisfaction with a B2B partner, and the performance that B2B partners realize from joint efforts (Morgan and Hunt 1994).

The relationship quality focus (RQF) interaction measures display an interesting combination of results. Among firms with explicit contract tendencies, the influence of RQF on firm performance is negatively moderated by formalization (β= -0.214, p<0.01), yet is positively moderated by flexibility (β= 0.201, p<0.01). RQF also increases partner satisfaction when moderated by flexibility among firms with an explicit contract tendency (β= 0.188, p<0.01). It is also interesting to note that RQF also increases partner satisfaction when moderated by flexibility by a precisely equal amount (β=0.228, p=0.01), regardless of which governance contract tendency firms in the sample happened to hold. Higher levels of RQF, which include trust and commitment (Morgan and Hunt 1994), unsurprisingly increase the satisfaction of actors with a trade relationship. To enhance firm performance outcomes, however, requires a relationship based on a more collaborative atmosphere, such as that provided through the use of normative governance contracts, where the lack of boundaries between firms can enable the establishment of an extended enterprise (Christopher 2000).

HYPOTHESIS TESTS

With the path relationships loadings and significance of the structural model known, the results of the nine hypotheses presented in Chapter Four may be evaluated. No significant relationship exists between transaction cost focus and use of either form of relational governance form in the hypothesized model, and the alternative model does not pose any direct relationship between those constructs. Hence, H_{1a} and H_{1b} are not supported.

Similarly, the lack of significant structural paths between perceived power and either relational contract form in the hypothesized model indicates that we can draw no conclusions about their relationship. Consequently H_{2a} and H_{2b} cannot be supported by the hypothesized model. However, in the alternative model, among firms with an explicit contract tendency, use of explicit governance forms did increase firm performance, while use of normative governance forms exerted a negative influence, suggesting some support for both H_{2a} and H_{2b}.

The results of the internal integration measures in this sample also do not present significant relationships with either explicit or normative relational contract forms. Therefore no support for H_{3a} nor H_{3b} can be established. It should be noted, however, that in the alternative model, use of normative governance contracts resulted in negative impacts on firm performance when moderating internal integration, regardless of the governance contract tendency of respondents, providing some support for H_{3b}.

These results lend themselves to the conclusion that unilateral capabilities do not directly shape relational governance forms. Further, the lack of significant interactions with TCF, perceived power, internal integration, formalization, and flexibility by external integration, knowledge sharing, relationship quality focus, and opportunism deprive the study of any support for $H_{4a\text{-}g}$, $H_{5a\text{-}g}$, $H_{6a\text{-}g}$, and $H_{8a\text{-}g}$. Because the measures of competitive intensity were dropped during development of the measurement model for lack of significant loading (see Chapter Five), $H_{7a\text{-}g}$ cannot be tested, and therefore must also be considered unsupported.

In the hypothesized model, the relational governance contract measures - formalization and flexibility - do demonstrate significant relationships with both firm performance and the satisfaction with the partner, as do the unilateral capabilities transaction cost focus, and perceived power. The internal integration unilateral capability also shares a significant relationship with firm performance. However, the lack of significant relationships between the unilateral capabilities and the relational governance forms variables prevents any inference of mediation. Hence, no support can be claimed for $H_{9a\text{-}d}$.

It must be noted, however, that the alternative model does offer some interesting relationships. Where unilateral capabilities significantly interact with normative governance forms (i.e. perceived power and internal integration), the influence on firm performance tends to be negative. Also, when normative governance forms significantly interact with collaborative capabilities' influence on relationship value outcomes (i.e. knowledge sharing on firm performance, and external integration and relationship quality focus on satisfaction with a partner), the interaction positively influences the outcome. Yet, there are also some contradictory findings, such as the negative influence on partner satisfaction resulting from the interaction of knowledge sharing and normative contracts, and the positive influence of relationship quality focus when moderated by explicit contracts.

Particularly interesting are the contradictory influences of knowledge sharing on outcome measures when moderated by normative relational governance forms. The ability for partners in a B2B relationship to increase their capabilities by exchanging information and understandings

of their environment and processes is viewed in the literature as a key to enhancing the value realized by B2B relationships (Handfield and Bechtel 2002; Hult, et al. 2004; Hult, et al. 2005, Lambert, et al. 1998). Findings in the alternative model of this research bear this view out, as knowledge sharing, moderated by normative governance contracts, increased firm performance. However, it is the *negative* influence of normative governance contract-moderated knowledge sharing on satisfaction with a partner that is most intriguing.

Intuitively, one would view activities that increase confidence in one's ability to effectively act, as increases in knowledge do (Alavi and Leidner 2001), as desirable. Therefore, intuitively, activities that increase knowledge arising from interaction with trade partners (Branstettler 2001) would be expected to increase one's satisfaction with a partner. The negative result suggests the potential of a curvilinear effect in the amount knowledge sharing that the firm engages in with a trade partner.

OVERVIEW

Chapter Six has demonstrated that unilateral capabilities and relational governance forms do impact relationship value outcomes, such as firm performance and satisfaction with a trading partner, but as originally conceived in this research they do not show a mediated relationship. Further, unilateral capabilities did not significantly interact with either collaborative capabilities or relational contextual factors. Thus, the ability to measure outcomes based on higher uses of normative or explicit governance forms is not possible given this model.

Tests of the theoretically driven alternative model provide some signification relationships, and raise some intriguing questions. Most importantly, many of these relationships are altered once the model is applied to firms that tend to employ explicit contract forms more than normative, and normative contract forms more than explicit. These questions will be explored in Chapter Seven.

RELATIONAL GOVERNANCE FORMS AND FIRM PERFORMANCE: THE ROLE OF UNILATERAL AND COLLABORATIVE CAPABILITIES

CHAPTER 7

CONCLUSIONS

Firms engage in business-to-business relationships for a variety of reasons and in a variety of ways. Motivations for firms to compete in larger, cooperative groups, rather than as individual, vertically integrated entities include capturing greater efficiencies and superior acquisition of resources from which to build the capabilities that lead to competitive advantage. This has fostered a condition where competition among groups of firms operating as supply chains in business-to-business relationships has supplanted competition among discrete, stand-alone entities. Therefore understanding the dynamics of this competitive paradigm is of great importance to both practitioners and scholars.

As the study of B2B relationships has evolved, different views of how and why firms collectively compete have emerged. Rooted in transaction cost economics, relational governance research has posed a view of firms as efficiency-maximizing entities that make tradeoffs between reducing hazards and acquiring resources through the establishment of barriers with other firms in the form of contracts that delineate rights and obligations in order to balance the costs and benefits of each firm-external transaction. Often grounded in the resource-based view of the firm, supply chain management scholars have proposed that the need for greater resources than

individual firms possess enables the use of cooperative relationships with firms that provide complementary resources, with the focus being the success of the partnership as a whole, and the key to success lying in the ability of B2B relationship partners to strategically collaborate, and to integrate operations. Yet, commonalities exist between the relational governance and supply chain management views of B2B relationships.

Both relational governance and supply chain management literature examine how firms deal with hazards such as opportunism. Both approaches examine how antecedent capabilities and approaches of B2B relationship partners influence performance outcomes. Both recognize that not all partners may be relationally dealt with in the same manner, depending on the trade-offs the firm must make as part of each given relationship. However, efforts to integrate these views date to have tended to focus on determining how the constructs of one domain (i.e. transaction costs, versus collaboration and/or trust) fit within the other domain's nomological networks and theories. This research has sought to find a broader view of B2B relationship influences by deconstructing relational governance and supply chain management literature, and to offer an explanation of how the influences that are both common and unique to each research domain interact to shape the structure of relationships between firms, and the manner in which those structures influence relationship value outcomes. Specifically, this research has proposed construct definitions of unilateral capabilities, collaborative capabilities, and relational contextual factors, and tested the influence of those constructs on relationship value outcomes through the lens of relational governance contract forms.

As conceptualized in this research, unilateral capabilities represent the abilities of discrete firms, acting on their own, independent interests, while collaborative capabilities are the abilities that firms realize as a consequence of their participation in a relationship with a B2B partner. The purpose of both capabilities are to shape the structure of a business-to-business relationship in a manner that enhances the outcomes that the firm experiences, although the benefits shaped by unilateral capabilities may be more asymmetrically distributed than those shaped by collaborative capabilities. Relationship contextual factors are those conditions arising from the unique characteristics of each firm in a relationship – and/or the markets in which those firms operate – that impact the structure of B2B relationships, regardless of the types of capabilities that the firms sharing a B2B relationship possess. The relational governance structures that B2B partners enact are explicit relational governance contracts – or agreements that specify relationship rights and obligations in a formal, detailed manner – and normative relational governance contracts – or agreements that are based on more loosely specified mutual understandings of rights and obligations between B2B partners. All agreements between entities represent some form of contract.

Although firms tend to use *both* explicit *and* normative relational contracts, most firms studied in this work tended to make more use of one relational governance contract form than the other. Relational contextual factors tended to lead to more use of explicit relational contracts among the respondents in this sample. Further, this research found that, in general, unilateral capabilities tend to provide higher levels of relationship value outcomes when the firm tends to employ more explicit relational contracts, while collaborative capabilities tend to provide higher

levels of relationship value outcomes when the firm tends to use more normative forms of relational contracts.

In comparison to previous research, this study also found surprising relationships between the constructs examined and firm performance. These include relationships between the internal and external integration variables and the outcome variables, as well as the effect of knowledge sharing on partner satisfaction. The details and meaning of each of these for research and practice will be discussed next.

THEORETICAL IMPLICATIONS

This work has supported extant research indicating that the means by which firms govern their B2B relationships are complex and multidimensional. The resources that firms bring to bear in developing and managing relationships include capabilities that are purely internal to the firm, as well as capabilities that can only be built from collective efforts with B2B partners.

Transaction cost focus was found to significantly increase firm performance, yet significantly decrease partner satisfaction. These findings suggest that firms are able to increase relationship outcomes based on their ability to identify transaction costs in order to minimize potential hazards, but the process of doing so reduces their comfort with trade partners. This is an interesting supplement to the findings of Heide, et al. (2007) that efforts to examine a partner's processes, as opposed to a partner's outcomes, are detrimental to the partner's satisfaction with a B2B relationship.

The possession of perceived power did not demonstrate any significant direct influence on firm performance, except in cases where the firm has a tendency to employ explicit relational governance contract forms, and the specific relational governance contract used in the relationship is explicitly structured. However, perceived power has a positive relationship with partner satisfaction, regardless of the relational governance contract form employed. Further, perceived power actually decreases firm performance when moderated by use of normative relational governance contracts. These findings suggest that the ability to compel a partner to respond to a firm's expectations of a relationship may increase the comfort of the firm with the relationship, but that imposing the firm's preferred way of coordinating activities on a partner may only yield benefits to the firm under specific conditions. Also, attempting to manage relationships on a normative basis is not compatible with the use of power in the pursuit of financial or market outcomes.

A firm's internal integration does lead to higher levels of firm performance, but demonstrated no significant impact on partner satisfaction. Further, normative relational governance contracts significantly decrease the relationship of internal integration with firm performance. This suggests that the ability of the firm to coordinate its own activities may enhance efficiency and effectiveness of the firm's efforts, but that those benefits do not reach beyond the boundaries of the firm, and those benefits are compromised by the effort of the firm to adapt to the needs of B2B partners. This logic is supplemented by the findings that that both external integration and knowledge sharing significantly *decrease* satisfaction with a B2B

relationship partner. This raises a question of how efforts to adapt a firm's activities to those of a partner firm impact the efficiency and effectiveness of the firm's operations.

Especially in supply chain management literature, integration has been viewed as something of an unqualified benefit to B2B relationships, although some literature has explored the question of what level of integration a firm should engage in based on differences in the type of relationship that a firm shares with individual trade partners. Further, it has been suggested that highly structured systems, like those required to obtain high levels of integration between functions and firms, may reduce the firm's flexibility and adaptability to changes in the competitive environment (Daugherty, et al. 2006). The findings here suggest, at the least, that firm outcomes influenced by integration may be mixed depending on the nature of the specific relationship, and possibly that too much integration with a B2B partner can prove detrimental.

The finding that relationship quality focus increases partner satisfaction, and increases that satisfaction even further *regardless* of whether the firm tends to employ normative or explicit relational governance contract forms is surprising. This result, when viewed in the context of the negative relationships of integration on partner satisfaction, suggests that establishing expectations, whether through explicitly detailed instruments or less formal mutual understandings, is a key to ensuring satisfaction with a firm's B2B partners. Yet the negative relationships found between transaction costs focus and partner satisfaction indicate that the establishing such mutually acceptable terms between firms must avoid invasive means of determining what terms are acceptable between partners.

An important implication of this research lies in one of its limitations (discussed later in this chapter), specifically, that the study relied on self-report measures of both outcomes and antecedent influences. This may be particularly acute in the case of power. It should be noted that only the *non-coercive* measures of the power construct survived the CFA process for use in analysis of the empirical relationships; neither coercive nor reward power items loaded with adequate strength on the power construct. In a similar manner, the measures of manifest conflict were also dropped during CFA. One interpretation of this is that firms simply do not maintain relationships that are less than congenial with their trade partners, but examples from the recent Apple-AT&T alliance and the long history of Wal-Mart as a domineering customer dispute such a simplistic answer. Further, results from the qualitative study of this research indicate that firms do employ both coercive and reward power in pursuit of their B2B relationship goals.

A more likely explanation may be that respondents in this sample were subject to social desirability bias, and reticent to regard the behavior of their firm as predatory, extortive, or dictatorial. This raises a question: by what means, and to what extent do firms exercise power over others. Such a question is particularly important for determining the relative influences of unilateral and collaborative capabilities in relationships that rely more heavily on normative contracts than on explicit contracts.

MANAGERIAL IMPLICATIONS

The key lesson for managers to derive from this research is the importance of understanding themselves, their trade partners, and how the characteristics of each relate to the capabilities the firm has and the contracts that firms employ in B2B relationships. Managers must develop a clear vision of who they are: what are the firm's capabilities, both unilateral and collaborative? Firm managers must understand where the firm's strengths and weaknesses lie in developing and managing relationships, and how those capabilities match the nature of their relationship with their B2B partners. In addition to evaluating their capabilities, the findings indicate that firms must carefully examine the nature of the relational governance contracts they employ, how well those contract forms match the firm's capabilities, and the contextual factors with which the firm contends in each B2B relationship.

Power, for example, when used with more formal contract forms by firms with an explicit relational governance tendency, increased firm performance in study two of this research. At the same time, knowledge sharing, when used with more flexible contract forms by firms with a normative relational governance tendency, also increased firm performance. Further, the choice between relational governance contracts in this research showed a relationship only with opportunism. Such contrasts and dynamics among the findings point out the complexity of the relationships that unilateral and collaborative capabilities have with relationship value outcomes, and therefore, the importance of firms fully understanding both their capabilities and the conditions that shape their B2B relationships.

Another key to managing B2B relationships is establishing expectations between trade partners, such as what obligations will be incumbent upon each party, what each party may anticipate deriving from the relationship, what procedures will be required, and how each party will go about assuring that obligations are met. This differs from the establishment of hazard-limiting barriers, in that firms can improve firm performance through relationship quality focus and the use of normative relational governance contracts. However, B2B relationship satisfaction is equally higher when firms with high relationship quality focus employ explicit relational governance contracts as it is when employing normative relational governance contracts. Thus, whether by formally delineated terms, or tacitly agreed upon mutual understandings, establishing what each party in a B2B partnership must contribute to – and may harvest from – a relationship is critical to success of the relationship.

LIMITATIONS OF THE RESEARCH

As with all research, the studies of this work are subject to limitations, which also open opportunities for future research. The following sections details limitations inherent to the design of the study, and limitations that were imposed by the methods used in this research.

Study Limits

The design of both studies conducted in this research was cross sectional. It has been noted that the nature of normative relational governance contracts, as well as collaborative capabilities such as trust and commitment, develop over time. Although relationship tenure was insignificant as a control variable, this study may not fully account for the impact of relationship-tenure on normative – versus explicit – relational governance contract tendencies, nor for the relative levels of collaborative – versus unilateral – capabilities that firms leverage.

Respondents in the quantitative study of this work came from multiple nations, but the number of non-US firms was low enough that the sample could not credibly be deemed international. Further, the qualitative study of this research employed a completely US sample. Therefore, the findings of this work may not be generalizable beyond the US market environment.

This research was intended to explore B2B relationships in general, but a firm's B2B relationships are not all equal. Because of the large number of items required to measure the constructs of interest, and the exploratory nature of the study, focus was not devoted to classifying the importance or quality of the specific relationships sample respondents were asked to consider when responding to the survey items. Therefore, issues of differences in the empirical relationships based on specific B2B partner characteristics are not evaluated here.

In an effort to develop a generalizable empirical study, a wide range of industries were considered, but no industry contributed more than sixty-two representatives to the sample examined, thus this research is unable to provide inferences of industry-specific effects of the capabilities and contextual factors examined.

The complexity of the relationships explored in this research, and the length of the survey required to measure the variables hypothesized to shape those empirical relationships limited the number of potential factors that could be explored in this research. Other potential influences on the development of B2B relationship structures, including inter-organizational social capital and strategic vision, were not included in this study.

Although this research collected information from firms representing both suppliers and customers in B2B relationships, the sample was not dyadic, thus respondents were required to provide observations of both antecedent and outcome measures. Social sciences literature has alternately cautioned against, and minimized the complications of self-report data. Steps were taken in this research to assess the potential of common method variance (CMV) – which proved inconsequential – but it is impossible to say with certainty that the CMV played no role in the analysis. More importantly, CMV is typically viewed as an issue when antecedent variables are assessed by the same respondents that assess outcome variables; however, for this work this limitation has implications for some of the constructs, regardless of their relationship to other variables.

Coercive power, reward power, and manifest conflict did not load sufficiently during CFA to merit inclusion in a final measurement model, and therefore the influence of those factors played no role in the assessment of the conceptual model of hypothesized relationships. Power and relationship quality focus – although unilateral in nature – are inherently subject to some dyadic effects (e.g. it is impossible to perceive that one possesses power if there is no one over whom one may exercise it). Stemming from the discussion of potential theoretical implications noted above, these facts provoke a question: what scores might have been observed on those – for lack of a better term – "pejorative" measures had they been evaluated by a respondent's trade partner?

Method Limits

The interviews conducted in study one of this research were all conducted by telephone. The questionnaire was designed to elicit the respondents' thoughts, the respondents were allowed to "roam" in their comments, and interesting comments by the respondents were explored in greater depth by the researchers, whether those comments were within the parameters of the interview guide or not. Nonetheless, some information may have been lost by not being physically present with the respondent. The researchers conducting the qualitative interviews may have been unable to perceive body language and other cues from the sample respondents. Thus, it is possible that additional data on the phenomena of interest went unrecognized in study one.

The model tested in study two of this research called for a very large number of parameters. As originally designed, the model required forty-five interaction items, in addition to the main indicator variables, in order to test interactions between the antecedent and moderator variables. Such extremely large and intricate networks of variable relationships impose severe difficulties on the abilities of structural equation modeling tools to converge on solutions, compromising the power of the study.

FUTURE RESEARCH

As noted, this research was cross-sectional, and normative relationships often rely on factors that develop over time. This study should be replicated using samples that can be observed at multiple points in time in order to determine how – or if – the relational governance contract forms used between B2B partners change based on increased understandings between the actors in B2B partnerships, as well as how – or if – time influences the levels and interactions of unilateral capabilities, collaborative capabilities and relational contextual factors.

Related to this is a question of social capital. This research did not consider the influences of social capital between B2B partner members, yet it seems likely that social capital would influence several of the variables studied here, particularly power and trust. Further, one would expect that the influence of social capital would change over time, as the actors in B2B partner firms gain experience in their relationship, or as actors changed due to promotions, job changes and other factors. Future research of these relationships should not only include

longitudinal studies, but studies of the impact of social capital on these relationships, and the impact of social capital over time.

In a similar vein, the role of strategic vision may have implications for this research. The character of a firm is subject to the leadership of its managers; this will certainly impact the capabilities that the firm concentrates on developing, and the preference of the firm for adopting an explicit-, normative-, or hybrid-orientation toward the structuring of relational governance contracts. Thus, future research should examine the relationship of strategic vision with relational governance contract forms, unilateral capabilities, and collaborative capabilities, and should do so over time.

In order to be truly considered generalizable, this study needs to widen its sample beyond its current geographic scope. Replication of this survey should be conducted with samples drawn from a broader range of cultures. Further, the findings of a geographically broader replication should be evaluated for variance based on such cultural dimensions as those proposed by Hofstede and Trompenaars.

As noted, replication of this study would benefit from a truly dyadic view. In addition to more fully minimizing risks of CMV, most of the antecedent variables, and even perceptions of the use of explicit and/or normative relational governance structures would benefit from being derived from difference scores between members of B2B relationships, as opposed to self-reports from only one side of the relationship. Hence, future research should include replication of this study employing a sample of matched pairs of firms.

Power, in particular, deserves more attention. As mentioned in the discussion of limitations, respondents in this sample reported very low levels of both coercive or reward power; power dimensions that might be viewed as pejorative. Two approaches to resolving such an issue might be possible: dyadic research (as mentioned above), or developing new scales that carry less risk of social desirability bias. Scales of power most commonly used in B2B relationship research tend to cope with the issue of social desirability bias by using measures that are highly contextualized to specific study/sample characteristics, and that infer – rather than directly measure – the dimensions of power. A more general measure of power, similar to the one employed here, but reframed to limit the impact of social desirability bias, might represent a substantial contribution to the academy.

The small size of each industry represented in this sample forbade meaningful exploration of variance in the findings based on industry, even though industry had no significant influence as a control variable. As the sample measured in this research included representatives of governmental agencies, construction firms, wholesalers, retailers, and service providers, it is logical to assume that differences in the characteristics of these firms might impact the empirical relationships studied here. A future replication of this study should employ samples delimited to small numbers of specifically selected industries in order to determine what role industry influences might play.

The surprisingly contradictory findings concerning integration suggest a question of how much integration is too much. If, as previous research has found, integration is beneficial to B2B

relationship outcomes, and yet in combination with different relational governance structures, integration can have a negative influence on B2B relationship outcomes, what boundary conditions dictate these differences in empirical relationships? Among other approaches, future research should explore potentially quadratic interactive effects of integration on B2B relationships.

The complexity of this model was noted as a methodological issue of this research. One possible means of circumventing this issue may be to examine smaller sets of capabilities rather than the large implied models estimated here. Such an approach would increase power of the analyses and, potentially, yield more insightful results.

CONCLUDING ASSESSMENT

Chapter One established four major goals for this research: 1) define unilateral capabilities, 2) define collaborative capabilities, 3) define relational contextual factors, and 4) determine how relational governance forms influence the interacting effects of unilateral capabilities, collaborative capabilities, and relational contextual factors to shape outcomes of B2B relationships. On reviewing the literature-based conceptualization and empirical examinations performed, it is possible to assess the degree to which this research has achieved its goals.

Based on search and synthesis of extant literature in relational governance and supply chain management, and grounded by both TCE and RBV theoretical views, this research has developed a definition of unilateral capabilities: those capabilities of the firm, acting on its own, as an efficiency-maximizing entity, by which the firm establishes the relational governance contract forms through which B2B relationships are managed. Empirical evidence presented in this work's two studies suggests that firms do possess and leverage unilateral capabilities that are related to B2B relationship value outcomes.

Literature search and synthesis have also provided a definition of collaborative capabilities: those capabilities of the firm, derived from the firm's cooperative relationships with B2B partners, that the firm use to establish the relational contract forms through which B2B relationships are managed. The evidence from the studies in this research indicates that firms do possess collaborative capabilities, sometimes related to but distinct from unilateral capabilities, and which are related to B2B relationship outcomes.

In a like manner, literature synthesis provided a definition of relational contextual factors: those influences on B2B relationships stemming from the markets in which partner firms operate, and/or from the perceived traits of the entities with which the firm partners, comprising the conditions in which B2B relationships operate. The results from the two studies of this research suggest that firms do contend with relational contextual factors, and that those factors do impact B2B relationships.

Literature and theory-based conceptualization of the interactions of unilateral capabilities, collaborative capabilities, and relational contextual factors, along with a qualitative study of firm managers, guided development of a quantitative study to assess the interactions. That quantitative study indicates that relational governance forms are influenced by relational contextual factors. The interaction of relational governance forms with the influence of unilateral and collaborative capabilities on B2B relationship value outcomes proved to be different than originally conceived when empirically tested, but an interactive relationship among these constructs was established. Some of the findings of the qualitative study are surprising, but provide the basis for future research to better understand the phenomena explored here.

In satisfying the four goals set for it, this research has opened new ways to view B2B relationship-based collective competition. For managers, this means new ways to evaluate the costs and benefits of B2B relationships. For scholars, this means new ways to evaluate relationships between resources, conditions and B2B outcomes. For the academy and society in general it is, perhaps, one more step toward understanding why the firm exists and why exchange seems to happen the way that it does.

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APPENDIX A:
SURVEY INTRODUCTORY STATEMENT

B2B Relationship Management

Thank you for agreeing to participate in this research.

The following survey is for research being conducted by a major academic institution studying the nature of relationships between firms and their business customers and suppliers. Any business person, at any firm, of any size is qualified to participate in the survey, provided they have some knowledge of how relationships with their firm's customers and/or suppliers are established and maintained.

This study is important because it will attempt to understand how firms can improve their relationships with their business to business trade partners. Furthermore, this study will expand on previous research by examining how the way that companies establish and manage relationships with other businesses affects performance in a business to business relationship. There is no right or wrong answer to any of the questions. However, we ask that you respond in an honest fashion to the best of your ability and knowledge.

You have been asked to be in this study because you are an important contact within your organization for your key suppliers and customers. Your responses will remain completely anonymous, and neither your name, nor your company's name will be connected with a specific survey in any manner.

The following screen will begin a succession of questions. The entire survey should take you no longer than 40 minutes to complete. There are no risks to you for being involved, and ALL information and responses will remain confidential. There are no direct benefits to you for participating beyond those provided to you as a member of Zoomerang's research panels, but you will be contributing to our knowledge of an important research topic.

Thank you again for participating.

Start Survey!

APPENDIX B:
SURVEY MEASURE ITEMS AND SOURCES

Relational Governance Forms and Firm Performance: The Role of Unilateral and Collaborative Capabilities

Construct	Dimension	Item	Anchors/Type	Source
General Information				
	Firm Info	What is your firm's primary industry?	Open Ended	
		If your firm is publicly traded, please enter it's stock symbol _____	Open Ended	
		Please enter the City your firm is headquarted in.	Open Ended	
		Please enter the State or Provice your firm is headquartered in.	Open Ended	
		Please enter the Country your firm is heaquarted in.	Open Ended	
		Is this the location that you work from?	1=Yes 2=No	
		Please enter the City you are based in.	Open Ended	
		Please enter the State or Provice you are based in.	Open Ended	
		Please enter the Country you are based in.	Open Ended	
	Firm Size	Please tell us a little about the size of your firm, **please answer each of the following with numbers only** (approximate answers are fine)		
		What are your firm's approximate sales (in dollars)?	Numeric	
		How many full time employees work for your firm?	Numeric	

Construct	Dimension	Item	Anchors/Type	Source
Trade Partner Information		Think about a typical company that your firm does significant amounts of business with, the survey will often call this firm a trade partner. This survey will ask you several questions about your trade partner, please keep the firm you have thought of in mind when answering them.		
	Dyadic Position	Is the trade partner you were asked to think about a customer or supplier for your firm?	1=Customer 2=Supplier	
	Relationship Tenure	How long has your company been doing business with this trade partner? _____ months	Numeric	Heide 2003
	Partner Size	Compared to your firm, how large is the trade partner you thought of?	1 - 7 Much Smaller to Much Larger	
	Exchange Size	Compared to other customer firms (or supplier firms) your company does business with, how much business does your firm do with the trade partner that you thought of?	1 - 7: Very Little to A Great Deal	
	Relationship Size	How many customer firms (or supplier firms, if that is the type of firm you thought of) does your company do business with? (**please answer with numbers only**)	Numeric	
International Scope	Specific	Is the trade parter you are thinking of from your country or another country?	1=Based in my country, 2=Foreign but with an office in my country, 3=Foreign	

Construct	Dimension	Item	Anchors/Type	Source

Transaction Cost Focus		Thinking about the typical business relationships your firm is involved in, please indicate how much managerial energy your firm generally expends in …	1 - 7: Very Little to A Great Deal	Dwyer, et al. 1997
	Search Costs	... researching potential trade partners		
	Contracting Costs	... constructing contracts with new trade partners		
	Monitoring Costs	... checking to see that trade partners live up to their agreements with your firm		
	Safeguarding Costs	... making complaints and/or filing actions against trade partners who violate deals with your firm		
Perceived Power		Please indicate how much you agree/disagree with the following statements about why your trade partner complies with your wishes	1 - 7 Strongly Disagree to Strongly Agree	John 1984
	Legitimate			
		Our trade partner views complying with our requests as their duty.		
		Our trade partner recognizes their obligation to go along with our requests.		
		Our trade partner is aware of contract clauses that require them to comply with our requests.		
	Expert			
		Our trade partner relies on our judgment regarding the requests that we make		
		Our trade partner respects our expertise.		
		Our trade partner believes that we have more information than they do regarding the requests that we make.		
Construct	Dimension	Item	Anchors/Type	Source
	Referent			

	Our trade partner admires the way we run our business
	Our trade partner appears to be proud to be affiliated with our firm.
	Our trade partner has feelings similar to our firm’s feelings about the way a business should be run
Coercive	
	Our firm hints that we will take actions that might reduce our trade partner's business profits and/or volume
	Our trade partner believes we would get back at them if they disappoint us.
	Our trade partner believes that we might withdraw certain needed services (or cooperative terms)
Bias Check	Please Mark "2" (Disagree) if you are reading this survey
Reward	
	Our trade partner believes that our firm might return a favor on another occasion
	Our firm rewards our trade partners when they fulfill our requests.
	Our trade partner believes that our firm can offer additional rewards in the future

Construct	Dimension	Item	Anchors/Type	Source
Integration	Internal	Please indicate how much you agree/disagree with the following statements about how well your firm coordinates its activities	1 - 7 Strongly Disagree to Strongly Agree	Closs and Savitskie 2003
		My firm effectively shares operational information across departments		
		My firm maintains an easily accessed system to record information and facilitate information sharing across all departments		
		The information available in my firm is accurate, timely and formatted to facilitate use		
Integration	External	Please indicate how much you agree/disagree with the following statements about how well your firm coordinates its activities with its trade partners	1 - 7 Strongly Disagree to Strongly Agree	Closs and Savitskie 2003
		My firm obtains information directly from trade partners to facilitate sales planning and improves forecasting		
		My firm is shares strategic information with selected trade partners		
		The information supplied to trade partners is timely, accurate and formatted to facilitate their use		
		The information my firm supplies to trade partners is used in their forecasting		

Construct	Dimension	Item	Anchors/Type	Source
Knowledge Sharing		Please indicate how much you agree/disagree with the following statements about information your company obtains from trade partners	1 - 7 Strongly Disagree to Strongly Agree	Kahn, et al. 2006
	Combination			
		Our firm uses information from our trade partner in combination with our own information.		
		Our firm combines order data with information from our trade partner to develop forecasts		
		Our firm combines our sales data with data from our trade partner to better understand sales trends		
		Our firm combines our sales data with data from our customers trade partner to better balance our inventory		
	Creation			
		Our firm develops new processes for managing inventory based on information from our trade partner		
		Our firm develops new processes for forecasting based on information from our trade partner		
		Our firm develops new processes for reducing costs based on information from our trade partner		
		Our firm develops new processes for communicating with other customers and/or suppliers based on information from our trade partner		

Construct	Dimension	Item	Anchors/Type	Source
Relationship Quality Focus		In the following questions, please indicate how much you agree/disagree with the following statements about your relationship with your firm's trade partner		
	Trust	In our relationship with our major customer (supplier), our customer (supplier)…	1 - 7 Strongly Disagree to Strongly Agree	Morgan and Hunt 1994
		…can generally be trusted		
		…can be counted on to do what is right.		
		…has high integrity		
	Commitment	Our relationship with our major trade partner…	1 - 7 Strongly Disagree to Strongly Agree	Morgan and Hunt 1994
		...is something we are very committed to.		
		…is something our firm intends to maintain indefinitely		
		…deserves our firm's maximum effort to maintain.		

Construct	Dimension	Item	Anchors/Type	Source
	Manifest Conflict	Considering our firm's relationship with our trade partner…	Likert-Type 1-7	Kumar, et al. 2011
		A high degree of conflict exists between our firm and our trade partner		
		Discussions between our firm and our trade partner often become contentious		
		Our firm has major disagreements with our trade partner on several key issues		
Opportunism		Please indicate how much you agree/disagree with the following statements your trade partner.	1 - 7 Strongly Disagree to Strongly Agree	Heide, et al. 2007
		Our trade partner sometimes promises to do things without actually doing them later.		
		Our trade partner does not always act in accordance with our contract(s).		
		Our trade partner sometimes tries to breach informal agreements between our companies to maximize our their benefit.		
		Our trade partner tries to take advantage of "holes" in our contract to further their interests.		
		Our trade partner sometimes uses unexpected events to extract concessions from us.		

Construct	Dimension	Item	Anchors/Type	Source
Competitive Intensity		For each of the following questions, please select the option that best completes the statements about your company's competition in general		Miller 1987
		Over the past five years, competitive hostility has become _____ predictable	1 - 7 Far Less to Far More	
		Over the past five years, marketing activities of our competition have become _____	1 - 7 Far Less to Far More Hostile	
		Over the past five years, marketing activities of our competition has affected _____	1 -7 Many Fewer to Many More Areas of Our Firm	
Explicit Contracts (Formalization)	Formalization	Thinking about the trade partner you were asked to consider, please indicate your level of agreement/disagreement with the following statements regarding your relationship with your trade partner.	1 - 7 Strongly Disagree to Strongly Agree	Heide 2003
		Our dealings with this trade partner are subject to a lot of rules and procedures stating how various aspects of the relationship are to be handled.		
		Orders from this customer (or to this supplier) must be placed periodically according to a formalized routine.		
		Deliveries to this customer (or from this supplier) must be made on fixed days and times.		
		The interaction with this trade partner involves doing things "by the rule book."		

Construct	Dimension	Item	Anchors/Type	Source

Normative Contracts (Flexibility)	Flexibility	Thinking about the trade partner you were asked to consider, please indicate your level of agreement/disagreement with the following statements regarding your relationship with your trade partner.	1 - 7 Strongly Disagree to Strongly Agree	Heide 1994
		The agreement with this trade partner is very informal.		
		Flexibility in response to requests for changes is a characteristic of this relationship.		
		Both we and our trade partner expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances.		
		When some unexpected situation arises, we and our trade partner would rather work out a new deal than hold each other to the original terms.		
Firm Performance		Think about a main competitor of your firm. For the following comments, please indicate how your firm's performance compares to that of your competitor. All of your answers are confidential.	1 - 7 Much Less Than to Much More Than	Morgan and Piercy 1988
	Financial Perf			
		Your Return on Investment		
		Your Return on Assets		
		Your Anticipated Average Profits per Customer.		
		Please select "Strongly Disgree" on this line		
	Market Perf			
		Your Market Share		
		Your Customer Retention		
		Your Sales Growth		
Construct	Dimension	Item	Anchors/Type	Source

Partner Satisfaction	Please indicate your feelings about the following statements regarding your relationship with your trade partner:		Daugherty, et al. 2002
	Overall, we are satisfied with our relationship with our trade partner.	1 - 7 Strongly Disagree to Strongly Agree	
	Our feelings about our interaction with our trade partner over the past year can be described as:	1 - 7 Strongly Displeased to Pleased	
	Our feelings about our interaction with our trade partner over the past year can be described as:	1 - 7 Strongly Dissatisfied to Satisfied	

APPENDIX C: IRB CERTIFICATION

PROTOCOL
APPLICATION FORM
FOR EXPEDITED REVIEW
HUMAN SUBJECTS IN NON-MEDICAL RESEARCH
UNIVERISTY

Protocol ID: 2341				
Title: Towards a Governance Mechanism Selection Theory: A Service-Dominant Logic View of 21st Century Business-to-Business Relationships				
Principal Investigator frank adams		**Degree: (MD/PhD)** MBA	**Title** student	
Dept and College Management & Marketing	**Box Number**	**Phone** 205-394-1613	**Fax**	**E-mail** fgadams@bama.ua.edu
Human Subjects Tutorial Completed? Y				

Co-Principal Investigator - 1 Robert G. Richey		**Degree: (MD/PhD)** PhD	**Title** Assoc Professor	
Dept Management & Marketing	**Box Number**	**Phone** 8-8922	**Fax**	**E-mail** grichey@cba.ua.edu
Human Subjects Tutorial Completed? Y				

Co-Principal Investigator - 2 Vincent Landers		**Degree: (MD/PhD)**	**Title** student	
Dept Management & Marketing	**Box Number**	**Phone** 256-404-4881	**Fax**	**E-mail** vmlanders@cba.ua.edu
Human Subjects Tutorial Completed? Y				

Co-Principal Investigator - 3		**Degree: (MD/PhD)**	**Title**	
Dept	**Box Number**	**Phone**	**Fax**	**E-mail**
Human Subjects Tutorial Completed?				

Admin Contact		**Degree: (MD/PhD)**	**Title**	
Dept	**Box Number**	**Phone**	**Fax**	**E-mail**
Human Subjects Tutorial Completed?				

Other Personnel				
Name	**Degree: (MD/PhD)**	**Title**	**Dept**	**Human Subjects Tutorial Completed?**