MIS Quarterly

RESEARCH ARTICLE

THE ROLE OF SERVICE LEVEL AGREEMENTS IN RELATIONAL MANAGEMENT OF INFORMATION TECHNOLOGY OUTSOURCING: AN EMPIRICAL STUDY[1]

By: **Jahyun Goo**
Information Technology and Operations Management
Barry Kaye College of Business
Florida Atlantic University
777 Glades Road
Boca Raton, FL 33431-0991
U.S.A.
jgoo@fau.edu

Rajiv Kishore
Department of Management Science and Systems
School of Management
State University of New York at Buffalo
Jacobs Management Center
Buffalo, NY 14260-4000
U.S.A.
rkishore@buffalo.edu

H. R. Rao
Department of Management Science and Systems
School of Management
State University of New York at Buffalo
Jacobs Management Center
Buffalo, NY 14260-4000
U.S.A.
mgmtrao@acsu.buffalo.edu

Kichan Nam
School of Business
Sogang University
1 Shinsoo-Dong, Mapo-Ku
Seoul 121-742
KOREA
knam@sogang.ac.kr

Abstract

This study extends the view that formal contracts and relational governance function as complements rather than as substitutes. We investigate how specific characteristics of service level agreements (SLAs) impact relational governance in information technology outsourcing relationships. Eleven contractual elements (categorized into three SLA characteristics: foundation, change, and governance characteristics) are hypothesized to act as complements of three relational governance attributes: relational norms, harmonious conflict resolution, and mutual dependence. Data for the study were collected through a survey of South Korean IT executives. Results of the study support the fundamental proposition of complementarity between formal contracts and relational governance, and indicate that well-structured SLAs have significant positive influence on the various aspects of relational governance in IT outsourcing relationships. However, the study also reveals that change characteristics of SLAs may act as a substitute for relational governance as these characteristics were found to dampen the level of trust and commitment through moderation effects. Overall, the findings support the proposition that well-developed SLAs not only

[1]Rajiv Sabherwal was the accepting senior editor for this paper. A previous version of this paper was presented at the 25th International Conference on Information Systems in Washington, DC.

provide a way to measure the service provider's performance, but also enable effective management of outsourcing engagements through the development of partnership-style relationships with high levels of trust and commitment.

Keywords: IT outsourcing, interorganizational relationship, service level agreement (SLA), formal contract, relational governance, relational norms, harmonious conflict resolution, mutual dependencies, trust, commitment, partnership, relational exchange theory, PLS

Introduction

The pervasiveness of information technology outsourcing in business practices and the increased reliance of companies on outsourcing partners have turned management attention to a fresh set of skills: the ability to manage interorganizational relationships with outside service providers (SP) (Kishore et al. 2003). There are two prevailing perspectives that underlie most research in interorganizational relationship management: *formal controls* and *relational governance* (Poppo and Zenger 2002). Formal controls are the written contractual and management-initiated mechanisms designed to guide behavior toward desired objectives, whereas relational governance is unwritten, worker-based mechanisms designed to influence interorganizational behavior (Macneil 1980). Most IT outsourcing literature has focused on the processes of and behaviors based on trust and social enforcement and on the effects of relational governance and relationship quality on IT outsourcing success, providing some evidence for this relationship (e.g., Lee and Kim 1999). However, this literature has largely ignored the question of how to foster and manage necessary attributes of partner relationships that promote high relationship quality for achieving outsourcing success.

Further, most outsourcing relationships are usually governed by a formal contract. Therefore, it is not enough to simply develop an understanding of how to foster and improve relational governance in an outsourcing relationship; we also need to understand how to do so in the context of a formal contract. Most empirical and theoretical work on relational governance across multiple disciplines (e.g., marketing, strategic management, and IT outsourcing) couches it as a self-enforcing mechanism. Within this tradition, some ignore the role of formal contracts (e.g., Mohr and Spekman 1994), while others view formal contracts as a more costly substitute for relational governance (e.g., Gulati 1995; Uzzi 1997). Still others argue more strongly that the combined use of relational governance and formal contracts is fundamentally problematic, since formal controls signal distrust while relational governance is based on trust (e.g., Ghoshal and Moran 1996).

Contrary to this substitution position, Poppo and Zenger (2002) empirically showed that formal contracts and relational governance function as complements. These authors found that managers employed greater levels of relational norms as their contracts became increasingly customized, and utilized a higher degree of contractual complexity as they developed greater levels of relational governance. Thus, while results of this study provided evidence that relational governance can be used concurrently with a formal contract to achieve high exchange performance, Poppo and Zenger acknowledged a greater need for attention to measurement to develop a better understanding about the relationship between specific contractual clauses and relational governance, and their impact on outsourcing success.

The present study responds to this call to further shed light on the nature and effects of the relationship between formal contractual clauses and relational governance. Our goal in this paper is to take an in-depth look at the detailed formal contract between the two contracting parties, often called a service level agreement (SLA)[2] in an outsourcing context, and to examine the impact of specific SLA clauses on relational governance. Further, while the fundamental proposition in this paper is that comprehensive and well-defined contracts promote relational governance, our goal is to test for both a complementary as well as a substitution relationship between SLAs and relational governance because arguments in the literature for both of these relationships are cogent and plausible.

This study makes a twofold contribution. First, we extend Poppo and Zenger's finding that formal contracts and relational governance function as complements, and not as substitutes. We open the black box of complementary relationship and examine whether and what formal contractual clauses in SLAs lead to relational governance. Our results show that change characteristics in the formal contract dampen trust and commitment rather than reinforcing them, suggesting careful use of these clauses in outsourcing contexts. Second, this study contributes to the IT outsourcing literature regarding the role that SLAs can play in fostering harmonious, cooperative relationships that have high levels of trust and commitment. Although many studies in the IT outsourcing area have mentioned the important role that SLAs can play in managing IT outsourcing relationships, to our knowledge this study is the first one that empirically examines specific characteristics of formal contracts that help in building partnership-style relationships.

[2]We use the terms *service level agreement*, *formal contract*, *contract*, and *agreement* interchangeably in this paper to avoid repetition and monotony.

The rest of the paper is organized as follows. We begin by reviewing the literature on formal contracts, relational governance, and their complementarity versus substitution, followed by a discussion about use of SLAs in IT outsourcing relationships. We then discuss the contractual elements of SLAs and their theoretical justification. Next, the research model and the hypotheses are presented. The research method is then discussed. Subsequently, the paper presents the results followed by a discussion of the findings of this study and their implications. The paper concludes with the limitations of this study and some future research directions.

Theory Development

Formal Contracts

Transaction cost economics (TCE) has emerged as a common framework for understanding the choice of governance mode in economic activities. TCE suggests that in response to exchange hazards, firms either craft complex contracts or may choose to vertically integrate when such contracts are too costly to craft and enforce. As exchange hazards rise, so must contractual safeguards, if contracting is chosen as the governance mechanism (Williamson 1985). These safeguards act to minimize costs arising from exchange hazards and help firms to build initial institutional trust (McKnight et al. 1998; Zucker 1986). Many have argued, however, that TCE overstates the desirability of either integration or explicit contractual safeguards in exchange settings commonly labeled as hazardous (Ghoshal and Moran 1996). In addition, TCE and related perspectives in contracting hold that bounded rationality and uncertainty prevent parties from writing detailed and complete contracts that deal with all possible contingencies (Hart 1988), and the use of social mechanisms can play a role to complement the adaptive limits of formal contracts (Poppo and Zenger 2002). Thus, incomplete contracting encourages the literature to view formal and relational contracts as complements for one another, particularly when we are dealing with IT outsourcing contracts, which are necessarily incomplete (Mayer and Argyres 2004).

Relational Governance

Relational governance refers to the role of the enforcement of obligations, promises, and expectations that occur through trust and social identification. It builds on the assertion, articulated by Macneil (1980), that contracting is never completely *discrete* (i.e., anonymous, characterized by limited communication, as assumed by neoclassical theories), and even the most fundamental model of discrete exchange includes some relational elements. Central to Macneil's argument is the proposition that relational exchange is based on a social component, largely represented by trust and commitment. A rich body of empirical work has demonstrated that relational governance improves the performance of interorganizational exchanges in general (McEvily et al. 2003), and IT outsourcing in particular (Sabherwal 1999). In a similar vein, Dore (1983) discusses the role that commitment, mutual dependence, trust, and relational norms play in the maintenance of exchange relationships between firms. Particularly, these attributes appear to play a major role in the context of IT outsourcing relationships in that successful management of an outsourcing relationship today requires a highly interactive, flexible relationship between two organizations in order to sustain over the strategic planning horizon. This view of relational governance deviates from Williamson's (1985) conceptualization of "relational" governance, which treats it as an intermediate governance mode between markets and hierarchies and holds that this governance mode is maintained by economic weapons such as hostages and credible commitments to keep opportunistic behavior at bay. In this study, we follow the social conceptualization of relational governance in which the enforcement of obligations, promises, and expectations occurs through social processes that promote norms of flexibility, solidarity, and information exchange (Poppo and Zenger 2002) rather than the Williamsonian view of relational governance in which enforcement occurs through economic means. In the social conceptualization, relational governance heightens the probability that trust and cooperation will safeguard against hazards that are poorly protected by a formal contract, thereby helping overcome the adaptive limits of contracts.

Substitution Versus Complementarity Between the Two Governance Mechanisms

Poppo and Zenger (2002) investigated whether formal contracts and relational governance act as substitutes or as complementary governance mechanisms in governance choices with respect to their IT portfolios. We provide a brief discussion of these two opposing views, but the reader is referred to Poppo and Zenger for a fuller discussion on this topic.

A number of researchers in the governance area have argued that relational governance mechanisms such as trust substitute the need for formal contracts (e.g., Macaulay 1963), especially as the relationship develops (Gulati 1995; Ring and Van de Ven 1994). This stream of literature considers this substitution as operating through one of two mechanisms. Either relational governance eliminates the need for formal contracts and vice versa (Gulati 1995), or formal contracts directly

hinder the formation of relational governance (Ghoshal and Moran 1996; Macaulay 1963). In the former view, the presence of relational governance obviates the need for formal contracts because if one party trusts the other, there is little need for contractually specifying the obligations and responsibilities of the two parties. Thus, it reduces transaction costs by replacing contracts with informal self-enforcing mechanisms such as trust and reputation (Gulati 1995). Formal contracts may also actually undermine the formation of relational governance. For example, Macaulay (1963, p. 64) argues that the use of an elaborate contract "indicates a lack of trust...turning a cooperative venture into an antagonistic horse trade." Contracts may also encourage rather than suppress opportunistic behavior with respect to actions that cannot be specified within a contract (Klein 1996).

Despite these convincing arguments about relational governance and formal contracts acting as substitutes, the logic for considering these two governance devices as complements, rather than as substitutes, appears to be equally compelling. Researchers have noted that the combined power of formal contracts and relational governance may be much higher in terms of safeguarding assets and they can jointly deliver much higher exchange performance than either governance choice in isolation (Baker et al. 1994; Mayer and Argyres 2004). Well-specified contracts narrow the domain and severity of risk to which an exchange is exposed and thereby encourage cooperation and trust. In addition, well-crafted contracts promote longevity in exchanges by increasing the penalties that accompany severing an exchange relationship (Baker et al. 2002; Klein 1996). Further, the process of developing a comprehensive and complex contract itself requires parties to engage in joint problem solving. Both parties have to work as a team to develop and negotiate the various provisions that will be incorporated in the SLA, including difficult aspects of the contract such as acceptable service levels, penalties for noncompliance, and future contract changes. These joint efforts also lead to the development of social relationships between the two parties. It is to be noted that the complementary relationship between formal contracts and relational governance may also function in reverse. The continuity and cooperation encouraged by relational governance may generate contractual refinements, as lessons learned during contract execution may be incorporated with mutual consent in contract revisions. This may further support greater cooperation in future periods.

IT Outsourcing and Service Level Agreements

We define IT outsourcing as contracting with third party SPs for the provision of some or all of an organization's IT functions. An IT function includes a recurrent activity, process, or service, and not a discrete event like purchasing a single unit of an off-the-shelf product or resource. Practitioners (e.g., Sturm et al. 2000) have often proclaimed that the key to managing successful IT outsourcing relationships is through the use of formal and comprehensive SLAs, defined as a formal written contractual agreement between the service recipient (SR) and the service provider (SP) that specifies the various facets of the service to be provided at certain levels to meet business objectives. In many cases, however, IT organizations lack well-developed SLAs that can be used to effectively gauge and manage relationships and activities associated with IT outsourcing (Fitzgerald and Willcocks 1994; Karten 2004). Service level agreements often still contain clauses dealing only with the most rudimentary service elements and metrics and ignore important issues pertaining to governance (including communication mechanisms, joint decision-making mechanisms, and conflict management) as well as those pertaining to the evolution of contracts based on past results and the client's changing business needs. Such agreements ignore the many intangible benefits that can be derived from them in terms of achieving effective SP–SR relationships (Kern et al. 2002). There is, therefore, a need for SLAs that include processes for dealing with changing business needs, joint decision making, communication, and conflict resolution in addition to target service levels. Consequently, we develop a comprehensive template for service level agreements in this study. This template contains three major sets of contract provisions that we call SLA characteristics,[3] and they include foundation, change, and governance characteristics. Development of this SLA template is discussed later in the research methodology section; the specific agreement characteristics are discussed below.

Research Model and Hypotheses

Following Poppo and Zenger (2002), this study intends to examine the existence of a dynamic complementary relationship between a formal contract and relational governance. In other words, a well-developed and well-specified formal contract in the form of a comprehensive SLA may promote more cooperative, long-term, and trusting exchange relationships. Various agreement elements influence the development of key relational attributes including relational norms (RN), harmonious conflict resolution (HCR), and mutual dependence

[3]In this study, we use the term *SLA characteristic* to refer to a formal contract clause. We do this because actual clauses may differ in different SLAs. While a particular clause may not be explicitly specified in a particular SLA, the essence of that clause may still be present in the SLA. Thus, we use the term *characteristic* rather than the term *clause* in this paper.

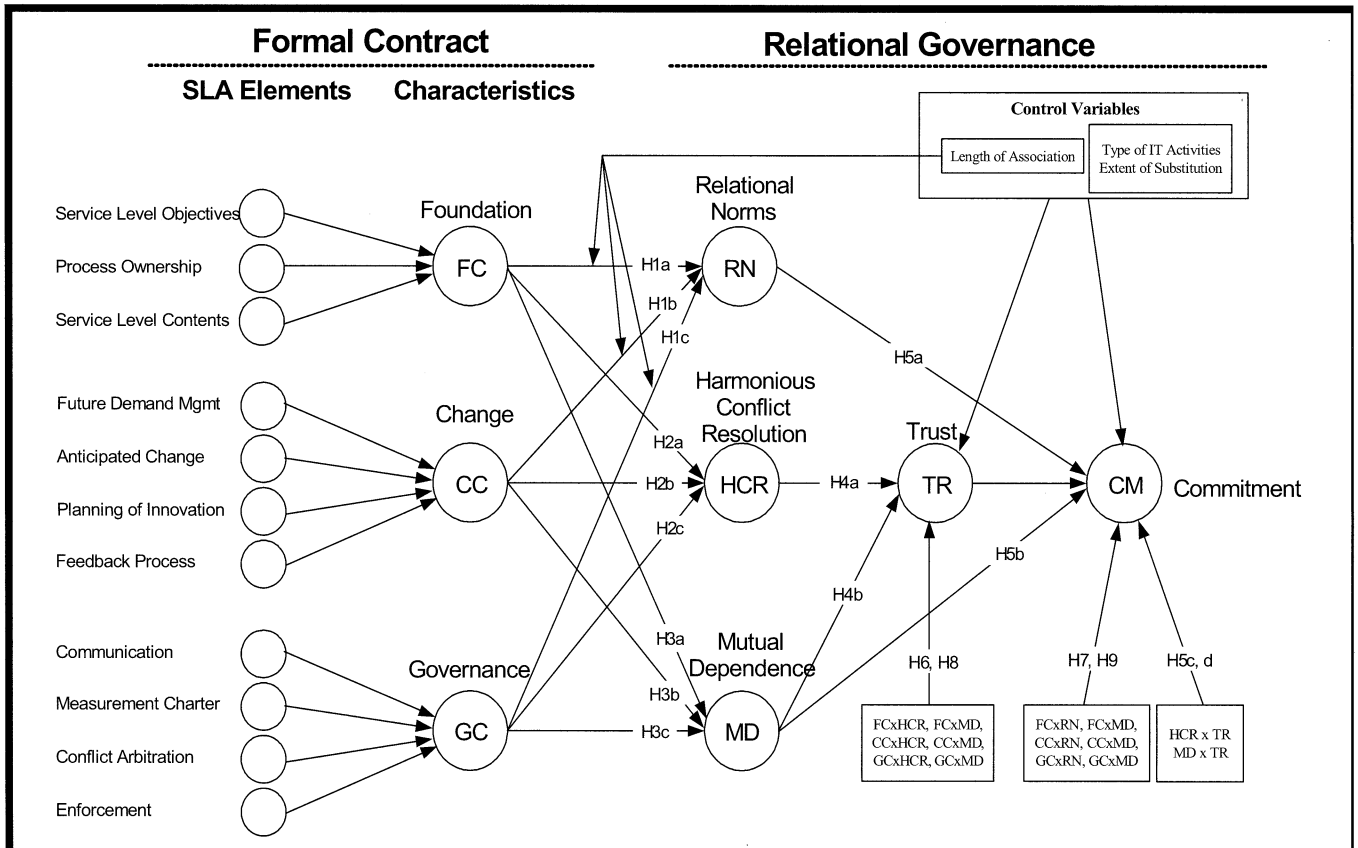

Figure 1. Research Model

(MD). These in turn shape desired relational outcomes of trust (TR) and commitment (CM) that directly act as relational governance devices and mitigate exchange hazards, as discussed above. However, consistent with prior literature, we also admit the possibility of substitution in addition to complementarity between the two governance modes and test this possibility in the present study. Figure 1 presents the conceptual model used in the study.

Formal Contracts: Three Characteristics of SLAs in IT Outsourcing

Foundation characteristics (FC) of SLAs include provisions that specify the key principles and agreements between the parties, the key process owners and their roles and responsibilities, and the target levels of product and service performance. The intent behind the provisions under foundation characteristics of an SLA is to publicize the common beliefs shared by the two organizations so that their IT outsourcing relationship could build common goals and a general commitment toward the outsourcing relationship (Choudhury and Sabherwal 2003). By clearly and explicitly defining the intent and goals of the relationship, the objectives that initially drove the creation of the relationship can be at least partially understood and shared by a group of decision makers and the staff members who inherit the relationship (Choudhury and Sabherwal 2003; Koh et al. 2004). In addition, these provisions also set clear standards of conduct by defining the roles and responsibilities of the various parties involved in the outsourcing relationship.

Contractual terms associated with *change characteristics* (CC) of SLAs include provisions concerning processes for resolving unforeseeable outcomes of future demand, processes for implementing foreseeable contingencies and changes, processes for introducing new innovations coordinated with incentive plans, and processes of feedback and efficient adjustments in the contract. These provisions, grouped under change characteristics of an agreement, attempt to develop the ground rules and procedures for dealing with future contingencies. These provisions are

expected to lead to desired outcomes if followed (Kirsch 1997), as the IT environment evolves rapidly and business conditions often require fast response from the SP to modify current services or deliver new services. The idea here is that although comprehensive contracting is not a feasible option by reason of bounded rationality, limited but intentional rationality is translated into incomplete but farsighted contracting (Williamson 1996). Indeed, previous research in IT outsourcing has called for investigating the possibility and impacts of evolving specifications for highly uncertain or unstructured tasks (Choudhury and Sabherwal 2003).

Contractual terms associated with *governance characteristics* (GC) of SLAs specify ways to maintain the relationships through a clear statement of the measurements, penalty and incentives, exit options and responsibilities, and documented communication processes as well as processes for identifying and resolving potential disputes. Thus, the contractual elements underlying governance characteristics set administrative procedures to continually assess the value that the relationship is generating for the various stakeholders and to ensure that the relationship remains on course (Ouchi 1979). Both economists and organizational theorists alike support the spirit of governance characteristics. For example, it is suggested that outcomes and rewards be linked in order to succeed in managing interorganizational relationships (e.g., Kirsch 1997). Especially to safeguard against hold-up behavior where relationship-specific investments are high, contracts need to specify not only required actions and conditions of contractual breach, but also a framework for resolving unforeseen disputes (Williamson 1996). Moreover, interorganizational relationship literature documents the existence of formal systems for conflict resolution relying on two-way communication and joint problem solving (Deutsch 1973).

Relational Governance

Relational Norms

Relational norms (RN) are patterns of accepted and expected behaviors that are partially shared by a group of decision makers and directed toward collective or group goals (Heide and John 1992; Jap and Ganesan 2000). Similar to past researchers, we focus on three types of relational norms: solidarity, information exchange, and flexibility. Solidarity is a bilateral expectation that behaviors are directed toward relationship maintenance and a high value is placed on the joint relationship (Macneil 1980). Information exchange is the expectation that the parties will freely and proactively provide useful information to each other (Heide and John 1992). Flexibility refers to the joint expectation that both parties will be willing to make adaptations as circumstances change (Dwyer et al. 1987). These norms thus address behavioral expectations in ongoing, day-to-day relationships, quite relevant to most IT outsourcing exchanges (Kern and Blois 2002). We argue that comprehensive and well-specified SLAs will help both SPs and SRs in building relational norms because their mutual expectations pertaining to solidarity, information exchange, and flexibility are defined jointly by them while developing their contracts. Thus, well-specified agreements may transform formal agreements into institutionalized unwritten codes of conduct that powerfully affect the behaviors of individuals within firms (Zucker 1986).

Foundation characteristics of SLAs might foster relational norms of solidarity as they encapsulate goals for and expectations from each party, which may shape a sense of mutuality. Joint development of mutual expectations and goals, possible investments, and capabilities of the SP might also elevate tight coupling between the SR and the SP. Identification of process ownership and service contents to be delivered also help formalize the roles and responsibilities of the provider and the recipient in outsourcing arrangements. This enables both SRs and SPs to know more about each others' capabilities and so they are better able to match their resources to needs (Miranda and Saunders 2003). Therefore,

> *Hypothesis 1a: Foundation characteristics of SLAs positively influence relational norms.*

Change characteristics of SLAs are expected to foster relational norms of flexibility by furnishing detailed plans for dealing with future contingencies. The two parties know that the contract is not rigid and will evolve as needs change, following the processes for effecting such changes. For example, future demand management plan and anticipated change plan may contain provisions that detail contingency plans for the relationship. These provisions reflect the joint expectation that both parties are willing to make necessary adaptations to the contract as business and environmental circumstances change (Dwyer et al. 1987). Change and innovation plans describe appropriate information to be exchanged and appropriate actions to be taken by both the SP and the SR concerned so they can react to unexpected events and develop innovative responses to changing business needs. Therefore,

> *Hypothesis 1b: Change characteristics of SLAs positively influence relational norms.*

Governance characteristics of SLAs engender active exchange of information. The communication plan in an SLA identifies communication initiatives and policies, and encourages both parties to keep each other informed about the events and

changes that may affect the other party. The communication plan also specifies reporting responsibilities pertaining to the outsourcing project to ensure the effective flow of information to the SR. In addition, enforcement plan and conflict arbitration charter provide the SR and the SP with shared expectations about behaviors in this realm, and this may promote solidarity in the relationship. In addition, contractually agreed communication and feedback mechanisms such as regular meetings and report exchanges may also facilitate information exchange (Kern and Willcocks 2002). Therefore,

Hypothesis 1c: Governance characteristics of SLAs positively influence relational norms.

Harmonious Conflict Resolution

Conflict is inherent in interorganizational relationships because of partner opportunism, goal divergence, and cross-cultural differences (Doz 1996). It is inevitable in outsourcing arrangements due to technology complexities, dynamic and fast-paced business environment, and disparate goals of the two parties. Given that a certain amount of conflict is expected, how such conflict is managed is important (Borys and Jemison 1989; Kale et al. 2000) because the impact of conflict resolution on the relationship can be productive or destructive (Deutsch 1973). Harmonious conflict resolution (HCR) refers to the extent to which parties achieve mutually satisfying resolutions of their conflicts and, thus, disagreements are replaced by agreement and consensus (Robey et al. 1989). Conflict resolution literature suggests that activities or processes to resolve conflicts be initiated by explicit resolution plans in the relationship (Dant and Schul 1992). This suggests that a number of contractual elements may be incorporated within SLAs to manage conflicts harmoniously.

Organizations may resolve conflicts harmoniously by establishing common and shared goals that are mutual and readily apparent to both parties (Dant and Schul 1992; March and Simon 1958). Foundation characteristics of SLAs can enhance such an understanding by providing accurate information about the joint goals and priorities of the two parties. Process ownership and responsibilities specified as part of the foundation characteristics of an agreement might mitigate the likelihood of conflicts by reducing uncertainty about formal roles and procedures that govern the relationship. Further, clear guidelines specifying the rights and obligations of both parties may also improve coordination and, thus, increase both parties' capability to resolve conflicts successfully and in mutual satisfaction, when conflicts do occur or escalate. Therefore,

Hypothesis 2a: Foundation characteristics of SLAs positively influence harmonious conflict resolution.

Change characteristics of SLAs also provide mechanisms for dealing with uncertainties in the environment and changes in the business needs in a joint manner, fostering closer collaboration between the SP and SR (Kale et al. 2000). Future demand management and anticipated change plans address ways to respond to new demands and handle changes during the course of relationship, which are usually the bone of contention among transacting parties. This not only provides each party with a better understanding of mutual concerns but also enables prompt recognition of potential conflict situations. The processes for resolving unforeseeable outcomes, implementing foreseeable contingencies, introducing new innovations, and providing feedback that are outlined in the agreement in an explicit manner should lower the potential for conflicts and enhance the likelihood of harmonious conflict resolution. Therefore,

Hypothesis 2b: Change characteristics of SLAs positively influence harmonious conflict resolution.

Governance characteristics of SLAs engender a communication-intensive process of harmonious conflict resolution. Clear lines of communication lead to continued growth of close ties, and this has been acknowledged in the literature as a key element of harmonious resolution in potential conflict situations (Cummings 1984). Partners can set up formal joint mechanisms including a schedule for regular interaction and timetable for resolving issues, as well as a conflict arbitration charter to institutionalize peaceful and harmonious ways for managing potential conflict situations (March and Simon 1958). By specifying the use of a conflict arbitration charter in their agreement, the concerned parties can also properly seek third party intervention when they fail to reach an acceptable solution by interorganizational means. Therefore,

Hypothesis 2c: Governance characteristics of SLAs positively influence harmonious conflict resolution.

Mutual Dependence

Mutual dependence (MD) is the recognition by both partners in an exchange relationship that the relationship provides benefits greater than either partner could attain alone or with some other partner (Lambe et al. 2000). Thus, the existence of mutual dependence in exchange relationships is often illustrated by mutual value creation (Borys and Jemison 1989). Because MD develops as value continues to be created through joint efforts of the two partners after the formation of

an outsourcing relationship, it raises issues of coordination of different philosophies, operations, administrative systems, etc. of the two partners. We argue that the three agreement characteristics help the service provider and the service recipient to reasonably coordinate these differences without hold-ups or opportunistic behavior that may arise from uncertainties during the period of contract.

Foundation characteristics of SLAs lay out a set of compatible goals and institutionalized mutual expectations. They also specify what services will be delivered by the provider, to what extent, and when and where they are required. These elements provide both the SP and the SR with a clear understanding of service and reward levels resulting in exchange effectiveness and value creation (Borys and Jemison 1989). Realization of benefits may in turn inspire both the service recipient and the service provider to actively engage in further development of mutual dependency to gain further from their mutually beneficial outsourcing relationship (Lambe et al. 2000). Therefore,

Hypothesis 3a: Foundation characteristics of SLAs positively influence mutual dependence.

Mutual dependence between the two partners may also increase when clear guidelines for coordination are able to reduce the uncertainty that may arise from future contingencies (Jap and Ganesan 2000). Change characteristics in SLAs deal with such look-ahead features and include future change clauses that delineate the processes for scheduling and modifying agreements as new needs arise. Both the service provider and the service recipient understand that following the change and contingency management processes outlined in the agreement would lead to future value creation, and this should deepen their interdependence (Kirsch 1997). Therefore,

Hypothesis 3b: Change characteristics of SLAs positively influence mutual dependence.

Mutual dependence also develops as partners invest in the exchange relationship and foresee positive mutual outcomes. An enforcement plan in governance characteristics of an SLA is likely to codify penalties associated with opportunistic behaviors as well as rewards resulting from innovative initiatives made by both parties. By assuring that the service recipient and service provider will recoup their investments either through continuance of their relationship or through penalties, if the relationship breaks prematurely, enforcement provisions foster attachment in the exploration phase of an outsourcing engagement (Levinthal and Fichman 1988). A feedback plan in the agreement also provides the opportunity for the two parties to learn how to work together (Mayer and Argyres 2004). This learning becomes a relationship-specific investment that promotes further development of mutual dependence. Therefore,

Hypothesis 3c: Governance characteristics of SLAs positively influence mutual dependence.

Trust

Trust (TR) reflects one party's belief that its requirements will be fulfilled through future actions undertaken by the other party (Zaheer and Venkatraman 1995) and is viewed as a necessary condition for relational governance (McEvily et al. 2003). In this study, we focus on the SR's trust in the SP. This trust captures the SR's beliefs about the SP's benevolence, integrity, and honesty in the context of their IT outsourcing relationship, and stems from the maintenance of their current exchange (i.e., harmonious conflict resolution) and expectations about future exchange between them (i.e., mutual dependence).

As IT outsourcing relationships are typically characterized by uncertainty in specifying desired outcomes or steps to achieve them, as well as by information asymmetry between service recipients and service providers, they are rife with potential disputes and opportunism. In this regard, harmonious conflict resolution can be particularly important because it can engender feelings of procedural justice between the provider and the recipient (Kale et al. 2000). These feelings of justice in addition to the service recipient's positive experiences about the service provider's behavior during the conflict resolution process may help improve the recipient's views about the provider's sincerity, integrity, and honesty, thereby increasing the SR's trust in the SP (Mayer and Argyres 2004). Therefore,

Hypothesis 4a: Harmonious conflict resolution positively influences trust.

Trust is affected by the way in which interfirm interactions are organized and conducted (Kumar et al. 1995). It is unlikely to exist in minimally interdependent relationships because this sentiment is less relevant to the functioning of such relationships (Dwyer et al. 1987). In contrast, highly interdependent relationships may develop a higher degree of trust. High interdependence makes it increasingly dangerous for the partners to engage in opportunistic behavior or coercion because both the parties have much to lose. These convergent interests also decrease power asymmetry between the recipient and the provider and encourage each party to

cultivate its partner's trust, because neither party can use its asymmetric power to obtain the partner's cooperation. Thus, mutual dependence creates a higher need for trust and contributes to its development (Anderson and Weitz 1992). Therefore,

Hypothesis 4b: Mutual dependence positively influences trust.

Commitment

Consistent with Scanzoni (1979) and Kumar et al. (1995), commitment (CM) to the outsourcing relationship in this study entails *durability* (a desire to continue a relationship because of positive affect toward the partner), *input* (a willingness to be deeply involved in the relationship through investment of capital and effort), and *consistency* (a confidence in the stability of the relationship). Following past literature, we posit that relational norms and mutual dependence influence the development of such an integrative commitment in the context of an IT outsourcing relationship. We do not hypothesize the impact of trust on commitment in this study, but include this relationship in our model as it has been found to be statistically significant in prior studies (e.g., Morgan and Hunt 1994).

Relational norms direct the focus of a service provider to a long-term orientation overall. Norms of flexibility may influence the development of stability in relationships as flexibility encourages adjustments when disturbances due to technology and other environmental changes occur. Norms of solidarity shift the focus of each party from self-centered behaviors to behaviors that foster unity arising from common responsibilities and interests. The relational value of solidarity figures prominently in promoting exchange into the future. It ensures a "keep on with it" attitude such that each party desires to and is able to be involved with the other (Jap and Ganesan 2000). Therefore,

Hypothesis 5a: Relational norms positively influence commitment.

In a situation of high mutual dependence, both parties need the relationship to continue in a stable manner for them to achieve their respective goals, and this increases their commitment to the relationship (Anderson and Weitz 1989). In addition, mutual dependence also increases partners' knowledge about each other and allows them to perform their respective tasks more effectively. This may, in turn, lead to a mutual desire to have an enduring relationship. Indeed, research suggests that interdependence is critical for promoting cooperation and adaptation in relational exchange and a key contributor to partner commitment (Dwyer et al. 1987). Therefore,

Hypothesis 5b: Mutual dependence positively influences commitment.

We argued above that harmonious conflict resolution and mutual dependence positively influence trust and proposed hypotheses 4a and 4b accordingly. However, the converse of these two relationships may also be true (e.g., Deutsch 1973). Trust may serve as the lubricant that produces more harmonious conflict resolution and it may also make the two parties comfortable in making themselves dependent on the other party. This indicates the possibility of mutually reinforcing reciprocal relationships between trust and harmonious conflict resolution, and between trust and mutual dependence. Through this cyclical reinforcement, the impact of trust on commitment is further strengthened, which suggests that harmonious conflict resolution and mutual dependence may have positive moderating impacts on the relationship between trust and commitment. Therefore,

Hypothesis 5c: Interaction between harmonious conflict resolution and trust positively influences commitment.

Hypothesis 5d: Interaction between mutual dependence and trust positively influences commitment.

Formal Contract and Relational Governance as Substitutes Versus Complements

A complete and reliable test without information loss for complementarity versus substitution between formal contract and relational governance would be to incorporate appropriate bi-directional links in the model. However, we are not able to test bi-directional linkages in the current study as both formal contract and relational governance variables are endogenously determined and the model does not meet the rank and order conditions. We, therefore, use the interaction effects method, also used by Poppo and Zenger (2002), for testing complementarity/substitution between formal contract and relational governance. Following this approach, we test the interaction effects of the three SLA characteristics (foundation, change, and governance characteristics) and the three relational governance variables (relational norms, harmonious conflict resolution, and mutual dependence) on trust

Table 1. Hypotheses for Testing Substitution Versus Complementary Between SLA Characteristics and Relational Governance Using Interactions

Substitutes				Complements			
SLA Characteristics	Relational Governance Variables	Trust	Commitment	SLA Characteristics	Relational Governance Variables	Trust	Commitment
FC	RN		H7a	FC	RN		H9a
	HCR	H6a			HCR	H8a	
	MD	H6b	H7b		MD	H8b	H9b
CC	RN		H7c	CC	RN		H9c
	HCR	H6c			HCR	H8c	
	MD	H6d	H7d		MD	H8d	H9d
GC	RN		H7e	GC	RN		H9c
	HCR	H6e			HCR	H8e	
	MD	H6f	H7f		MD	H8f	H9f

and commitment, the two relational outcomes in this study.[4] We include only those interaction terms for which there is a main effect hypothesized in the model for trust and commitment. Thus, an interaction effect between foundation characteristics and harmonious conflict resolution (FC × HCR) is included on trust but the interaction between foundation characteristics and relational norm is not included on trust because relational norms is not hypothesized to directly influence trust (Carte and Russell 2003). Further, our interaction terms are modeled with the agreement characteristics acting as "pure" moderators (Carte and Russell 2003) because SLA characteristics are not hypothesized to directly impact trust and commitment.[5] Evidence of substitution between formal contract and relational governance will exist if the coefficients of the interaction terms are negative. Evidence of complementarity between formal contract and relational governance will exist if the coefficients of the interaction terms are positive. To test for both possibilities requires 24 corollary hypotheses that are based on the general hypothesis: [*SLA characteristics: FC | CC | GC*] and [*relational governance variable: RN | HCR | MD*] will function as [*substitutes | complements*] in explaining [*trust | commitment*], and these hypotheses are succinctly shown in Table 1.

Control Variables

The model incorporates three control variables that may influence trust and commitment: type of IT activity outsourced, length of association, and extent of substitution. The type of outsourced IT activity represents an important variable that has an influence on many outcome variables in an outsourcing context including commitment of the partners to the relationship. A longer duration of association is generally expected to influence the development of a high-quality relationship and, thereby, a higher degree of trust and commitment in the relationship (Levinthal and Fichman 1988). We, therefore, include length of association as a control variable in the study. Length of association is also expected to moderate the relationship between the three SLA characteristics and relational norms. Any interorganizational relationship passes through the three stages of negotiation, agreement, and execution over time (Ring and Van de Ven 1994), and this passage of time is expected to reinforce the relational norms that are developed as a result of the contract characteristics. Finally, extent of substitution, defined as the proportion of total IT budget spent on outsourcing (Kishore et al. 2003), may also influence the realm of the service recipient/service provider relationships because an outsourcing contract where a large portion of a firm's IT budget is outsourced raises issues of lock-in, thereby requiring or developing a higher degree of commitment to the relationship. Next we discuss the research methodology used in this study.

[4]When two predictor variables substitute for each other in their impact on a criteria variable, the joint effect of the two variables on the criteria variable is much lower and this is captured in a negative interaction effect of the two variables on the criteria variable. We also thank one anonymous reviewer who recommended that we test complementarity/substitution effects using interaction terms.

[5]Thus, our interaction terms take the form $y = x + x \bullet z$ and not the form $y = x + z + x \bullet z$ where y is either TR or CM, x is one of the three relational variables, and z is one of the three SLA characteristics.

Research Methods

Data Collection

The current study utilized a "key informants" methodology for data collection (e.g., Segars and Grover 1998). In survey research, targeted respondents assume the role of a key informant and provide information on a particular unit of analysis by reporting on group or organizational properties. However, if a respondent lacks appropriate knowledge, results can be confounding and may lead to erroneous conclusions. Therefore, within the context of this study, it was important to not only identify organizations that actively engaged in IT outsourcing and implemented an SLA for management of their outsourcing engagements, but to also identify respondents within those organizations who were intimately involved with, and most knowledgeable about, the outsourcing activity and the agreements. With this in mind, pre-recruiting calls were made to IT professionals in the attendee list of a national outsourcing conference in South Korea. This process generated a list of organizations that undertook IT outsourcing through SLAs with an external IT provider within the last five years. Through this process, we also generated a list of IS executives (vice president, CIO, director, contract officer, the head of IT sourcing management team) who appeared to be accurate sources of organizational information regarding IT outsourcing decisions and implementation via service level agreements. In all, 150 executives from this sampling frame agreed to participate in the survey or directed us to other key informants within their organizations who could provide us better information about their IT outsourcing arrangements. E-mails containing the URL that linked to the web-based online survey instrument were sent to 150 key informants. To increase the response rate, respondents were offered financial incentives as well as a report that summarized the results of the study. Of the 150 participants who agreed, 92 (61.3 percent) completed the web-based survey for their outsourcing contracts (see Table 2).

To assess potential threats of nonresponse bias, the respondent and nonrespondent firms were compared with respect to sales and the number of employees. No significant differences were found at the 0.05 level. Further, the distribution of survey responses from different industries was also examined. While the manufacturing industry was found to be slightly overrepresented and the public/government sector was found to be slightly underrepresented in the respondent group, the sample included various cases of outsourcing arrangements that implemented SLAs from various industries (see Table 2). Demographic information about the respondents showed that about 46.8 percent were senior IT executives and 41 percent were IT managers. Although some preliminary steps were taken to ensure appropriate selection of key informants, a formal check was administered as part of the questionnaire (Kumar et al. 1993). Specifically, two items on a seven-point scale regarding key informant quality were used to assess an informant's knowledge about the chosen agreement and his/her involvement with IT outsourcing arrangements. The mean score for informant quality for each item was 5.60 and 5.80 out of 7, respectively, indicating that respondents were appropriate and, thus, all responses were retained.

Operationalization of Constructs

All constructs in the survey were measured using multi-item scales with seven-point Likert rating systems. A conscientious effort was made to adapt existing validated measures from prior studies for the latent constructs in this research, whereas new items were developed for the 11 SLA elements based on an extensive review of SLA documents discussed below. The specific items used in this study are shown in Appendix A.

Service Level Agreement Characteristics

We developed a template structure for a comprehensive SLA in this study using a variety of sources to discover the contractual elements (or clauses) that are necessary in an elaborate agreement including the legal perspective of relational exchange (Macneil 1980), industry best practices about the fundamental constituents of an SLA (Stone 2001), and the control theory literature for interorganizational relationship management (Kirsch 1997). First, Macneil's (1980) work differentiated relational exchange from discrete transactions along several dimensions. We identified 11 contractual issues that appear important in IT outsourcing relationships that are conceptualized as relational exchanges. Second, we identified the actual provisions used in several actual SLAs and in contract templates suggested by experts, and mapped those provisions into the above 11 contractual issues, termed SLA elements in this study. Next, the axial coding technique (Strauss and Corbin 1990) was employed to categorize the 11 SLA elements into 3 unique categories. Based on the common underlying themes in these categories, we named them as foundation, change, and governance characteristics of an SLA. Finally, we reconciled these categories and the agreement elements with the three types of control modes—behavior-based, outcome-based, and clan control—used by organizations to manage interorganizational relationships (see

Table 2. Demographic Characteristics of Respondents (n = 92)

Characteristics	Frequency	Percentage	Mean	Std. Dev.
Title of Respondents				
President	2	2.2%		
CIO/Vice President	11	12.0%		
Director/Assistant Vice President	30	32.6%		
IT Manager	38	41.3%		
Other	7	7.6%		
Not mentioned	4	4.3%		
Respondents' knowledge regarding current SLAs	–	–	5.60	1.04
Respondents' involvement in outsourcing engagement	–	–	5.80	1.08
Types of Industry				
Manufacturing	23	25.0%		
Banking/Finance/Insurance	17	18.5%		
Wholesale/Retail	4	4.3%		
Public/Government	1	1.1%		
Constuction/Real Estate	4	4.3%		
Transportation	4	4.3%		
Medical/Health Care	14	15.2%		
IT/Communication/Software	18	19.6%		
Undecided	7	7.6%		

Choudhury and Sabherwal 2003; Kirsch 1997). Table 3 summarizes these SLA template development efforts.

We developed multi-item seven-point Likert-type scales for all agreement elements. Items were initially created based on contractual clauses mapped to related contractual elements of agreements (see Table 3). Next, a panel of SLA experts examined the content validity of these items and necessary changes were made based on this review. Finally, the survey was pilot tested with several local organizations that had implemented SLAs in their outsourcing contracts, which enhanced the face validity of the items by clarifying terms, reordering questions, and revising instructions in the questionnaire. A final set of 33 items representing 11 different elements of agreements were presented to the respondents. The expectation is that these 33 items will uniquely measure their associated factors and that this system of factors will measure a second-order factor of an agreement (i.e., the three SLA characteristics).

Relational Governance and Control Variables

Using five items, relational norms (Cronbach's alpha = .83) was evaluated along the three norms of solidarity, flexibility, and information exchange (Heide and John 1992). Harmonious conflict resolution (Cronbach's alpha = .85) was measured through three items adapted from scales developed in earlier research (Robey et al. 1989). Respondents were asked to rate their satisfaction with how conflicts are resolved. Three items were adapted from existing scales (Lee and Kim 1999) to measure mutual dependence (Cronbach's alpha = .82). Respondents were asked to rate the extent to which both SR and SP realize benefits and share responsibilities. Our measure for trust (Cronbach's alpha = .81) was based on the conceptualization by Zaheer et al. (1998) and three items for this construct were adapted from scales used in the context of outsourcing capturing the trust of the service recipient in the service provider (Lee and Kim 1999). Seven items were used to capture three measurable criteria of commitment (Cronbach's alpha = .89): inputs, durability, and consistency (Kumar et al. 1995). *Length of association* was measured by asking respondents to indicate the year when the IT contracting activity started (Nam et al. 1996). For the cases where outsourcing contracts had terminated at the time of the survey, the duration for which the contract was in force was considered as the length of association. Respondents were also asked to indicate the *type of IT activity* being outsourced. The *extent of substitution* was measured as the percentage of IT budget spent on IT outsourcing as shown in Appendix A.

Table 3. The Contractual Elements of Service Level Agreements in IT Outsourcing[†]

Underlying Themes in Common	Contractual Elements of SLA	Contractual Issues of SLA in IT Outsourcing	Clauses in Practice
Foundation Characteristics (FC): • Publicizing common values, beliefs, philosophy within a clan (Kirsch 1977) • Resulting in sharing a common ideology, internalizing a set of values, and committing to a clan (Choudhury and Sabherwal 2003) • Providing means to create a general commitment between partners from which desirable actions evolve (Williamson 1985, 1991)	Service Level Objectives	Spirit of contractual and publicity of common values, beliefs, philosophy between organizations to ensure performance	• A statement of both SR's and SR's business objectives from the engagement • A statement of overall change expectation within the SR • A statement of expectations and capabilities of the SP
	Process Ownership Plan	Number of companies taking part in some aspect of the IS portfolios when outsourced	• Statement of processes that are delivered via the agreement • Statement of processes directly affected by the services included in the agreement • Statement of processes that are required to manage the agreement between SR and SP • Statement of process ownership roles, authorities, and responsibilities
	Service Level Contents	Specification of obligations in terms of a statement of work, the associated and required service levels, and the price to be paid into all sourcing agreements	• A general description of the services required, major categories of services, and specific service elements • A compilation of the most common service levels completed for each service level • Service-level target, time frame definition, quality statement, etc.
Change Characteristics (CC): • Specific rules and procedures, which would lead to desired outcome if followed (Choudhury and Sabherwal 2003; Kirsch 1997) • Mechanisms that facilitate joint adaptation to problems raised from unforeseeable changes in the contract (Williamson 1996) • Methodology aligned to match known exchange hazards, particularly those associated with uncertainty (Williamson 1985)	Future Demand Management Plan	Planning the process and methodologies for coping with changes and contingencies in long-term engagements; agreeing to agree	• Joint (SR/SP) demand forecasting process • Assumptions made and process for updating the key assumptions that affect demand • Prioritization methodology for current and future demands • Process for scheduling, costing, and modifying agreements
	Anticipated Change Plan	The joint development of expectations about perceived uncertainties, especially concerned with anticipated conflicts of interest and potential trouble	• Clear definitions of the key categories of change • Roles, responsibilities, and decision-making procedures for the SR and SP for each category of change • Top drivers for changed, reviewed regularly
	Feedback Plan	Continuous processes for changing interfaces, approaches, and attitudes toward better service delivery states within a deal based on learning by doing	• Statement of how changes will be implemented based on measurement results • The road map for an efficient feedback on the identified drawbacks • Prioritization methodology for current tasks and feedback
	Innovation Plan	Cooperative innovation, especially joint efforts at continuous performance improvement and planning	• Process for innovation, including implementation and prioritization • Process for technology advancement (scope improvement and technology refreshes/ upgrades) • Business-measured innovation (business process improvement)
Governance Characteristics (GC): • Mechanisms that mitigate disruptions (Williamson 1996) • Rewards or sanctions for meeting or missing the targets (Klein et al. 1978) • Setting and checking performance targets, interim milestones to ensure that the relationship remains on course (Choudhury and Sabherwal 2003; Kirsch 1997; Ouchi 1979)	Communication Plan	The approach for disseminating contract-related information to all of the parties involved in the relationship through scheduled interaction and communication such as formal meeting and reporting	• Organizational reporting structure • Identified communication initiatives/initiative owners • Identified recipients for various communication initiatives • Common schedules and media
	Measurement Charter	Tactical measurements for calculating and reckoning of service performance as well as success metrics derived from the SR's strategic plan	• Statement of measurement methodology • Definition of what is to be measured • Definition of processes to periodically measure the defined categories • Interfaces with the feedback plan
	Conflict Arbitration Charter	Balance of power that imposes one's will on others	• A statement of the parameters for involving the third party in discussions between the SR and SP • Process description to determine how the parties interact • A schedule for regular interactions between the parties, and timetables for resolving issues between the SR and SP • A statement of the practices and conduct rules required to preserve the interdependence of the independent advisor
	Enforcement Plan	Carrot-and-stick; sharing of benefits and burdens	• Penalty/reward definitions and formula • Conditions under which termination may occur • Detailed list of all penalty assumptions (e.g., implementation process, reporting process, due diligence process, HR process, knowledge transfer)

[†]Adapted from Macneil (1980) and Dwyer et al. (1987)

Results

Measurement Model

Measurement Properties of Variables

Given our conceptualization of SLA characteristics as formative second-order constructs, confirmatory factor analysis (CFA)[6] was employed to assess the validity of the measurement model. Statistical evidence of both convergent validity and unidimensionality were checked through high and significant factor loadings as well as low residuals between the observed and implied covariance matrices. While the confirmatory factor analysis showed no items with either low loadings (< 0.50) or high cross-loadings (> 0.5), the initial model was found to have poor model fit. Refinements to the model were made[7] using high standardized residuals and high modification indices as a guide (Kline 1998). The final model comprising 33 items for the 11 elements of the service level agreement is shown in Appendix A. The analysis resulted in a converged model with a low χ^2 per degree of freedom and a good fit as indicated by all the listed fit indices (Gefen et al. 2000). The model fit indices provide evidence of the unidimensionality of the items and their respective elements of the agreement. The comparative fit index and Tucker-Lewis index are considered to be robust indicators of model fit, and it is recommended that their values be above 0.90 (Gefen et al. 2000). As is evident from Appendix A, values of both of these indicators provide evidence of good model fit. Although the root mean square error of approximation (RMSEA) should ideally be less than 0.05, Browne and Cudeck (1993) suggest that an RMSEA of less than 0.08 is also practical evidence of good model fit. Collectively, these results provide strong support to the measurement model for the SLA constructs.

Composite reliability for all 16 variables in the research model, including the 11 SLA variables, was computed in line with the recommendations of Fornell and Larcker (1981). Scores above 0.50 indicate that at least 50 percent of the variance in measurement is captured by the trait variance and are, therefore, evidence of good measurement properties. Collectively, the results from composite reliability, average variance extracted, factor loadings, and t-values shown in Table 4 suggest that the indicators account for a large portion of the variance of the corresponding latent constructs and, therefore, provide support for the convergent validity of the measures (Gefen et al. 2000). Discriminant validity was assessed by comparing every pair of the 11 SLA latent constructs (Anderson and Gerbing 1988). Pair-wise χ^2 difference tests were carried out requiring the estimation of 110 covariance structures (55 constrained and 55 unconstrained). Results indicate that the χ^2 values of all 55 unconstrained models were significantly lower than those of the constrained models at 95 percent or higher significance levels. This provides strong evidence of discriminant validity and indicates that the 11 contractual elements are unique and the correlations between pairs of elements are significantly different from unity. In addition, for satisfactory discriminant validity, the square root of average variance extracted (AVE) from the construct should be greater than the variance shared between the construct and other constructs in the model. Table 5 lists the correlation matrix, with correlations among constructs and the square root of AVE on the diagonal. This table also provides strong evidence of discriminant validity.

Assessing the Second-Order Factor Model for SLAs

The 11 contract elements and the 5 relational constructs in this study are reflective. However, the three higher-level characteristics of service level agreements are conceptualized and implemented as formative constructs in this study. The 11 first-order SLA elements are aggregated in appropriate combinations to form super-ordinate second-order constructs (Chin 1998a) because we do not anticipate the elements of a particular agreement characteristic to be necessarily correlated with each other.

To assess dimensionality as well as the convergent and discriminant validity of the 3 second order SLA constructs, alternative first-order and second-order measurement models were compared separately for each of the three constructs (see Tanriverdi 2005). For assessing each second-order agreement construct, we considered four separate models. Model 1 hypothesizes that a unidimensional first-order factor accounts for the variance among all measurement items of the particular second-order SLA construct. Model 2 hypothesizes that the measurement items of a specific second-order SLA construct form into respective first-order factors that are uncor-

[6]While exploratory factor analysis (EFA) may be useful in exploring potential latent factors in the development of measures, EFA assumes that measurement items' errors are uncorrelated and it cannot test whether some elements together form second order factors. In contrast, CFA takes item error correlations into consideration and may, thus, reveal more complex relationships embedded in the items.

[7]Refinements were made with extreme caution so that the modified model would not be capitalizing on "chance" rather than reflecting true sources of variation in the observed covariance matrix. For example, *innovation plan* identifies the structure and process for introducing new innovations but it needs to be synchronized with enforcement plan such as penalties or incentives for its effectiveness. Thus, it seems reasonable to conclude that there may be shared variances between items in an innovation plan and a reinforcement plan that are not captured by the present model.

Table 4. The Assessment of the Measurement Models: Evidence of Convergent Validity

Constructs	# of Items	Composite Reliability[†]	Average Variance Extracted	Loadings (t-Statistics)[‡]
Service Level Objectives	3	0.87	0.69	0.83 (19.01), 0.84 (17.33), 8.81 (12.47)
Process Ownership Plan	3	0.92	0.80	0.94 (62.93), 0.89 (32.62), 0.85 (22.68)
Service Level Contents	3	0.91	0.77	0.90 (50.49), 0.89 (35.26), 0.83 (23.31)
Future Demand Management Plan	3	0.93	0.81	0.89 (35.81), 0.90 (37.28), 0.91 (39.86)
Anticipated Change Plan	3	0.92	0.80	0.90 (42.75), 0.89 (29.37), 0.90 (35.02)
Innovation Plan	3	0.90	0.75	0.75 (8.94), 0.90 (37.87) 0.92 (52.41)
Feedback Plan	3	0.94	0.84	0.90 (43.50), 0.91 (19.15), 0.93 (52.56)
Communication Plan	3	0.93	0.81	0.88 (29.53), 0.91 (29.34), 0.91 (43.10)
Measurement Charter	3	0.93	0.82	0.90 (37.49), 0.89 (33.16), 0.92 (35.83)
Conflict Arbitration Charger	3	0.89	0.73	0.82 (14.18), 0.84 (28.00), 0.90 (28.37)
Enforcement Plan	3	0.91	0.76	0.87 (28.70), 0.91 (36.34), 0.84 (14.77)
Relational Norms (RN)	5	0.88	0.60	0.77 (13.42), 0.78 (16.58), 0.74 (9.19), 0.81 (19.26), 0.77 (13.35)
Harmonious Conflict Resolution (HCR)	3	0.91	0.78	0.89 (30.97), 0.90 (34.86), 0.85 (27.33)
Mutual Dependence (MD)	3	0.90	0.74	0.85 (25.47), 0.85 (25.91), 0.88 (24.25)
Trust (TR)	3	0.89	0.72	0.90 (46.86), 0.86 (23.95). 0.78 (17.25)
Commitment (CM)	7	0.93	0.64	0.81 (18.75), 0.84 (21.51), 0.81 (18.78), 0.78 (18.45), 0.74 (13.27), 0.82 (22.31), 0.81 (22.04)

[†]The composite reliability scores were calculated with the formula prescribed by Fornell and Larcker (1981).
[‡]$p < .001$

Table 5. Correlations of Latent Variables and Evidence of Discriminant Validity

	SLO	POP	SLC	ACP	FDMP	CM	RN	IP	FP	CP	MC	CAC	EP	HCR	TR	MD
SLO	**0.83**															
POP	0.52	**0.89**														
SLC	0.60	0.60	**0.87**													
ACP	0.35	0.55	0.51	**0.90**												
FDMP	0.39	0.61	0.61	0.65	**0.90**											
CM	0.53	0.54	0.63	0.24	0.67	**0.80**										
RN	0.34	0.48	0.50	0.20	0.24	0.67	**0.77**									
IP	0.37	0.41	0.45	0.66	0.67	0.31	0.21	**0.86**								
FP	0.44	0.48	0.54	0.56	0.69	0.41	0.29	0.61	**0.91**							
CP	0.48	0.58	0.64	0.47	0.56	0.54	0.47	0.46	0.63	**0.90**						
MC	0.53	0.57	0.70	0.40	0.62	0.58	0.46	0.50	0.64	0.69	**0.91**					
CAC	0.42	0.38	0.45	0.50	0.55	0.43	0.34	0.56	0.64	0.54	0.59	**0.85**				
EP	0.25	0.43	0.44	0.21	0.34	0.37	0.35	0.28	0.29	0.43	0.31	0.32	**0.87**			
HCR	0.39	0.46	0.54	0.21	0.32	0.67	0.61	0.23	0.33	0.41	0.50	0.27	0.47	**0.88**		
TR	0.45	0.44	0.52	0.22	0.21	0.62	0.64	0.27	0.31	0.41	0.48	0.36	0.48	0.70	**0.85**	
MD	0.48	0.39	0.52	0.22	0.20	0.60	0.56	0.25	0.30	0.45	0.55	0.38	0.52	0.50	0.64	**0.86**

Note: Bolded diagonal elements are the square root of average variance extracted (AVE). These values should exceed inter-construct correlations (off-diagonal elements) for adequate discriminant validity.
SLO = Service Level Objectives; POP = Process Ownership Plan; SLC = Service Level Contents; ACP = Anticipated Change Plan; FDMP = Future Demand Management Plan; CM = Commitment; RN = Relational Norms; IP = Innovation Plan; FP = Feedback Plan; CP = Communication Plan; MC = Measurement Charter; CAC = Conflict Arbitration Charter; EP = Enforcement Plan; HCR = Harmonious Conflict Resolution; TR = Trust; MD = Mutual Dependence

related. Model 3 hypothesizes that these first-order factors are freely correlated with each other. Finally, Model 4 hypothesizes a second-order factor that accounts for the patterns of covariance (combinations) among the first-order factors as conceptualized in this study. Comparison of Model 1 (χ^2 = 137.1, d.f. = 27; χ^2 = 300.8, d.f. = 54; χ^2 = 305.7, d.f. = 54 for foundation, change, and governance characteristics, respectively) and Model 2 (χ^2 = 115.2, d.f. = 27; χ^2 = 230.2, d.f. = 54; χ^2 = 201.6, d.f. = 54 for foundation, change, and governance characteristics, respectively) indicates that Model 2 is a better-fitting model (lower chi-square for the same degrees of freedom), indicating the multidimensionality of each characteristic. Further comparison of Model 2 (χ^2 = 115.2, d.f. = 27; χ^2 = 230.2, d.f. = 54; χ^2 = 201.6, d.f. = 54 for foundation, change, and governance characteristics, respectively) with Model 3 (χ^2 = 41.4, d.f. = 24; χ^2 = 81.0, d.f. = 48; χ^2 = 109.6, d.f. = 48 for foundation, change, and governance characteristics, respectively), indicates that Model 3 (unconstrained model) for each SLA characteristic is superior to Model 2 (constrained model) with significant changes in chi-square ($\Delta\chi^2$ = 73.8, Δd.f. = 3; $p < 0.0001$; $\Delta\chi^2$ = 149.2, Δd.f. = 6; $p < 0.0001$; $\Delta\chi^2$ = 92, Δd.f. = 6; $p < 0.0001$, respectively). In Model 3, standardized factor loadings of measurement items on their respective factors are all highly significant ($p < 0.001$), providing support for *convergent validity* of each of the three agreement characteristics. Superiority of Model 3 (unconstrained model) over Model 2 (constrained model) indicates that pairs of correlations among the first-order factors are significantly different from zero and below the cut-off value of 0.90 (Bagozzi et al. 1991). This demonstrates distinctiveness of theoretical content captured by the individual first-order factors and provides support for *discriminant validity of the SLA constructs* (Anderson 1987; Bagozzi et al. 1991).

Finally, we examine the efficacy of second-order SLA constructs by comparing Model 4 (second-order factor model) with Model 3 (unconstrained first-order factors model). An external criterion variable, relational norm, was used to be able to compare these two models due to issues of identification (see Tanriverdi 2005). Model 3, discussed above, represents a direct-effects model and tests direct effects of the first-order factors of specific SLA characteristics on relational norm. Model 4 entails a second-order factor model and captures how the first-order factors of the particular second-order factor interact with each other and collectively impact relational norm. To test if the second-order factor model is superior to the first order factor model, two criteria were used: (1) model statistics of the two specifications (Venkatraman 1990), and (2) target coefficient (T) statistics (Marsh and Hocevar 1985). Model statistics of the first-order (χ^2 = 280.0, d.f.= 75; χ^2 = 472.2, d.f.= 116; χ^2 = 465.9, d.f.= 116, respectively) and second-order (χ^2 = 299.2, d.f.= 77; χ^2 = 490.4, d.f.= 119; χ^2 = 495.6, d.f.= 119, respectively) models are similar for all three SLA characteristics. The second-order factor model is preferred because it is more parsimonious with fewer parameters to be estimated and more degrees of freedom (Venkatraman 1990). The target coefficient values (T = 0.93, 0.96, 0.94, respectively) are very close to the theoretical upper limit of 1, indicating that the second-order factor accounts for 93 percent, 96 percent, and 94 percent of the relationship among the first-order factors of each agreement characteristic. This also suggests acceptance of the second-order factor model (Marsh and Hocevar 1985). Further, all β estimates between the second-order factors and relational norm are above the recommended 0.20 value (Chin 1998b), and exhibit significantly high t-values, providing further evidence for the second-order factor model for SLAs. In sum, on both theoretical and empirical grounds, the conceptualization of SLA characteristics as second-order multidimensional constructs appears justified.

Structural Model

The assessment and estimation of structural model was conducted using partial least squares (PLS). The PLS technique is appropriate and well-suited for this study because it allows for latent constructs to be modeled with formative indicators. This is an important requirement in our case as we model the three second-order SLA characteristics with formative first-order SLA elements in this study (Chin 1998a). We do this because the first-order SLA elements are not necessarily correlated with each other (e.g., a particular contract may have some clauses in it but not others).[8]

In order to determine the precision of estimation in our PLS estimation, minimum sample size check and a reactive Monte Carlo analysis were performed (Chin 1998b). First, our sample size of 92 exceeded the recommended minimum of 60 (for the commitment construct), which was adequate for model testing. Second, a bootstrapping procedure with resampling of 500 subsamples was used to determine the statistical significance of the parameter estimates (Chin 1998b). As justified in the hypothesis development section, the structural model also incorporated various interaction terms in order to test either moderating effects or substitution versus

[8]We modeled the second-order SLA characteristics with reflective, rather than formative, first-order SLA elements in the measurement model even though the first-order constructs are not expected to be correlated. This was done due to the limitation of covariance-based structural equation modeling techniques that were used to assess the efficacy of a second-order factor structure for SLAs, as these techniques do not allow the modeling of second-order factors with first-order formative constructs.

complementarity between the latent variables. Following Goerzen and Beamish's (2003) approach, our nonlinear equation including interactions terms was analyzed through a PLS model incorporating latent variable scores for interaction terms, as suggested by Jöreskog (2000). These latent variable scores are estimated by constructing individual scores on all endogenous and exogenous variables for every case in the sample such that their sample mean vector and covariance matrix satisfy the same relationships as the latent variables themselves (for a detailed explanation of the matrix algebra, see Jöreskog 2000). Based on the results of this procedure, the structural model was assessed examining the magnitude, statistical significance of the path coefficients, and R^2 in the structural model. A summary of these results is presented in Table 6.

As shown in Table 6, foundation, change, and governance characteristics in the model contributed positively and significantly to the development of relational norms ($\beta = 0.277, p < 0.05$; $\beta = 0.266, p < 0.01$; and $\beta = 0.579, p < 0.01$, respectively), supporting hypotheses 1a, 1b, and 1c. Similarly, foundation and governance characteristics contributed positively and significantly to harmonious conflict resolution ($\beta = 0.425$, $p < 0.01$ and $\beta = 0.248$, $p < 0.05$, respectively), supporting hypotheses 2a and 2c. However, the hypothesized relationship between change characteristics and harmonious conflict resolution was not supported. All three foundation, change, and governance characteristics contributed positively and significantly to the development of mutual dependence ($\beta = 0.334, p < 0.05$; $\beta = 0.224, p < 0.05$; and $\beta = 0.449, p < 0.01$, respectively), supporting hypotheses 3a, 3b, and 3c, respectively. Of the variances of relational norms, harmonious conflict resolution, and mutual dependence in the model, 40 percent, 31 percent, and 35 percent, respectively, were explained by three characteristics of SLA. Overall, these results provide compelling evidence that clauses in the formal contract positively impact important aspects of relational governance. As hypothesized, harmonious conflict resolution and mutual dependence had significant and positive effects on trust ($\beta = 0.486$, $p < 0.01$ and $\beta = 0.246, p < 0.01$, respectively), supporting hypotheses 4a and 4b. These two relational governance factors explained 38 percent of the variance in trust. Also, as hypothesized, relational norms and mutual dependence had significant and positive effects on commitment ($\beta = 0.242, p < 0.01$; and $\beta = 0.445, p < 0.05$, respectively), accounting for 64 percent of variance in commitment, providing strong support for hypotheses 5a and 5b.

Testing possible substitution versus complementarity between SLA and relational governance using interaction terms also generated very interesting results. While all coefficient estimates for the interaction effects between SLA constructs and relational governance constructs on trust as well as commitment are statistically significant, both the signs and the significance levels of these estimates vary. All interaction terms involving foundation and governance characteristics on both trust (i.e., FC × HCR, FC × MD, GC × HCR, and GC × MD) and commitment (i.e., FC × RN, FC × MD, GC × RN, and GC × MD) bore positive signs and were statistically significant ($\beta = 0.135, p < 0.05$; $\beta = 0.255, p < 0.05$; $\beta = 0.704, p < 0.1$; $\beta = 0.902, p < 0.05$, $\beta = 0.336, p < 0.05$; $\beta = 0.521, p < 0.05$; $\beta = 0.252, p < 0.1$; and $\beta = 0.144, p < 0.05$, respectively). These results support hypotheses H8a, 8b, 8e, 8f, 9a, 9b, 9e, and 9f and provide further evidence for a complementary relationship between these two SLA characteristics (foundation and governance characteristics) and the relational governance variables of relational norms, harmonious conflict resolution, and mutual dependence. However, all interaction terms involving change characteristics on both trust (i.e., CC × HCR and CC × MD) and commitment (i.e., CC × RN and CC × MD) bore negative signs and were statistically significant ($\beta = -0.359, p < 0.05$; $\beta = -0.175, p < 0.05$; $\beta = -0.245$, $p < 0.1$ and $\beta = -0.570$, $p < 0.05$, respectively). These negative signs are contrary to our expectations as they suggest that change characteristics in a contract may have a substitutive relationship with relational governance. Finally, the interaction effects between trust and harmonious conflict resolution, and between trust and mutual dependence on commitment are statistically significant with positive signs ($\beta = 0.187, p < 0.05$; and $\beta = 0.397, p < 0.05$, respectively), supporting H5c and H5d. These findings lead to several insights and we discuss them below.

Discussion

First, the findings above indicate that the three key attributes of relational governance—relational norms, harmonious conflict resolution, and mutual dependence—mediate the impact of SLA characteristics (foundation, change, and governance characteristics) on relational outcomes of *trust* (explaining 38 percent of variance) and *commitment* (explaining 54 percent of variance), both of which are critical safeguards for future exchanges in an IT outsourcing relationship. For a service recipient and its service provider to move toward this state of *embeddedness*[9] (Lee et al. 2004; Uzzi 1997) with high psy-

[9]Embeddedness is a logic of exchange that promotes economies of time, integrative agreements, Pareto improvements in allocative efficiency, and complex adaptation.

Table 6. Structural Model Results†

		FC	CC	GC	RN	HCR	MD	TR	CM
11 Contractual Elements	Service Level Objectives	0.330***							
	Process Ownership Plan	0.412***							
	Service Level Contents	0.423***							
	Future Demand Management Plan		0.302***						
	Anticipated Change Plan		0.281***						
	Innovation Plan		0.259***						
	Feedback Plan		0.314***						
	Communication Plan			0.365***					
	Measurement Charter			0.420***					
	Conflict Arbitration			0.249***					
	Enforcement			0.221***					
SLA Characteristics	Foundation Characteristics (FC)				0.277**	0.425***	0.334**		
	Change Characteristics (CC)				0.266***	0.117	0.224**		
	Governance Characteristics (GC)				0.579***	0.248**	0.449***		
Relational Governance	Relational Norm (RN)								0.242***
	Harmonious Conflict Resolution (HCR)							0.486***	
	Mutual Dependence (MD)							0.246***	0.445**
	Trust (TR)								0.567**
Interaction Terms	FC × RN								0.336**
	FC × HCR							0.135**	
	FC × MD							0.255**	0.521**
	CC × RN								-0.245*
	CC × HCR							-0.359**	
	CC × MD							-0.175**	-0.570**
	GC × RN								0.252*
	GC × HCR							0.704*	
	GC × MD							0.902**	0.144**
	TR × HCR								0.187**
	TR × MD								0.397**
	L × FC				0.474*				
	L × CC				0.046				
	L × GC				-0.191				
Control Variables	Length of Association (L)							0.229	0.350*
	Type of IT Activity								-0.231
	Extent of Substitution								0.409*
R-square					0.397	0.308	0.347	0.381	0.642

†Suggested by Jöreskog (2000) and following Goerzen and Beamish (2003), PLS was performed using latent variable scores to test nonlinear equations.

Note: The numbers in the cells are standardized beta values from the PLS structural model.

*p < 0.1; **p < 0.05; ***p < 0.01

chological bonds of trust and commitment, the two parties need to develop mechanisms to create relational norms, engage in harmonious conflict resolution, and develop mutual dependence on one another in the outsourcing relationship. Our research provides strong evidence that they can use well-developed formal contracts to develop these relational attributes. This finding is consistent with observations in economics that formal contracts may affect the self-enforcing nature of relational governance (Baker et al. 1994; Klein 1996).

Second, some outsourcing engagements are based largely on mutual trust and do not specify written and detailed contracts due to the difficulty of anticipating and specifying all possible expectations and contingencies. However, our results provide strong evidence in favor of using a well-structured SLA in an IT outsourcing engagement. First, a well-structured agreement will supply IT outsourcing engagements with a "safety net" in lieu of exclusive reliance on trust (Sabherwal 1999). Further, the explicit clauses dealing with the three SLA characteristics may also serve to develop social elements in relational exchanges including higher levels of relational norms, mutual dependence, and trust that are usually associated with hierarchies (Stinchcombe 1985). Our findings also reinforce the suggestion by Fitzgerald and Willcocks (1994) that partnership issues in IT outsourcing must be considered only in conjunction with contractual arrangements. They are also in line with Sabherwal's (1999) view about the need for balance between trust and structural controls in outsourced IS development projects, as excessive focus and reliance on only one of them can hurt performance.

Third, barring one exception, the findings of this study favor a complementary relationship between SLA and relational governance. The three SLA characteristics (foundation, change, and governance) were found to be significant direct predictors of the three relational governance attributes (relational norms, harmonious conflict resolution, and mutual dependence), which in turn increase the level of trust and commitment in the relationship. Further, all interaction relationships involving foundation and governance characteristics of SLAs showed positive and significant effects on trust and commitment, providing further evidence about the complementarity between these two contract characteristics and relational governance. These results indicate that the various characteristics of agreements can promote harmonious and useful relationships with high trust and commitment. Even though it may appear at first blush that change and governance characteristics can actually hinder relationship building because these characteristics provide the buyer with the ability to punish the service provider for deviating from cooperative behavior, our results suggest that these characteristics can also induce relational governance because the ability to unilaterally punish deviation actually strengthens incentives for cooperation as well.[10]

However, our results provide mixed evidence with respect to change characteristics of contracts. While the change characteristics construct was found to have a direct, positive effect on relational governance attributes, its interaction with those attributes had a negative impact on the relationship between relational attributes and relational outcomes of trust and commitment. This suggests that change characteristics dampen the positive effects of relational attributes on trust and commitment. These anomalous findings indicate that while incorporating very specific and detailed change clauses in a contract may build relational attributes, these clauses may simultaneously create a detrimental effect on trust and commitment through their interaction with the relational attributes. One plausible explanation for this anomaly may be found in the fact that formal contract changes are one of the most difficult aspects of market exchanges, because it is in this area that opportunism has the most potential to raise its ugly head. However, changes are endemic to IT outsourcing since processes change, and firms continuously embed new knowledge/strategies as their competition evolves. Unlike physical product component outsourcing that can be easily modularized, it is hard to do so in IT outsourcing due to high-dependence and lack of maturity (Tanriverdi et al. 2007). Consequently, changes to the formal contract may best be negotiated in a continuous interactive environment of mutual adjustment between the two parties concerned so "give and take" on contract changes can take place most effectively, rather than in an environment where contract changes are brought about following a "cookie cutter" standardized approach or through plans, procedures, and schedules captured in SLA clauses. Essentially, what this means is that the process of formal contract changes exhibits reciprocal interdependence requiring mutual adjustment rather than standardization through plans and schedules that are required for pooled and sequential interdependence, respectively[11] (Thompson 1967). Therefore, while detailed written clauses as part of change characteristics in an agreement may increase relational attributes of relational norms, harmonious conflict

[10]We are very thankful to an anonymous reviewer for providing this insightful observation.

[11]We are very thankful to the associate editor and an anonymous reviewer for this insightful explanation about the unexpected finding with respect to the negative moderating impact of change characteristics on the relationship between relational attributes and relational outcomes of trust and commitment.

resolution, and mutual dependence, such detailed clauses may actually have a negative, detrimental effect on trust and commitment in combination with those high relational attributes. This would suggest that the parties concerned should not have all the contingencies, processes, and methods for contract changes prespecified in the SLA because these clauses may ultimately hamper the development of trust and commitment in the relationship. However, more research will need to be conducted to shed further light on this anomalous finding. Overall, this study adds further evidence at a much finer level of granularity, supporting the complementary nature of relationship between formal contracts and relational governance, as was also found by Poppo and Zenger (2002), albeit only at an aggregate level.

Consistent with existing literature, relational norms, mutual dependence, and trust were found to be significantly related to commitment in the IT outsourcing relationship. Anticipating possible reciprocal relationships between harmonious conflict resolution and trust, and between mutual dependence and trust, interaction terms for these variables on commitment were also tested in the model. Results show that the two interaction terms are positively and significantly related to commitment, providing some evidence of the reciprocal and reinforcing nature of these relationships. A complete and reliable test for these cyclical relationships in a snapshot data set would require modeling bi-directional reciprocal relationships in the structural model. However, we are not able to test bi-directional linkages in the current study as the model did not meet the rank and order conditions. Further research using longitudinal data or a model with other exogenous variables will be needed to further test these cyclical relationships.

As extant literature holds that the length of interaction is a source of trust in interorganizational relationships, we incorporated in our model both the length of association (a control variable) and the contract characteristics (hypothesized variables) as sources of trust to see which effect predominates in the IT outsourcing context. We found that the effects of agreement characteristics on trust, mediated through relational attributes, are more powerful than the effect of length of association on trust, which was found to be statistically not significant. This may be attributed to the fact that "calculative" trust between strangers may be more essential than the trust that arises due to repeated interactions in IT outsourcing arrangements (Ho and Weigelt 2005). In other words, trust in an IT outsourcing context may depend largely upon the protective support and assurances provided by the terms and provisions in the formal contract that specify contingencies, adaptive processes, and controls as these are likely to mitigate opportunistic behavior and support relational governance.

Limitations and Future Research Directions

There are a number of limitations with our study and we discuss them below. First, there are at least two potential concerns associated with our research design that utilizes a single respondent for each outsourcing contract: common methods variance and the respondent's biases and knowledge base. While these certainly remain limitations of the study, they are not very serious limitations. With respect to common methods variance, most of the issues examined in this research pertain to organizational actions (constituent elements of SLA) rather than individual cognitions. Given the factual nature of the items for assessing a majority of the constructs, the possibility of a common method problem was minimal (Podsakoff et al. 2003). We also performed Harman's single factor test (Podsakoff and Organ 1986) by conducting an exploratory factor analysis. This analysis generated a large number of factors with the first factor accounting for only 18 percent of the total variance, providing evidence that a substantial amount of common method variance is not present in this study. Further, as shown in Table 3, individuals responding to the survey questionnaire possessed both appropriate knowledge about contracts and specific organizational responsibility for the outsourcing arrangements in question. This reduces the severity of concerns about biases and knowledge base of respondents.

The second limitation is related to the first one in terms of mono-method bias. This limitation has to do with perceptual data about service level agreements. We don't know the extent to which respondent opinions about their contracts are valid. That is, respondent perceptions about their agreements may be colored by their other perceptions about their relationships with their service providers. However, our study used very precise questions based on actual clauses in contracts as discussed earlier. Nonetheless, we recommend that future studies verify respondent perceptions about their contracts by comparing respondent scores on SLA questions with scores given by an independent panel of experts for the presence of specific elements in a subsample of actual agreements.

The third limitation of the study emanates from the snapshot nature of the survey used in this study. A number of relationships in our model are potentially cyclical including the relationships between the three contract characteristics (foundation, change, and governance) and the three relational governance attributes (relational norms, harmonious conflict resolution, and mutual dependence), the relationship between harmonious conflict resolution and trust, and the relationship between mutual dependence and trust. Unidirectional relationships between these variables are justified if data are

collected longitudinally, such that data for the exogenous (independent) variables are collected earlier than the data for endogenous (dependent) variables. In our context of a snapshot survey, it would be appropriate to model these relationships with bi-directional links in the SEM model to capture the bi-directional nature of these relationships. However, identification of an SEM model requires the meeting of rank and order conditions, which our model did not meet due to the lack of sufficient number of exogenous variables that predict the variables involved in bi-directional relationships. Essentially, what this means is that we need other exogenous variables that predict the three SLA characteristics (foundation, change, and governance), the three relational attributes (relational norms, harmonious conflict resolution, and mutual dependence), and trust. Future research studies should overcome this problem of bi-directionality by either incorporating additional exogenous variables in the model or through a longitudinal study.

Another limitation that directly emanates from our inability to model bi-directional relationships in the model deals with our tests of complementarity versus substitution relationship between formal contract and relational governance. The complete and reliable evidence for a complementarity versus a substitution relationship will come from bi-directional linkages, as was done by Poppo and Zenger (2002). Complementarity implies that "x increases y" and "y increases x" in turn, while substitution implies the converse: "x decreases y" and "y decreases x" in turn. However, as discussed above, we were not able to test this in our model due to the limited number of exogenous variables in the model that predict the variables involved in the bi-directional relationships. An alternate way to gather evidence for complementarity/substitution relationship is to include interaction effects between the variables involved in complementary/substitution relationships on the performance variables, here trust and commitment, as complementarity implies interaction. This alternate method was also used by Poppo and Zenger, and this is the method we use in the current study. As suggested above, future studies should incorporate additional exogenous variables in the model for further testing of the nature of the relationship between formal contract and relational governance.

The fourth potential limitation concerns the nature of the sample utilized in this study and, thus, the external validity of our findings. Our sample was limited to Korean domestic organizations and was selected from the attendee list of an outsourcing conference. Therefore, generalizing the observed structure of service level agreement or its impact on relational governance to organizations of other nations or beyond the sampling frame may be problematic.

The final limitation of this study lies in the choice of the respondent type in this study. We empirically tested a model of the impacts of formal contractual elements on relational governance in a service recipient–service provider dyad using data collected from service recipients. We did not examine these impacts from the service providers' perspective. This resulted in measuring commitment of both service providers and service recipients to their relationship only from the recipients' perspective. Results of our study would certainly be more robust if we had data about commitment from the providers' side as well. Nonetheless, this is not expected to be a major limitation of this study because a service recipient's perceptions about its service provider's commitment are influenced by the provider's actual commitment to the relationship. This is because both partners reveal some of their true feelings, actions, and intentions to each other during their interactions over time (Anderson and Weitz 1992).

Contributions and Implications

Notwithstanding the above limitations, this research makes two significant contributions. First, this study contributes to the IT outsourcing literature both conceptually and empirically. Conceptually we develop a comprehensive SLA structure based in both extant theories as well as best practices used in the industry. Empirically we contribute by developing and validating an instrument for measuring formal SLAs used in the IT outsourcing contracts and this instrument can be productively used in future empirical studies. Further, while the importance generally ascribed to partnership-style relationships and their influence on outsourcing success has been empirically examined (Lee and Kim 1999), IT outsourcing research has largely neglected to examine the methods to develop those kinds of relationships. By integrating the literature on interorganizational relationships from organizational theory, strategic management, marketing, economics, and information systems, we provide an inclusive and conceptually sound framework for developing partnership-style relationships with high levels of trust and commitment through the use of well-structured SLAs in IT outsourcing arrangements.

This paper also extends the view propagated by Poppo and Zenger that formal contracts and relational governance function as complements rather than as substitutes. We follow the call made by these authors to understand in much more depth the relationship between specific formal contractual clauses and relational governance attributes, and focus our study on SLA characteristics that capture various contractual clauses in the context of IT outsourcing relationships to understand

their impact on some key relational governance variables. All three characteristics of formal contracts—foundation, change, and governance characteristics—contribute fairly to the development of relational norms, harmonious conflict resolution, and mutual dependence. Consistent with the findings by Poppo and Zenger, our results show that IT outsourcing engagements tend to employ a greater level of relational governance overall when they use well-structured and comprehensive SLAs. However, the study also suggests that change characteristics in contracts can dampen trust and commitment in the relationship, perhaps due to reciprocal interdependence inherent in the contract change process requiring mutual adaptation rather than contractual clauses. Further, our findings confirm the conceptualization of governance as embodied in both the *formal contract* and the *social elements* of an interorganizational relationship and support the view propounded by Sobrero and Schradar (1998) that procedural coordination might not only be structurally identified by the form of formal contract but also by the form of so called relational (Baker et al. 2002) or psychological (Koh et al. 2004) contracts.

This study also has two managerial implications. Many IT organizations do not have well-structured SLAs using which they can manage the activities and relationships associated with their IT outsourcing efforts (Karten 2004). A lack of well-developed contracts leads to erroneous conclusions pertaining to the value of SLAs in promoting relational governance and in managing successful outsourcing relationships. In many situations, service level agreements are mostly treated as a stick in the "carrot and stick" control paradigm, and are used to monitor the SP's performance so deficiencies can be adequately measured and penalized. The value of a service level agreement in promoting harmonious social relationships is generally neither visible nor understood in these contexts. This study provides clear evidence that well-developed SLAs not only provide a way for measuring service provider performance, but also provide a way to effectively manage IT outsourcing engagements through the development of relational governance. The study also provides a comprehensive set of 11 contractual elements categorized into 3 substantive dimensions including foundation, change, and governance characteristics. These three dimensions provide a parsimonious SLA structure for practitioners, and the scales associated with the 11 contract elements provide a useful tool to them for rationalizing and refining the elements of their SLAs.

Acknowledgments

This material is based upon work supported by the National Science Foundation under Grant No. 9907325. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation. This research was also supported by a CanAm grant. The research of the third author is supported in part by the NSF under Grant No. 0809186. The usual disclaimer applies. The authors are very grateful to the senior editor, the associate editor, and the three anonymous reviewers for their insightful comments and invaluable suggestions that greatly helped improve the quality and lucidity of the paper. The authors are also grateful to Professor Sabyasachi Mitra of Georgia Tech, participants at the MSS Colloquium at SUNY Buffalo, and the anonymous reviewers, discussant, and the attendees at the 25th ICIS conference for providing valuable suggestions that also helped improve our paper.

References

Anderson, E., and Weitz, B. 1989. "Determinants of Continuity in Conventional Industrial Channel Dyads," *Marketing Science* (8:4), pp. 310-323.

Anderson, E., and Weitz, B. 1992. "The Use of Pledges to Build and Sustain Commitment in Distributional Channels," *Journal of Marketing Research* (29), pp. 18-34.

Anderson, J. C. 1987. "An Approach for Confirmatory Measurement and Structural Equation Modeling of Organizational Properties," *Management Science* (33:4), pp. 525-541.

Anderson, J. C., and Gerbing, D. W. 1988. "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin* (103:3), pp. 411-423.

Bagozzi, R. P., Yi, Y., and Phillips, L. W. 1991. "Assessing Construct Validity in Organizational Research," *Administrative Science Quarterly* (36:3), pp. 421-458.

Baker, G., Gibbons, R., and Murphy, K. J. 1994. "Subjective Performance Measures in Optimal Incentive Contracts," *The Quarterly Journal of Economics* (109:4), pp. 1125-1156.

Baker, G., Gibbons, R., and Murphy, K. J. 2002. "Relational Contracts and the Theory of the Firm," *The Quarterly Journal of Economics* (117:1), pp. 39-83.

Borys, B., and Jemison, D. B. 1989. "Hybrid Arrangements as Strategic Alliances: Theoretical Issues in Organizational Combinations," *Academy of Management Review* (14:2), pp. 234-249.

Browne, M. W., and Cudeck, R. 1993. "Alternative Ways of Assessing Model Fit," in *Testing Structural Equation Models,* K. A. Bollen and J. S. Long (eds.), Newbury Park, CA: Sage Publications, pp. 136-162.

Carte, T. A., and Russell, C. J. 2003. "In Pursuit of Moderation: Nine Common Errors and Their Solutions," *MIS Quarterly* (27:3), pp. 479-501.

Chin, W. W. 1998a. "Issues and Opinion on Structural Equation Modeling," *MIS Quarterly* (22:1), pp. vii-xvi.

Chin, W. W. 1998b. "The Partial Least Squares Approach to Structural Equation Modeling," in *Modern Methods for Business Research,* G. A. Marcoulides (ed.), Mahwah, NJ: Lawrence Erlbaum Associates, pp. 295-336.

Choudhury, V., and Sabherwal, R. 2003. "Portfolios of Control in Outsourced Software Development Project," *Information Systems Research* (14:3), pp. 291-341.

Cummings, T. G. 1984. "Transorganizational Development," *Research in Organizational Behavior* (6), pp. 367-422.

Dant, R. P., and Schul, P. L. 1992. "Conflict Resolution Processes in Contractual Channels of Distribution," *Journal of Marketing* (56:1), pp. 38-54.

Deutsch, M. 1973. *The Resolution of Conflict: Constructive and Destructive Processes*, New Haven, CT: Yale University Press.

Dore, R. 1983. "Goodwill and the Sprit of Market Capitalism," *British Journal of Sociology* (34:4), pp. 459-482.

Doz, Y. L. 1996. "The Evolution of Cooperation in Strategic Alliances: Initial Conditions or Learning Processes?," *Strategic Management Journal* (17:Special Issue), pp. 55-83.

Dwyer, F. R., Schurr, P. H., and Oh, S. 1987. "Developing Buyer-Seller Relationships," *Journal of Marketing* (51:2), pp. 11-27.

Fitzgerald, G., and Willcocks, L. 1994. "Contracts and Partnerships in the Outsourcing of IS,"in *Proceedings of the 15th International Conference on Information Systems*, J. I. DeGross, S. L. Huff, and M. C. Munro (eds.), Vancouver, British Columbia, pp. 91-98.

Fornell, C., and Larcker, D. F. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* (18:1), pp. 39-50.

Gefen, D., Straub, D. W., and Boudreau, M.-C. 2000. "Structural Equation Modeling and Regression: Guidelines for Research Practice," *Communications of the AIS* (4:7).

Ghoshal, S., and Moran, P. 1996. "Bad for Practice: A Critique of the Transaction Cost Theory," *Academy of Management Review* (21:1), pp. 13-47.

Goerzen, A., and Beamish, P. W. 2003. "Geographic Scope and Multinational Enterprise Performance," *Strategic Management Journal* (24:13), pp. 1289-1306.

Gulati, R. 1995. "Does Familiarity Breed Trust? The Implications of Repeated Ties for Contractual Choices in Alliances," *Academy of Management Journal* (38:1), pp. 85-112.

Hart, O. 1988. "Incomplete Contracts and the Theory of the Firm," *Journal of Law, Economics, and Organization* (4:1), pp. 119-139.

Heide, J. B., and John, G. 1992. "Do Norms Matter in Marketing Relationships?," *Journal of Marketing* (56:2), pp. 32-45.

Ho, T.-H., and Weigelt, K. 2005. "Trust Building among Strangers," *Management Science* (51:4), pp. 519-530.

Jap, S. D., and Ganesan, S. 2000. "Control Mechanisms and the Relationship Life Cycle: Implications for Safeguarding Specific Investments and Developing Commitment," *Journal of Marketing Research* (37:2), pp. 227-245.

Jöreskog, K. G. 2000. "Latent Variable Factor Scores and Their Uses" (http://www.ssicentral.com/lisrel/techdocs/lvscores.pdf).

Kale, P., Singh, H., and Perlmutter, H. 2000. "Learning and Protection of Proprietary Assets in Strategic Alliances: Building Relational Capital," *Strategic Management Journal* (21:3), pp. 217-237.

Karten, N. 2004. "With Service Level Agreements, Less Is More," *Information Systems Management* (21:4), pp. 43-44.

Kern, T., and Blois, K. 2002. "Norm Development in Outsourcing Relationships," *Journal of Information Technology* (17:1), pp. 33-42.

Kern, T., and Willcocks, L. 2002. "Exploring Relationships in Information Technology Outsourcing: The Interaction Approach," *European Journal of Information Systems* (11:1), pp. 3-19.

Kern, T., Willcocks, L. P., and van Heck, E. 2002. "The Winner's Curse in IT Outsourcing: Strategies for Avoiding Relational Trauma," *California Management Review* (44:2), pp. 47-69.

Kirsch, L. J. 1997. "Portfolios of Control Modes and IS Project Management," *Information Systems Research* (8:3), pp. 215-239.

Kishore, R., Rao, H. R., Nam, K., Rajagopalan, S., and Chaudhury, A. 2003. "A Relationship Perspective on IT Outsourcing," *Communications of the ACM* (46:12), pp. 86-92.

Klein, B. 1996. "Why Hold-Ups Occur: The Self-Enforcing Range of Contractual Relationships," *Economic Inquiry* (34:3), pp. 444-463.

Klein, B., Crawford, R., and Alchain, A. 1978. "Vertical Integration, Appropriable Rents, and the Competitive Contracting Process," *Journal of Law and Economics* (21:2), pp. 297-231.

Kline, R. B. 1998. *Principles and Practice of Structural Equation Modeling*, New York: The Guilford Press.

Koh, C., Ang, S., and Straub, D. W. 2004. "IT Outsourcing Success: A Psychological Contract Perspective," *Information Systems Research* (15:4), pp. 356-373.

Kumar, N., Scheer, L. K., and Steenkamp, J.-B. E. M. 1995. "The Effects of Perceived Interdependence on Dealer Attitudes," *Journal of Marketing Research* (32:3), pp. 348-356.

Kumar, N., Stern, L. N., and Anderson, J. C. 1993. "Conducting Interorganizational Research Using Key Informants," *Academy of Management Journal* (36:6), pp. 1633-1651.

Lambe, C. J., Spekman, R., and Hunt, S. D. 2000. "Interimistic Relational Exchange: Conceptualization and Propositional Development," *Journal of the Academy of Marketing Science* (28:2), pp. 212-225.

Lee, J.-N., and Kim, Y.-G. 1999. "Effect of Partnership Quality on IS Outsourcing: Conceptual Framework and Empirical Validation," *Journal of Management Information Systems* (15:4), pp. 29-61.

Lee, J.-N., Miranda, S. M., and Kim, Y.-M. 2004. "IT Outsourcing Strategies: Universalistic, Contingency, and Configurational Explanations of Success," *Information Systems Research* (15:2), pp. 110-131.

Levinthal, D. A., and Fichman, M. 1988. "Dynamics of Interorganizational Attachments Auditor-Client," *Administrative Science Quarterly* (33:3), pp. 345-370.

Macaulay, S. 1963. "Non-Contractual Relations in Business: A Preliminary Study," *American Sociological Review* (28:1), pp. 55-67.

Macneil, I. R. 1980. *The New Social Contract: An Inquiry into Modern Contractual Relations*, New Haven, CT: Yale University Press.

March, J. G., and Simon, H. A. 1958. *Organizations*, New York: John Wiley & Sons, Inc.

Marsh, H. W., and Hocevar, D. 1985. "Application of Confirmatory Factor Analysis to the Study of Self-Concept: First and Higher Order Factor Models and Their Invariance Across Groups," *Psychological Bulletin* (97:3), pp. 562-582.

Mayer, K. J., and Argyres, N. S. 2004. "Learning to Contract: Evidence from the Personal Computer Industry," *Organization Science* (15:4), pp. 394-410.

McEvily, B., Perrone, V., and Zaheer, A. 2003. "Trust as an Organizing Principle," *Organization Science* (14:1), pp. 91-105.

McKnight, D. H., Cummings, L. L., and Chervany, N. L. 1998. "Initial Trust Formation in New Organizational Relationships," *Academy of Management Review* (23:3), pp. 473-490.

Miranda, S. M., and Saunders, C. S. 2003. "The Social Construction of Meaning: An Alternative Perspective on Information Sharing," *Information Systems Research* (14:1), pp. 87-106.

Mohr, J., and Spekman, R. 1994. "Characteristics of Partnership Success: Partnership Attributes, Communication, Behavior, and Conflict Resolution Techniques," *Strategic Management Journal* (15:2), pp. 135-152.

Morgan, R. M., and Hunt, S. D. 1994. "The Commitment–Trust Theory of Relationship Marketing," *Journal of Marketing* (58:3), pp. 20-39.

Nam, K., Rajagopalan, S., Rao, H. R., and Chaudhury, A. 1996. "A Two-Level Investigation of Information Systems Outsourcing," *Communications of the ACM* (39:7), pp. 36-44.

Ouchi, W. G. 1979. "A Conceptual Framework for the Design of Organizational Control Mechanisms," *Management Science* (25:9), pp. 833-848.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., and Podsakoff, N. P. 2003. "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology* (88:5), pp. 879-903.

Podsakoff, P. M., and Organ, D. W. 1986. "Self-Reports in Organizational Research: Problems and Prospects," *Journal of Management* (12:4), pp. 531-544.

Poppo, L., and Zenger, T. 2002. "Do Formal Contracts and Relational Governance Function as Substitutes or Complements?," *Strategic Management Journal* (23:8), pp. 707-725.

Ring, P., and Van de Ven, A. 1994. "Developmental Processes of Cooperative Interorganizational Relationships," *Academy of Management Review* (19:1), pp. 90-118.

Robey, D., Farrow, D. L., and Franz, C. R. 1989. "Group Process and Conflict in System Development," *Management Science* (35:10), pp. 1172-1191.

Sabherwal, R. 1999. "The Role of Trust in Outsourced IS Development Projects," *Communications of the ACM* (42:2), pp. 80-86.

Scanzoni, J. 1979. "Social Exchange and Behavioral Interdependence," in *Social Exchange in Developing Relationships,* R. L. Burgess and T. L. Huston (eds.), New York: Academic Press.

Segars, A. H., and Grover, V. 1998. "Strategic Information Systems Planning Success: An Investigation of the Construct and its Measurement," *MIS Quarterly* (22:2), pp. 139-163.

Sobrero, M., and Schrader, S. 1998. "Structuring Inter-Firm Relationships: A Meta-Analytic Approach," *Organization Studies* (19:4), pp. 585-615.

Stinchcombe, A. L. 1985. "Contracts as Heirarchical Documents," in *Organization Theory and Project Management,* A. L. Stinchcombe and C. A. Heiner (eds.), London: Oxford University Press, pp. 121-170.

Stone, L. 2001. "Beyond T&Cs: What Must Be Included in Services Contracts," AV-14-3036, Stamford, CT: Gartner Group.

Strauss, A., and Corbin, J. 1990. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*, Newbury Park, CA: Sage Publications.

Sturm, R., Morris, W., and Jander, M. 2000. *Foundations of Service Level Agreement*, Indianapolis, IN: SAMS.

Tanriverdi, H. 2005. "Information Technology Relatedness, Knowledge Management Capability, and Performance of Multibusiness Firms," *MIS Quarterly* (29:2), pp. 311-334.

Tanriverdi, H., Konana, P., and Ge, L. 2007. "The Choice of Sourcing Mechanisms for Business Processes," *Information Systems Research* (18:3), pp. 280-299.

Thompson, J. D. 1967. *Organizations in Action*, New York: McGraw-Hill.

Uzzi, B. 1997. "Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness," *Administrative Science Quarterly* (42:1), pp. 35-67.

Venkatraman, N. 1990. "Performance Implications of Strategic Coalignment: A Methodological Perspective," *Journal of Management Studies* (27:1), pp. 19-41.

Williamson, O. E. 1985. *The Economic Institutions of Capitalism*, New York: The Free Press.

Williamson, O. E. 1996. *The Mechanisms of Governance*, New York: Oxford University Press.

Zaheer, A., McEvily, B., and Perrone, V. 1998. "Does Trust Matter? Exploring the Effects of Interorganizational and Interpersonal Trust on Performance," *Organization Science* (9:2), pp. 141-160.

Zaheer, A., and Venkatraman, N. 1995. "Relational Governance as an Interorganizational Strategy: An Empirical Test of the Role of Trust in Economic Exchange," *Strategic Management Journal* (16:5), pp. 373-392.

Zucker, L. G. 1986. "Production of Trust: Institutional Sources of Economic Structure, 1840-1920," in *Research in Organizational Behavior,* B. M. Staw and L. L. Cummings (eds.). Greenwich, CT: JAI Press, pp. 53-111.

About the Authors

Jahyun Goo is an assistant professor of MIS at the Florida Atlantic University. He received his Ph.D. and MBA degrees in MIS from the School of Management at the State University of New York at Buffalo. His active research areas are information systems sourcing, IT management and strategy, interorganizational relationships, and IS security. His articles have appeared in journal such as *Decision Sciences, Decision Support Systems, Information Systems Journal,* and *Information Systems Frontier*, and he has presented his research at major conferences such as the International Conference on Information Systems, the Hawaii International Conference on System Sciences, the Americas Conference on Information Systems, and the European Conference on Information Systems. He received a best paper award at HICSS in 2007 and was nominated for a best paper award at ECIS in 2006. He is a guest associate editor of *MIS Quarterly*'s special issue on cybersecurity.

Rajiv Kishore is an associate professor in the School of Management at the State University of New York at Buffalo. His interests

are in improving organizational and IT performance through the effective management of global IT and services outsourcing projects, technology adoption and implementation, and agile methods. His papers have been published in *Journal of Management Information Systems, IEEE Transactions on Engineering Management, Communications of the ACM, Decision Support Systems, Information & Management, Information Systems Frontiers, Journal of Database Management*, and *Advances in Management Information Systems*, among others. He also received a multiyear National Science Foundation research grant as a co-principal investigator in the area of IT outsourcing and is a guest editor of a special issue of the *Journal of the AIS*. Rajiv has consulted with a number of large companies, some of which include BellSouth, Blue Cross Blue Shield of Minnesota, IBM, and Pioneer Standard Electronics.

H. R. Rao's interests are in the areas of management information systems, decision support systems, and expert systems and information assurance. He has authored or co-authored more than 150 technical papers, of which more than 90 are published in archival journals. His work has received best paper and best paper runner up awards at the Americas Conference on Information Systems and the International Conference on Information Systems. Dr. Rao has received funding for his research from the National Science Foundation, the Department of Defense, and the Canadian Embassy, and he has received the University's prestigious Teaching Fellowship. He also received the Fulbright fellowship in 2004. He is an editor of a special issues of *The Annals of Operations Research* and the *Communications of ACM*, associate editor of *Decision Support Systems, Information Systems Research*, and *IEEE Transactions in Systems, Man and Cybernetics*, and guest editor of *MIS Quarterly*'s special issue on cybersecurity, as well as an Editor-in-Chief of *Information Systems Frontiers*.

Kichan Nam is a professor of MIS at Sogang University in Seoul, Korea. He received his Ph.D. in MIS from the School of Management at the State University of New York at Buffalo. He has published several research papers and books in the area of IT outsourcing. He has consulted in the area of IT outsourcing with several large companies on *Fortune*'s Global 500 list, including Samsung and LG.

Appendix A

Measurement Items

Constructs	Items
Service Level Objectives	A statement of the service recipient's (SR) management and organizational expectations at the end of the contract, once the relationship is fully operational (**0.673**)
	A statement of innovation expectations and capabilities of the service provider (SP) (**0.733***)
	A statement of the SR's business objectives from the service (**0.803***)
Process Ownership Plan	Statement of process ownership roles and responsibilities (**0.695**)
	Inventory of processes that are required to manage the agreements between the SR and SP (**0.880***)
	Inventory of processes directly affected by the services included in the agreements (**0.913***)
Service Level Contents	A statement of the key business measurements required by the SR (**0.591**)
	Established service-level/quality targets (**0.779***)
	A general description of the service requirements, major categories of services, and specific service elements (**0.849***)
Future Demand Management Plan	Processes for scheduling, costing, and modifying agreements with new demand (**0.847**)
	The processes used to obtain end-user feedback on the SP's delivery of services that are provisioned to meet new demand (**0.863***)
	The processes that the SR and SP will use to prioritize changes and modify the volume, type, or level of service to match evolving user requirements (**0.845***)
Anticipated Change Plan	Relevant technology, business, and industry drivers for change (**0.832**)
	Roles, responsibilities, and decision-making procedures of the SR and SP for each category of change (**0.792***)
	Clear definitions of the key categories of change (i.e., predetermined change such as charges for volume, type, or level of service to match evolving user requirements) (**0.862***)
Innovation Plan	Process for innovation, including implementation and prioritization (**0.845**)
	Process for business improvement and technology advancements (e.g., scope improvement and technology refreshes/upgrades) (**0.931***)
	Innovation incentive (reward) programs (**0.683***)
Feedback Plan	Statement of how change will be implemented based on measurement results (**0.875**)
	The road map for an efficient feedback on the identified drawbacks (**0.870***)
	Prioritization methodology for current tasks and feedback (**0.880***)
Communica-tion Plan	Statement of the communication policy (**0.816**)
	Organizational reporting structure (**0.866***)
	Identified communication reporting structure (**0.866***)
Measurement Charter	Statement of measurement methodology (**0.858**)
	Definition of what is to be measured (e.g., price and service benchmarking clause, customer satisfaction, contract and relationship alignment and vision, etc.) (**0.859***)
	Definition of processes to periodically measure the defined categories (**0.813***)
Conflict Arbitration Charter	A statement of the parameters for involving the third party in discussions between the SR and SP (**0.814**)
	A schedule for regular interactions between the parties, and timetables for discussions between the SR and SP (**0.680***)
	A statement of the practices and conduct rules required to preserve the independence of the independent advisor (**0.852***)
Enforcement Plan	Penalty definitions and formula (**0.705**)
	Conditions under which termination may occur (**0.956***)
	Statement of exit responsibilities (**0.788***)

Constructs	Items
Relational Norms	Both parties in the relationship are willing to accommodate each other as conditions change.
	Flexibility in response to requests for changes is a characteristic of this relationship.
	The parties are committed to improvements that may benefit the relationship as a whole, and not only the individual parties.
	Both parties in the relationship effectively exchange information with each other.
	It is expected that we keep each other informed about events or changes that may affect the other party.
Commitment	Both parties are willing to commit resources to sustain the relationship.
	If we requested it, SP would be willing to make further investment to support our needs.
	We are willing to put more effort and investment in building our business relationship with SP.
	Even if they could, SP would not drop our organization as a service recipient (client) because they like being associated with us.
	We want to remain a customer to SP because we genuinely enjoy our relationship with them.
	The continuation of a relationship with SP is very important to us.
	SP expects the relationship with us to continue for a long time.
Harmonious Conflict Resolution	Disagreements between both parties in the relationship are almost always successfully resolved.
	Differences of opinion were resolved to the mutual satisfaction of conflicting parties.
	The discussions I have had with this SP's personnel on areas of disagreement increase the effectiveness and strength of our relationship.
Trust	The SP makes beneficial decisions to us under any circumstances.
	The SP is sincere at all times.
	The SP has always provided us a completely truthful picture of the relevant IT services.
Mutual Dependence	Both parties in the relationship share the risks that can occur in the process of business.
	Both parties in the relationship have collective responsibility of benefits and risks.
	Both parties in the relationship effectively carry out services that the other is dependent on.
Type of IT Activity	Please provide a brief description of IT services the SP currently provides your organization. 1. Application services 2. Systems integration 3. Data center management 4. Training and consulting 5. Network management 6. Disaster recovery 7. PC management and maintenance 8. Company-specific application development
Length of Association	How long is the contract term with the SP in Year ____?
	When did you start contracting IT services from the SP?
Extent of Substitution	For the last fiscal year, percentage of IT budget spent on IT outsourcing: 1. Less than 5% 2. 5% to below 10% 3. 10% to below 20% 4. 20% to below 40% 5. 40% to below 60% 6. 60% to below 80% 7. 80% and above

Notes: The numbers in parentheses are standardized parameter estimates of SLA items for the measurement validation. *p < .001. The first item loading in each latent construct is fixed at 1.00 and does not have a t-value.

Model fit indices: Goodness of fit (X^2) with 380 degrees of freedom = 491.7 (p = 0.00)
Goodness of fit index = 0.87
Adjusted goodness of fit index = 0.84
Comparative fit index = 0.95
RMSEA = 0.57
Tucker-Lewis Index = 0.94