How to Govern Business Services Exchanges: Contractual and Relational Issues

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ABSTRACT

With firms concentrating on core competencies, more emphasis has been placed on outsourcing and the dealing with external sourcing agents. This has lead to a stronger academic focus on buyer-seller exchanges and the corresponding mechanisms for governing these exchanges. This paper gives an overview of previous research investigating the exchange governance phenomenon based on transaction cost theory or cooperative interorganizational relationships. The results reveal that few research studies have investigated the overall picture of exchange governance, including both contractual and relational governance and taking into account antecedents as well as performance outcomes of the governance mechanisms involved. Moreover, despite the service-dominant logic shift, limited attention is given to specific service characteristics and their impact on exchange governance. In this paper, we attempt to meld economic and social related antecedents into a model with regard to exchange governance in business services settings. Contractual and relational governance issues and their impact on performance outcomes are also considered. The resulting model indicates that to efficiently govern business services exchanges, more emphasis should be placed on behavioral uncertainty, human and process asset specificity and contractual governance. We conclude the paper by discussing several directions for future research.
In today’s turbulent marketplace, firms are increasingly concentrating on their core competencies to remain competitive. Consequently, these firms resort to outsourcing those activities that fall outside their own domain of expertise. Because of the increased need for dealing with suppliers and other external sourcing agents, a strong focus on buyer-seller exchanges and the corresponding mechanisms for governing these exchanges has emerged. Governance refers to the formal and informal rules of exchange between partners (Griffith and Myers 2005, Nickerson, Hamilton, and Wada 2001, Wathne and Heide 2004). In general, two types of governance strategies (Griffith and Myers 2005) have been studied: economic governance strategies such as contracts (Lusch and Brown 1996) and relational governance strategies such as relational norms (Heide and John 1992). While initial research on buyer-seller relationships mainly treated these exchanges as discrete transactions and not as ongoing relationships (Dwyer, Schurr, and Oh 1987), subsequent studies have placed more emphasis on relationship-based rather than transaction-based marketing perspectives (Sharma and Pillai 2003). While both these perspectives have their merits, Griffith and Myers (2005) suggest that further research is needed to provide an in-depth and extensive understanding of buyer-seller exchange governance mechanisms and the relationship between these governance strategies.

The objective of this paper is to investigate the governance mechanisms in buyer-seller exchanges, the relationship between these mechanisms and the corresponding impact of these governance mechanisms on the performance of the relationship. In particular, we focus on business exchanges in a services context. We do this for the following reasons. The service sector continues to grow in our economies and the biggest challenge in marketing today is re-orienting the focus on services (Vargo and Lusch 2004), especially in business-to-business settings (Johnston 2005). This recent shift towards a more service-centered view has intensified the need for research on exchange governance and governance of business services.
exchanges. Because of different issues and success factors in service industries, we simply do not know whether findings from previous studies in manufacturing settings extend to the service sector (Judge and Dooley 2006). First, exchange governance and its performance implications might be different in services compared to manufacturing settings. Because of the intangible nature of services, the writing of contracts is more challenging (Fitzsimmons and Fitzsimmons 2006) and relational structures such as relational norms will necessarily emerge (Vargo and Lusch 2004). Second, the findings of previous research indicate that manufacturing and services firms seem to respond differently to determinants of exchange governance such as asset specificity and uncertainty (Brouthers and Brouthers 2003). As services tend to be more people-oriented, knowledge and experience will play a more fundamental role than goods in service exchanges (Vargo and Lusch 2004). Moreover, because of the intangible nature of services, evaluation of the services being delivered is more difficult as these are not subject to close scrutiny (Fitzsimmons and Fitzsimmons 2006). Third, current research has not completely investigated the overall picture of exchange governance, including both social and economic antecedents, contractual and relational aspects, and performance consequences. Furthermore, little attention has been paid to the impact of specific service characteristics. Consequently, the governance of business exchanges requires further investigation, especially in a business services setting.

In this paper, we address the concerns stated above by proposing a model that identifies the process by which firms use contractual and relational governance to manage relationships between buying organizations and service suppliers. Antecedent factors that influence the type of governance mechanisms used and the subsequent impact of these governance mechanisms on performance outcomes of the buyer-seller relationships in
business services settings are identified. The model with the incorporated constructs and their interrelationships is illustrated in Figure 1.

The following section of the paper is devoted to further discuss the theoretical background of the shift from transaction to relational exchange in business-to-business services exchanges. Governance mechanisms for these business exchanges are subsequently discussed. We then propose a model based on these governance mechanisms and incorporate relevant antecedents and consequences of these governance mechanisms in business services settings. Finally, theoretical and practical implications of the paper are discussed, along with directions for future research.

THEORETICAL BACKGROUND

From Transaction to Relational Exchange

Ever since the work by Williamson (1979, 1985) on the governance of transactions, Transaction Cost Economics (TCE) has become one of the leading perspectives in the field of management and the study of organizations (David and Han 2004). The focus of TCE is on transactions and especially on their analysis and how efficiency can be achieved. The central claim is to handle transactions in such a way as to minimize the costs involved in carrying them out (David and Han 2004). A transaction is defined by Williamson (1985) as the transfer of a good or a service between separated units. Transactions are the units of exchange
(Williamson 1991) and are characterized by transaction-specific attributes on which the choice between different forms of alternate governance modes depends. These attributes include asset specificity, uncertainty, and frequency (cf. Williamson 1985). These transaction-specific attributes in turn are related to the two main assumptions of human behavior in TCE (Rindfleisch and Heide 1997): bounded rationality and opportunism. Bounded rationality assumes that decision makers have limited rationality because of constraints on their cognitive capabilities. While decision makers may be willing to act rationally, limited information processing and communication causes bounded rationality (Rindfleisch and Heide 1997). Due to the presence of uncertainty, bounded rationality plays a more profound role in the exchange setting. The second assumed human behavior in TCE, opportunism, supposes that decision makers may be seeking to serve their self-interest: “self-interest seeking with guile” (Williamson 1985). This relates to behaviors such as lying, cheating or other forms of violating the agreement. The extent to which specific assets support the transaction causes opportunism-related behavioral problems because of the increased safeguarding problem (Rindfleisch and Heide 1997).

The ‘discriminating alignment hypothesis’ of TCE states that transactions which differ in attributes are aligned with appropriate governance mechanisms, i.e. those structures which minimize the associated transaction costs (Williamson 1991). Whether economic agents will rely on a particular form of governance depends on the attributes of the transactions to be realized and the associated transaction costs (Aubert, Rivard, and Patry 1996). The governance mechanisms in TCE are originally limited to two alternate forms: market governance and hierarchy. Market governance relates to a market-based exchange with the market as governance mechanism. Market transactions are characterized by legal, formal
terms and hard bargaining (David and Han 2004). Hierarchy relates to internal organization or vertical integration with the firm as governance mechanism (Rindfleisch and Heide 1997).

Previous research on business exchanges has been mainly founded on unilateral approaches to buyer-seller relationships such as market or hierarchy (Joshi and Stump 1999). Nevertheless, over the past two decades, marketing has been transitioning from a transaction focus to more of a relationship focus (Vargo and Lusch 2004) and the findings from previous research indicate that TCE only provides limited guidance concerning suitable exchange governance for interfirm relationships (Pilling, Crosby, and Jackson 1994). As a result, intermediate modes of governance – distinct from the traditional modes of market and hierarchy – have been proposed (Zaheer and Venkatraman 1995). Such governance modes have been termed as hybrids (Williamson 1991) and their strategic importance is growing (Zaheer and Venkatraman 1995). In today’s business world, the concern is no longer the unilateral governance of transactions, but the bilateral governance of relational exchanges (Joshi and Stump 1999). In hybrids or bilateral governance modes, the exchange partners’ identity gains in importance because replacing the other entails considerable costs (David and Han 2004). As a result, the exchange partners will work together to restrain opportunism (Joshi and Stump 1999).

Because of the shift from unilateral governance of transactions towards the bilateral governance of relational exchanges, researchers (e.g. Brown, Dev, and Lee 2000) have combined the principles of TCE (Williamson 1985), the principles of Relational Exchange Theory (RET) (Macneil 1980), and relational governance to better understand buyer-seller interchange. RET mainly focuses on exchange relationships with significant levels of relational behavior between the exchange partners (Pilling, Crosby, and Jackson 1994).
Consequently, the unit of analysis is no longer the transaction itself, but the relationship established between supplier and buyer, based on the transactions taking place.

**Governance of Exchange**

In general, two types of governance strategies (Griffith and Myers 2005) have been studied: economic governance strategies such as contracts (Lusch and Brown 1996) and relational governance strategies such as relational norms (Haugland and Reve 1993, Heide and John 1992). Cannon, Achrol, and Gundlach (2000) focused on legal contracts and relational norms as the two common governance mechanisms used as building blocks for complex structures of governance.

Contractual governance is considered a formal, legal and economic governance strategy (Ferguson, Paulin, and Bergeron 2005, Lusch and Brown 1996). This governance mechanism is defined as the degree to which the formal contract is currently established in existing business exchanges (Ferguson, Paulin, and Bergeron 2005). It tends to depend more heavily on the principles of contract law (Lusch and Brown 1996), although the impact of inter-firm contractual law regulation on governance mechanisms is not part of this research (cf. Arrighetti, Bachmann, and Deakin 1997). In this research, contractual governance refers to explicit, formal, and usually written contracts. Contracts are detailed, binding legal agreements that specify the obligations and roles of both parties in the relationship. As such, contracts can be considered as substitutes for formal governance mechanisms of hierarchy or integration in business exchanges (Ferguson, Paulin, and Bergeron 2005, Gundlach and Achrol 1993, Heide 1994, Lusch and Brown 1996). Several researchers have delineated the importance of examining contracts (Brown, Cobb, and Lusch 2006, Lusch and Brown 1996).
and suggest that if contracts are misused, performance outcomes and behavioral relations among buyers and sellers may be harmed.

Relational governance is defined as the strength of the social norms present in the exchange and has often been referred to as relationalism (Ferguson, Paulin, and Bergeron 2005). Relationalism points not only to the relationship orientation of the exchange partners, but also to the emphasis placed by them on exchange behaviors or norms as indicators of closeness in buyer-seller relationships (Macneil 1980). Relational norms are defined as the bilateral expectations that exchange partners will act in ways that assist each other during the course of the relationship (Joshi and Campbell 2003). As such, relational governance can be considered rather informal and social, compared to contractual governance (Achrol and Gundlach 1999). Dwyer, Schurr, and Oh (1987) introduced Macneil’s (1980) relational contract theory and its behavioral concepts into the marketing literature on buyer-seller relationships. Ever since, it is generally accepted that interfirm activities can be managed using relational elements or norms (Weitz and Jap 1995, Zhang, Cavusgil, and Roath 2003). The importance of relational norms in business services settings has been illustrated by Paulin, Perrien, and Ferguson (1997). Recently, relational governance strategies such as relational norms have drawn increased academic and managerial focus (Griffith and Myers 2005).

Both contractual and relational governance are included in this paper as the interesting questions about these governance mechanisms have less to do with their single effect than with their interaction effect (Achrol and Gundlach 1999). There have been studies on the antecedents of contractual and/or relational governance (e.g. Claro, Hagelaar, and Omta 2003, Poppo and Zenger 2002), the interaction between both governance mechanisms (e.g. Lusch
and Brown 1996) and its impact on performance (e.g. Poppo and Zenger 2002, Styles and Ambler 2003). Table 1 gives an overview of empirical studies on exchange governance and the incorporated constructs. This table illustrates that still little is known on the overall picture taking into account both contractual and relational governance and their determinants and outcomes, especially in business services settings. Therefore, a model incorporating relevant antecedents and consequences of the contractual and relational governance interplay is developed to gain more in-depth understanding of exchange governance in a business services context.

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**MODEL OF GOVERNANCE MECHANISMS**

In this research, we look at the interplay between contractual and relational governance and their antecedents and outcomes in business services exchanges. We assume that the exchange partners are already involved in the relationship, past the awareness phase and before the dissolution phase (Dwyer, Schurr, and Oh 1987) and that they are not interacting on a discrete or one-time basis. The performance of the relationship during the exploration, expansion, and commitment phase (Dwyer, Schurr, and Oh 1987) will determine whether or not both parties are willing to continue or enhance the relationship. The model as illustrated in Figure 1 proposes relationships between antecedents and governance mechanisms and between these governance mechanisms and outcomes. This is the traditional way in which channel behavior is presented (Lusch and Brown 1996). However, when
interfirm relationships are considered as a developmental process in a longitudinal sense (Ring and Van de Ven 1994), performance outcomes can cause feedback and have a recursive relationship with relational or contractual governance. The governance of the exchange can also have a recursive relationship with certain antecedents. Therefore, we note that this model is a partial model and can not represent all possible antecedents and consequences of exchange governance in business services settings. In this research, the governance of business services exchanges is discussed at a certain stage in the buyer-seller relationship: the contract has been established ex ante and relational governance is still developing. The exchange partners have invested in the establishment of the contract and the current execution of the commitments made will determine the agreement’s renewal, expansion or dissolution in the future.

**Governance Mechanisms and their Performance Outcomes**

 Buyer-seller exchanges in business services markets are governed through both formal and informal agreements (Ivens 2005). The use of contracting for service delivery is extensive and rising (Dean and Kiu 2002). Explicit, written contracts between buyer and seller are established in the commitment stage (Ring and Van de Ven 1994) and formally state how parties to the contract should behave over time (Lusch and Brown 1996). During the execution of the contract, the content of the contract mainly remains unchanged until the next negotiation phase (Ring and Van de Ven 1994). Relational governance emerges from the values and agreed-upon processes found in the relationship and further develops within the relationship (Macneil 1980, 1983). Thus, at a certain point in an interfirm exchange, the formal agreement or contract has been established ex ante and the informal agreement or relational governance continues to develop over time.
Interaction between contractual and relational governance. The interaction between contractual and relational governance and how both governance mechanisms relate to performance have been investigated in previous research. Based on these results, two schools of thought can be distinguished (Lazzarini, Miller, and Zenger 2004, Wuyts and Geykens 2005): the substitution and the complementarity view.

The complementarity view argues that contracting methods and relational issues are supposed to complement each other and thus should be considered simultaneously (Möllering 2002). This school of thought is based on the idea that incomplete contracts facilitate the self-enforcement of informal agreements such as relational governance (Lazzarini, Miller, and Zenger 2004). Contractual specifications are even presumed to increase the occurrence of relational behavior between the exchange partners. Based on TCE and contract theory, the established contract limits the possibilities for opportunistic behavior (Woolthuis, Hillebrand, and Nooteboom 2005). Explicit contracts formally state how parties to the contract should behave over time (Lusch and Brown 1996). Moreover, the punishments specified in the contract reduce the short-time gains of opportunistic behavior and heighten the gains from cooperative behavior (Poppo and Zenger 2002). In a business service exchange, Ivens (2005) states that more formal and detailed contracts between buyer and seller increase the likelihood that relational behavior is performed. Thus, according to the complementarity view, contracts reduce the gains of short-term opportunism through incentives or punishments, thereby increasing the value of honoring more informal dealings such as relational governance (Lazzarini, Miller, and Zenger 2004, Poppo and Zenger 2002). Several researchers (Eriksson and Sharma 2003, Wathne and Heide 2004) state that contracts are only partly helpful and that the development of relational governance is even a necessity.
Nonetheless, in accordance with the substitution view (Lazzarini, Miller, and Zenger 2004), certain social scientists claim that contracts may be detrimental to the development of relational behavior (Woolthuis, Hillebrand, and Nooteboom 2005). This school of thought indicates that the presence of one governance mechanism may hinder or even preclude the emergence of the other (Paswan, Dant, and Lumpkin 1998, Poppo and Zenger 2002): the existence of a contract in a relationship may undermine the development of relational norms (Dyer and Singh 1998, Macaulay 1963). Two reasons for the negative relationship between contract and relational governance (Gundlach and Achrol 1993) are mentioned (Woolthuis, Hillebrand, and Nooteboom 2005). The first reason states that drawing up a contract is interpreted as a sign of distrust (Bradach and Eccles 1989). However, the research of Roxenhall and Ghauri (2004) demonstrates that contracts are mostly drawn up for establishing business relationships, thus confirming the willingness of both parties to engage in the exchange. Moreover, business services exchanges are often provided in the form of long-term relationships (Ivens 2005) indicating the relational orientation of both parties. The second reason states that the active use of the contract may evoke opportunism and thus hinder the development of relational behavior (Woolthuis, Hillebrand, and Nooteboom 2005). On the other hand, Roxenhall and Ghauri (2004) claim that contracts are merely established to determine the business relationships and are hardly ever established to prove what was agreed upon or to enforce the agreement.

Empirical research in business services exchanges has disconfirmed the substitution view (Poppo and Zenger 2002), while the complementarity of contracts and relational governance has not been disconfirmed (Bennett and Robson 2004, Poppo and Zenger 2002). Therefore, the complementarity of contractual and relational govenances is assumed in
business services exchanges and thus, we posit a positive link between contractual and relational governance.

In a longitudinal sense, recursive relationships between relational governance and formal contracts may emerge. In a subsequent negotiation phase, relational behavior may promote the refinement of the formal contract to complement its adaptive limits (Poppo and Zenger 2002). However, in this paper, the focus is on the governance of the current exchange, excluding the subsequent negotiation between buyer and seller.

**Performance outcomes of exchange governance.** Considering relational and contractual governance as complements indicates that the combined use of both governance mechanisms provides more efficient outcomes than the use of either governance mechanism in isolation (Lazzarini, Miller, and Zenger 2004, Poppo and Zenger 2002). When both governance mechanisms are used simultaneously, advantage can be taken of their differential impacts to enhance their individual outcomes (Brown, Dev, and Lee 2000, Weitz and Jap 1995). Based on the complementarity view (Lazzarini, Miller, and Zenger 2004), contractual and relational governance are each assumed to have a positive impact on performance outcomes, also in a business services setting (Poppo and Zenger 2002). While the positive influence of relational governance on performance outcomes has been frequently assessed and confirmed (e.g. Bello, Chelariu, and Zhang 2003, Ferguson, Paulin, and Bergeron 2005), the positive link between contractual governance and performance outcomes has been challenged by certain researchers. They state that exchange performance might decrease when detailed contracts are used and relational governance is not well developed (Cannon, Achrol, and Gundlach 2000, Ferguson, Paulin, and Bergeron 2005). Nonetheless, Cannon, Achrol and Gundlach (2000) had mentioned certain advantages of contractual governance: they pointed
out that careful contract negotiation serves as a foundation for and consequently act as a complement to relational governance. However, those research studies did not investigate possible positive effects of the ex ante established contract on the development of relational governance. We propose that the establishment of a detailed contract ex ante enhances the development of relational governance in business services settings. Thus, when the interfirm exchange is governed by a detailed contract, low levels of relational governance, and the supposed negative impact of contractual governance on performance, can not occur. This is supported in the study of Ferguson, Paulin, and Bergeron (2005) in which a significant positive effect between contractual governance and performance was found in stead of the supposed negative relationship for business clients in commercial banking. Because of the barriers against opportunistic behavior created by the contract, performance outcomes of the exchange will be enhanced (Judge and Dooley 2006). Moreover, a written contract makes the intangible service more tangible, facilitating the management of the required service delivery and thus resulting in a higher performance. Therefore, in a business services setting, both contractual and relational governance will be positively related to performance outcomes.

Antecedents of Governance Mechanisms

Based on Griffith and Myers (2005), both social and economic governance mechanisms should be incorporated to investigate buyer-seller exchanges. Accordingly, antecedents from both the sociological and economic perspective should be included when investigating exchange governance. In the governance of exchange relationships, non-economic factors – primarily represented by trust – are complementary to economic factors (Zaheer and Venkatraman 1995). TCE indicates three economic factors: frequency, asset specificity, and uncertainty (Williamson 1985). Frequency refers to a recurring instead of an occasional or one-time transaction. Previous research has devoted limited attention to the
frequency attribute (David and Han 2004, Rindfleisch and Heide 1997). As we assume that the exchange partners are not interacting on a discrete or one-time basis, frequency is not further considered.

Previous research suggests that the impact of transaction attributes on governance modes or performance outcomes is not always straightforward (Bello, Chelariu, and Zhang 2003). A first explanation could be the diverse definition and operationalization of these attributes (David and Han 2004). Moreover, the conceptualization of a construct in manufacturing settings might be inadequate for services settings (Zaheer and Venkatraman 1995). A second explanation could be the different response of manufacturing and services firms to certain transaction-specific attributes (Brouthers and Brouthers 2003, Murray and Kotabe 1999). Compared to manufacturing settings, emphasis should be more on people and less on tangible aspects of the delivery in business services settings.

**Asset specificity.** Asset specificity is defined by Williamson (1991) as the degree to which the assets used in support of the transaction can be redeployed to alternative uses without sacrifice of productive value. Asset specificity is considered the most important transaction attribute by Williamson (1985) and is the most frequently considered attribute in empirical research dealing with TCE (David and Han 2004). Several research studies (Fink, Edelman, Hatten, and James 2006, Heide and John 1990, Poppo and Zenger 2002) also use asset specificity as a proxy for organizational dependence defined as the degree of external control of the organization (Pfeffer and Salancik 1978).

Asset specificity exists in a number of specific dimensions (Williamson 1975) of which physical and human specificity most frequently occur (Grover and Malhotra 2003).
Physical asset specificity refers to assets for which the specificity is attributable to physical features (Williamson 1985) and incorporates customized machinery, tools and equipment (Heide and John 1990). Given the shift towards a service-dominant logic (Vargo and Lusch 2004) and the focus on business services exchanges, physical asset specificity appears less relevant in the business-to-business services world. Based on the intangible nature of services and the increased importance of process and knowledge, we focus on business process asset specificity which incorporates both human and procedural asset specificity (Zaheer and Venkatraman 1995). Human asset specificity relates to the learning-by-doing concept or the chronic problems of moving human assets (Williamson 1985). It deals with the degree to which skills, knowledge, training and experience of the personnel are specific to the requirements of the other firm (Claro, Hagelaar, and Omta 2003, Poppo and Zenger 2002, Walker and Poppo 1991, Zaheer and Venkatraman 1995). Procedural asset specificity relates to the extent to which a firm’s workflow and processes are customized in line with the requirements of the other party (Zaheer and Venkatraman 1995). The process to deliver maintenance services to a particular buyer organization can for example be adjusted to that customer’s specific machinery and its specific location at the customer’s premises. However, the explicit use of procedural asset specificity is limited in research studies on exchange governance in business settings. Nonetheless, it is considered as a powerful form of transaction-specific assets in service firms (Zaheer and Venkatraman 1995).

Transaction specific investments can be made by either the buyer or the seller (Heide and John 1990). While most studies incorporate only one of these types of asset specificity (Claro, Hagelaar, and Omta 2003, Heide and John 1992), both TCE theory and empirical results indicate the relevance of both in the governance of interfirm exchanges (Stump and Heide 1996, Williamson 1983). Specific investments made by the supplier are referred to as
supplier asset specificity, while specific investments made by the buyer are referred to as
buyer asset specificity or reciprocal investments. First, the impact of supplier asset specificity
on exchange governance is discussed; afterwards, reciprocal investments are considered.

The theory of TCE suggests that as asset specificity increases, hybrids and hierarchies
are preferred over markets and at high levels of asset specificity, hierarchy becomes the
preferred governance mechanism (David and Han 2004). Put differently, a higher degree of
asset specificity requires greater safeguards included in the exchange to guard against
opportunistic behavior. As a result, the exchange governance should move away from the
market towards more specialized forms of governance because these minimize transaction
costs (Williamson 1985). Contracts – as substitutes for hierarchy (Heide 1994) – have been
established ex ante and can be considered as the first safeguard against opportunism. The
higher the asset specificity, the more complex the established contracts (Dyer 1997) and the
more long-term contracts will be preferred (Aubert, Rivard, and Patry 1996, Joskow 1987).
Complex contracts containing remedies for anticipated contingencies are crafted to better
safeguard the investor of specific investments against opportunism (Poppo and Zenger 2002).
When asset specificity increases, transaction costs are presumed to increase (Williamson
1985), but by establishing more complex contracts certain costs associated with asset
specificity will be attenuated (Dyer 1997). For example, more complex contracts eliminate or
at least attenuate the bargaining over profits from transaction-specific assets (Dyer 1997). Past
and future transaction-specific assets and their safeguarding difficulties are anticipated in the
ex ante established contract by creating a detailed contract and specifying clearly the roles and
obligations of each party (in the absence of environmental uncertainty – cf. infra), as
confirmed by the research of Poppo and Zenger (2002).
A number of researchers (e.g. Claro, Hagelaar, and Omta 2003, Heide and John 1990) have investigated the impact of supplier asset specificity on relational governance, but without incorporating contractual governance and its effect on relational governance. They assume a positive relationship between asset specificity and relational governance based on TCE theory: asset specificity increases switching costs and thus, relational governance is enhanced as a safeguard against opportunist behavior. However, to investigate the impact of supplier asset specificity on exchange governance, other safeguards against opportunism like contractual governance and its interplay with relational governance were not incorporated in their research design. Consequently, the impact of supplier asset specificity on relational governance in the presence of an ex ante established contract has not yet been thoroughly investigated. Based on TCE theory, we posit that contracts are established ex ante as a safeguard against opportunistic behavior caused by supplier asset specificity. However, because of limited information processing and bounded rationality in TCE theory, additional mechanisms such as relational governance might be needed to safeguard further past and future investments. Therefore, we posit that supplier asset specificity affects both contractual and relational governance (in the absence of environmental uncertainty – cf. infra).

Uncertainty. Uncertainty is the second most analyzed transaction-specific attribute (David and Han 2004). In TCE, uncertainty is mostly related to environmental or behavioral aspects (Rindfleisch and Heide 1997). Environmental uncertainty is also referred to as external uncertainty, while behavior uncertainty is sometimes called internal uncertainty (Cannon, Achrol, and Gundlach 2000). The research overview of David and Han (2004) reveals that the most common form of uncertainty is environmental uncertainty, while behavioral uncertainty is less frequently investigated. Environmental uncertainty is defined as unanticipated changes in relevant factors surrounding the exchange (Noordewier, John, and
This type of uncertainty mainly refers to the unpredictability of the environment or the inability to predict changes in the external environment (Joshi and Stump 1999). The operationalization of environmental uncertainty is not uniform across research studies as several types of unpredictability can be incorporated. Market conditions, such as price and demand (Pilling, Crosby, and Jackson 1994), and technology (Heide and John 1992, Poppo and Zenger 2002) are the most frequently occurring (David and Han 2004). Behavioral uncertainty is defined by Williamson (1985) as arising from problems related to monitoring the performance of exchange partners. This type of uncertainty refers to the unpredictability of the exchange partner’s behavior. Conform to this definition, behavioral uncertainty is most often operationalized as the degree of difficulty associated with assessing the performance of transaction partners (Anderson 1985, Rindfleisch and Heide 1997). Behavioral uncertainty encompasses the difficulty to evaluate the service delivered, to determine product or service standards, and to render objective assessments (Cannon, Achrol, and Gundlach 2000).

Empirical results of previous research indicated that environmental and behavioral uncertainty can have opposite effects on the governance of business services exchanges (Poppo and Zenger 2002). In business services settings, behavioral uncertainty seems to have a much stronger influence on exchange governance than in manufacturing settings (Brouthers and Brouthers 2003). Services tend to be more people-oriented (Erramilli and Rao 1993) and are harder to judge on delivery (Fitzsimmons and Fitzsimmons 2006): for example, the output of advertising services will be harder to evaluate than the output of OEM supplies. Consequently, services firms respond more to the people-oriented component of TCE, i.e. behavioral uncertainty, than manufacturing firms (Brouthers and Brouthers 2003). Environmental uncertainty consists of unpredictability of both technology and market conditions such as price and demands (David and Han 2004). As services are less investment
intensive and require fewer resources (Erramilli and Rao 1993), services firms are less responsive to certain technology-related or material-related uncertainties than manufacturing firms (Brouthers and Brouthers 2003). For example, the steel-making industry will be very responsive to the development of an enhanced steel producing technology. On the other hand, services firms could be equally or more responsive to other facets of environmental uncertainty such as demand and competition (Brouthers, Brouthers, and Werner 2002). As services can not be inventoried and sold at a later time, increases in demand may also cause increases in service firm costs. Furthermore, in services settings such as the cleaning industry, the threat of new entrants is typically greater than in manufacturing settings (Brouthers, Brouthers, and Werner 2002).

According to TCE theory, uncertainty has an impact on exchange governance only in the presence of asset specificity: a moderating effect is assumed (David and Han 2004). In our research, set in a business services context, we posit a moderating effect of environmental uncertainty on the relationship between asset specificity and exchange governance. However, a direct effect of behavioral uncertainty on exchange governance is assumed. Because of the high people-oriented character and increased difficulty in assessing the exchange partner’s behavior in business services settings, behavioral uncertainty is proposed to influence exchange governance apart from the level of asset specificity.

Despite the numerous empirical studies on TCE theory, possible moderating effects of environmental uncertainty on the relationship between asset specificity and governance mechanisms have not yet been empirically investigated. According to TCE theory, when asset specificity is present to a certain degree, increasing uncertainty renders markets preferable to hybrids, and hierarchies preferable to both hybrids and markets (David and Han 2004).
However, higher levels of environmental uncertainty increase the costs of establishing or adapting contractual agreements (Rindfleisch and Heide 1997): when high environmental uncertainty is present, it is hard to determine ex ante how to react on unforeseen changes. Moreover, the study of Pilling, Crosby and Jackson (1994) indicates that environmental uncertainty increases the ex ante costs of developing an exchange relationship and specifying the roles of each exchange partner. As a consequence, due to increased environmental uncertainty, it will be harder to stipulate ex ante detailed and specific roles and obligations for each exchange partner. Furthermore, faced with environmental uncertainty, the exchange partners may prefer to remain flexible in the relationship and as such resist governance mechanisms that result in greater contractual governance (Gundlach and Achrol 1993). Thus, we posit that contractual governance will be a less effective mean to safeguard against past and future specific investments and to deal with opportunism caused by asset specificity in highly uncertain environments. Therefore, environmental uncertainty will have a negative moderating effect on the relationship between supplier asset specificity and contractual governance.

As contractual governance is not a sufficient governance mechanism to protect against opportunism caused by asset specificity in highly uncertain environments, other governance mechanisms should be developed as safeguard. The research of Cannon, Achrol, and Gundlach (2000) indicated that, when uncertainty is high, contractual governance is not sufficient: relational governance should be enhanced to protect against opportunism. If relational governance is established, adaptations to changes in the environment can be carried out more readily (Heide and John 1990) and efficiencies for both exchange partners are enhanced (Claro, Hagelaar, and Omta 2003). Therefore, we posit that environmental uncertainty has a positive moderating effect on the relationship between supplier asset
specificity and relational governance: in settings with high environmental uncertainty, supplier asset specificity has a more profound impact on relational governance.

In business services exchanges, behavioral uncertainty will be more important than in manufacturing settings because of the relatively more people-oriented and less tangible character of services (Brouthers and Brouthers 2003). Material goods can be inspected upon delivery, but this opportunity does not exist for purchased services: how does one for example know if the supplier of plant security is being effective (Fitzsimmons and Fitzsimmons 2006). More problems related to monitoring the exchange partner’s performance will arise in services settings because of their intangibility, simultaneity and people-oriented character (Erramilli and Rao 1993). Consequently, behavioral uncertainty will have a more profound impact in business services exchanges than in manufacturing settings (Brouthers and Brouthers 2003).

Few researchers have investigated the impact of behavioral uncertainty on exchange governance (David and Han 2004). Moreover, no researcher, except for Poppo and Zenger (2002), has incorporated both contractual and relational governance to assess the impact of behavioral uncertainty on exchange governance. Rindfleisch and Heide (1997) state that behavioral uncertainty causes ex ante information asymmetry because of the inability to determine a party’s true characteristics prior to the exchange. Therefore, with high behavioral uncertainty it might be harder to determine ex ante which monitoring practices should be incorporated in the contract or to stipulate ex ante detailed and specific roles and obligations for each exchange partner, especially in business services exchanges. Although the research study of Poppo and Zenger (2002) initially indicated a positive relationship between behavioral uncertainty and contractual governance, further detailed analyses revealed a
negative impact of behavioral uncertainty on contractual governance when other factors were taken into account.

Behavioral uncertainty also causes ex-post difficulties because of information asymmetry regarding task performance (Rindfleisch and Heide 1997). When behavioral uncertainty increases and performance of the exchange partner is hard to evaluate, relational governance is difficult to develop (Heide and Miner 1992). Based on Heide and Miner (1992), the following argument can be developed. Behavioral uncertainty makes it unclear whether a bad service performance is caused by the other party or whether the cause is beyond the other party’s control. If you give the other party the benefit of the doubt, the road to exploitation is open. If you consider it a fault of the other party, a spiral of joint retaliation is created. In either way, behavioral uncertainty has a negative impact on relational governance in business services (Eriksson and Sharma 2003). Based on the above arguments, this type of uncertainty has a negative impact on exchange governance: we posit a negative relationship between behavioral uncertainty and contractual governance and between behavioral uncertainty and relational governance in business services exchanges.

**Reciprocal investments.** Next to supplier asset specificity, specific investments can also be made by the other partner to the exchange. In this research, we refer to buyer asset specificity or reciprocal investments. Based on TCE theory, reciprocal investments can form a “hostage” (Williamson 1983): these investments serve as a credible commitment in the relationship. Based on reciprocal investments, bilateral credible commitments and a mutual reliance relation are created (Williamson 1985) in stead of unilateral dependence (Joshi and Stump 1999). Reciprocal investments are supposed to protect the specific investments of the other exchange party and consequently tend to lower the need for safeguards against
opportunism (Zaheer and Venkatraman 1995), due to the credible threat of forfeiture of the hostages (Joshi and Stump 1999). On the other hand, Heide and John (1990) argue that specific assets do not have the characteristics of good “hostages” because these are valued more highly by the giver than the taker. Consequently, the effects of supplier and buyer asset specificity are both enhancing and not attenuating the need for exchange governance: specific investments of both buyer and supplier increase the level of relational governance (Heide and John 1990). As neither exchange party is able to turn to another exchange relationship due to the specific investments, both parties are willing to develop relational governance to assure cooperation in the future (Joshi and Stump 1999). The negative influence of reciprocal investments on exchange governance has not been empirically confirmed (Zaheer and Venkatraman 1995), whereas the positive influences of both supplier’s and buyer’s specific investments on relational governance have been empirically confirmed (Joshi and Stump 1999).

The joint impact of reciprocal investments or buyer asset specificity and supplier asset specificity on contractual governance has not yet been empirically investigated. Based on TCE theory, we propose that detailed and specific contracts contain remedies for anticipated contingencies to safeguard against opportunism caused by supplier asset specificity (Poppo and Zenger 2002). However, the detailed roles and obligations are established for each party to the exchange. Consequently, not only the supplier’s but also the buyer’s specific investments made will be protected by the contract. For example, the longer the term of the contract, the more the supplier and buyer specific investments will be protected (Joskow 1987). Therefore, additional specific investments made by the buyer will not increase contractual governance. Thus, reciprocal investments do not influence contractual governance.
but relational governance is enhanced by those investments because neither party is able to turn to another exchange relationship (Joshi and Stump 1999).

**Trust.** Next to the above cited economic factors, several researchers include trust as non-economic or social factor to explain exchange governance (e.g. Joshi and Stump 1999). The statement of Chiles and McMackin (1996) that the inclusion of trust (sociological perspective) significantly increases the explanatory power of the exchange model is empirically confirmed in business services exchanges by the research of Zaheer and Venkatraman (1995). In business exchange relationships, trust is the firm’s belief that another company will perform actions that will result in positive outcomes for the firm as well as not take unexpected actions that would result in negative outcomes for the firm (Anderson and Narus 1990). This definition captures the behavioral dimension of trust that is of particular importance to maintain interorganizational relationships (Aulakh, Kotabe, and Sahay 1996, Zhang, Cavusgil, and Roath 2003). Trust is a necessary condition for relational governance (Macneil 1980) and it has been consistently mentioned as a predictor or antecedent of cooperative behavior between organizations (Ring and Van de Ven 1994): trust is a necessity for firms to learn that cooperation and relational governance will lead to outcomes that exceed what could be achieved if acted solely (Anderson and Narus 1990, Siguaw, Simpson, and Baker 1998). In the longitudinal sense, trust can also be an outcome of relational governance because of recursive relationships (Bradach and Eccles 1989, Johnston, McCutcheon, Stuart, and Kerwood 2004). Trust has been studied widely in the social exchange literature and others (Morgan and Hunt 1994) and indicated as the most encompassing determinant of relational governance (Claro, Hagelaar, and Omta 2003). As our focus is on the governance of the current exchange, we also consider trust as a necessary condition for the development of relational governance.
Incorporating the sociological perspective in the TCE framework further implies that behavioral uncertainty may be reduced by trust in contractual relations (Chiles and McMackin 1996). Based on Zand (1972), Chiles and McMackin (1996) state that the existence of trust in a contractual relationship increases accurate, comprehensive and timely information exchanges, enhances receptivity to influence by others and relaxes controls on others. Consequently, each party has greater certainty as to the performance of the exchange partner, decreasing behavioral uncertainty (Chiles and McMackin 1996, Zand 1972). When buyers trust suppliers and perceive them as being capable of delivering competent performance, the performance outcomes become more predictable and less uncertain (Gao, Sirgy, and Bird 2005). Thus, trust does not only enhance relational governance, it also decreases the level of behavioral uncertainty in business services exchanges.

THEORETICAL AND PRACTICAL IMPLICATIONS

The above arguments and the model as illustrated in Figure 1 give an overview of the effect of transaction-specific attributes and trust on contractual and relational governance and the impact of these governance mechanisms on performance outcomes in business services exchanges. A number of researchers have already empirically tested one or more of these relationships. While Table 1 gives an overview of the constructs incorporated in previous research, Table 2 describes the relationships between constructs which have been investigated by each research study. The objective of these research studies is to investigate buyer-seller relationships with focus on one or both governance mechanisms (contractual, relational) and to examine the antecedents, performance outcomes or both. The tables indicate that an overall picture, incorporating both economic and social antecedents, contractual and relational
governance, and their performance outcomes, is rarely considered. Moreover, the relationships proposed in the above reasoning and illustrated in the model sometimes deviate from the hypothesized relationships in previous research. This divergence is caused by both the scope and the focus of this paper: a global picture of exchange governance is investigated in the specific business services setting. Theoretical and managerial implications are discussed, along with directions for future research.

Theoretical and Management Implications

Despite Macaulay’s (1963) early statement that in most business exchanges, no contracts were used, recent research studies indicate that companies still do compose and sign contracts (Roxenhall and Ghauri 2004), even in business services settings (Dean and Kiu 2002, Ivens 2005). Based on the model (Figure 1), contractual governance might impact both directly and indirectly performance outcomes. Business services relationships in which a contract has been established ex ante can benefit from this action during the term of the contract by increased relational governance and enhanced performance outcomes. Consequently, contractual governance deserves more attention by both academia and practitioners but, until now, contractual governance has been rarely included in research on exchange governance (Table 2). Due to the intangibility of services, it might be harder to write contracts ex ante in business services settings than in manufacturing settings. However, in accordance with the complementarity view, governance of business services exchanges
should also include written specifications as contracts are proposed to influence both relational governance and performance outcomes.

The dominant logic shift from goods to services (Vargo and Lusch 2004) has an impact on the antecedents of exchange governance, especially on asset specificity and uncertainty. In previous research, asset specificity mainly focused on physical and human asset specificity (Grover and Malhotra 2003). Because of the service-dominant logic and the growth in significance of specialized skills and knowledge (Vargo and Lusch 2004), other aspects of asset specificity should be stressed in business services exchange governance. Business process asset specificity incorporating both human and procedural asset specificity (Zaheer and Venkatraman 1995) should be considered to determine the best suited governance mechanisms in business services settings. As a consequence, physical asset specificity becomes less relevant in these settings. Whether or not the exchange partner invests in transaction-specific physical assets should not strongly influence the chosen governance mechanism. As tangibility amongst services differs, the amount of physical assets needed to deliver the service might vary from setting to setting. Like in logistics services, physical assets might be more fundamental than in consulting services. However, because of the shift towards specialized skills and knowledge, we propose that transaction-specific investments in knowledge, skills and processes will have a more profound impact on exchange governance in business services settings than transaction-specific physical components. Moreover, today’s shift towards a service-dominant logic makes knowledge and processes more relevant than physical features (Vargo and Lusch 2004): goods are no longer the common denominator of exchange, but specialized skills and knowledge are. Therefore, even in manufacturing settings, business process asset specificity might need to be considered by both academia and practitioners. Procedural asset specificity can be of relevance not only
in services but also in manufacturing settings because it deals with customized organization routines as well (Zaheer and Venkatraman 1995), like for example ordering routines.

Next to the focus on business process asset specificity, the service-dominant logic also causes behavioral uncertainty to play a more fundamental role in business services exchanges. The intangibility, simultaneity and people-oriented character of services makes it harder to control and monitor the performance delivered by the exchange partner in services than in manufacturing settings (Brouthers and Brouthers 2003, Erramilli and Rao 1993). Consequently, because of the ex ante and ex post information asymmetries caused by behavioral uncertainty, the model proposes a direct negative impact on both contractual and relational governance. The type of uncertainty most frequently investigated in previous research, i.e. environmental uncertainty, is proposed to have only a moderating effect on the relation between asset specificity and exchange governance. When asset specificity is low, environmental uncertainty is proposed to have little impact on exchange governance. On the other hand, the impact of behavioral uncertainty is proposed to be independent of the level of asset specificity. As business services are difficult to judge on delivery, both academia and practitioners should give more attention to the impact of behavioral uncertainty on exchange governance and how its influence can be reduced in business services settings. Next to the proposed effect of trust on behavioral uncertainty, other ways to decrease this type of uncertainty should be investigated as this is an essential antecedent of exchange governance in business services settings.

**Directions for Future Research**

The above arguments and model (Figure 1) combined with the results of previous research displayed in Table 1 and Table 2 indicate some directions for future research that
need to be further explored. First, compared to relational governance, few research studies have incorporated contractual governance despite the increased use of contracting for service delivery (Dean and Kiu 2002). Those studies that do incorporate contracts in their research model all take place in the United States or Canada (Table 1). Previous studies on law and regulation have indicated that institutional factors, such as the contract law doctrine (Arrighetti, Bachmann, and Deakin 1997) and the degree of stability and consistency in systems of social regulation (Lane 1997), have an influence on preferred strategies for inter-firm contracting and the type of buyer-seller cooperation. As these institutional factors differ across countries, more research is needed on contractual governance in countries outside the North American continent. Moreover, most studies on contractual governance generally consider this construct as one-dimensional. Nevertheless, contracting literature suggest two dimensions of contract structure: the level of contract specificity (Gainey and Klaas 2003) and the level of contract flexibility (Harris, Giunipero, and Hult 1998). Therefore, the impact of contractual governance and its dimensions should be further explored. When investigating contractual governance, relational governance should also be included. While a few researchers do incorporate both governance mechanisms to investigate their impact on performance outcomes (Cannon, Achrol, and Gundlach 2000, Ferguson, Paulin, and Bergeron 2005), they generally do not incorporate the interrelationship between these governance mechanisms. As certain relationships proposed in this paper such as the impact of contractual governance on performance or the impact of contractual governance on relational governance were not incorporated in previous research studies, this might explain the differing findings between research studies on exchange governance in business settings. Future research is needed to clarify the interrelationships between contractual governance, relational governance, and performance outcomes in a business services setting.
Second, several researchers have included a certain type of asset specificity in their research study on exchange governance, but in recent years asset specificity is rarely included in these research studies (Table 1). Nonetheless, a number of research possibilities are still unexplored. Few research studies have investigated the impact of asset specificity on contractual governance and to the best of our knowledge no research study has yet investigated the impact of asset specificity and environmental uncertainty on contractual governance (Table 2). As a consequence, based on current research, it is empirically unclear whether and how contractual governance can safeguard the exchange partners against opportunistic behavior in a situation with either low or high environmental uncertainty. Transaction-specific investments for a particular exchange can be made by the supplier or the buyer: theory and empirical results indicate the relevance of both supplier and buyer asset specificity. However, only a limited number of research studies distinguishes between both types of asset specificity and no research study has yet examined whether these have a distinct impact on exchange governance, including both contractual and relational governance mechanism (Table 1, Table 2). For example, the impact of buyer asset specificity on contractual governance has not yet been investigated. In this paper we propose an insignificant relationship between these constructs but this has not yet been empirically validated. On the other hand, the positive impact of buyer asset specificity on relational governance has been empirically confirmed (Joshi and Stump 1999, Zaheer and Venkatraman 1995), though not in the presence of contractual governance. Therefore, future research is needed to fully understand the impact of specific investments made by the buyer. From a managerial viewpoint it is interesting to know how investments of the other party can affect the buyer-supplier relationship and the resulting performance outcomes in business services exchanges. When the impact of supplier and buyer asset specificity in business services
settings is further explored, more emphasis should be placed on human and procedural asset specificity in stead of physical aspects because of the intangible nature of services.

Third, despite the higher relevance of behavioral uncertainty in business services settings, this type of uncertainty has been less frequently investigated. Nonetheless, the unpredictability of the exchange partner’s behavior can put a different complexion on business services exchange governance because of its negative influence on exchange governance mechanisms. While buyer asset specificity or contractual governance can enhance the development of relational governance, this increase in relational governance can be restricted because of high behavioral uncertainty in the buyer-supplier relationship concerned. Thus, when behavioral uncertainty is overlooked in a business services setting, implications of certain managerial activities can be assessed quite wrongly. Future research is needed to enhance our understanding of behavioral uncertainty and to investigate how the predictability of the exchange partner’s behavior can be increased. In this paper, we propose the level of interorganizational trust as an important antecedent of behavioral uncertainty but further research is needed to investigate how this influence will affect the buyer-supplier relationship and resulting performance outcomes in a business services setting.

Finally, previous research studies have used buyer, supplier or dyadic (buyer and supplier) data to empirically investigate the hypotheses. The research overview in Table 1 and Table 2 indicates that research studies with buyer data most frequently occur. These research studies incorporate on average more constructs and relationships (included in the tables) than the other studies, but studies with buyer data have never taken place outside North America. Nonetheless, the tables indicate no differences in results for generally investigated relationships based on type of data used: consistent findings, such as the impact of relational
governance on performance, are confirmed in all groups and rather inconsistent findings, such as the impact of environmental uncertainty on relational governance, have erratic results in all groups. This supports the statement that buyer and seller share consistent perceptions of the exchange relationship, its attributes and performance (Anderson and Narus 1990, Heide and John 1990, Zaheer, McEvily, and Perrone 1998), although further research is needed to confirm this statement and assure that the possible impact of information bias and error is negligible.

When empirically testing the proposed model, researchers might need to include a number of control variables. Some other attributes than those incorporated in the model may have an effect on exchange governance and performance outcomes. When these additional variables are included in empirical studies testing the proposed relationships, competing explanations will be accounted for (Cannon, Achrol, and Gundlach 2000). Possible control variables often suggested by previous research are the relationship length between exchange partners (Cannon, Achrol, and Gundlach 2000, Claro, Hagelaar, and Omta 2003, Ferguson, Paulin, and Bergeron 2005, Poppo and Zenger 2002), variables relates to characteristics of the buying situation such as complexity and importance of the supply (Cannon and Perreault 1999), and cultural differences between the exchange partners (Griffith and Myers 2005).

The relationships between constructs illustrated in the model (Figure 1) are proposed to be valid at a certain point in time during an interfirm business service exchange: the contract has been established ex ante and relational governance continues to develop over time. However, recursive relationships between constructs may occur outside the time span of the developed model. Thus, further research on interrelations between the factors incorporated in the model during the earlier negotiation phase and contract drawing or during the
subsequent negotiation phase and contract renewal is needed. Table 1 indicates that previous research has mainly focused on product exchanges, distribution or export in a business setting. Because of the impact of service characteristics on the exchange governance model, other sectors need to be further explored. This model should be empirically tested in several business services exchanges such as IT outsourcing, professional business services like consulting or advertising, business logistics, support services etc. While not proposed in the model, we suppose that cross-sectional differences might occur between the relative magnitudes of the impact of various factors considered in the model, caused for example by varying institutional factors across sectors (Arrighetti, Bachmann, and Deakin 1997). Cross-sectional research investigating the proposed relationships and their relevance for a particular sector would further increase the knowledge on business services exchange governance.
REFERENCES


### TABLE 1

Overview of Constructs Incorporated in the Literature on Exchange Governance

<table>
<thead>
<tr>
<th>Empirical Study</th>
<th>Research Design</th>
<th>Country</th>
<th>Type of Exchange</th>
<th>AS</th>
<th>UNC</th>
<th>CG</th>
<th>RG</th>
<th>Trust</th>
<th>Perf</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sample (Response rate)</td>
<td></td>
<td>Gen</td>
<td>SAS</td>
<td>BAS</td>
<td>Gen</td>
<td>ENV</td>
<td>BEH</td>
<td>AS</td>
</tr>
<tr>
<td>Aulakh et al. (1996)</td>
<td>Survey 652 S (39.4%)</td>
<td>US</td>
<td>Export</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Bello et al. (2003)</td>
<td>Survey 402 S (72%)</td>
<td>US</td>
<td>Export</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cannon et al. (2000)</td>
<td>Survey 2,014 B (23%)</td>
<td>US</td>
<td>Various</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Claro et al. (2003)</td>
<td>Survey 598 S (29%)</td>
<td>Net</td>
<td>Distribution</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Eriksson, Sharma (2003)</td>
<td>Survey 145 S (95%)</td>
<td>Swe</td>
<td>Banking</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Ferguson et al. (2005)</td>
<td>Interview 160 dyads</td>
<td>US, Can, Mex</td>
<td>Banking</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Gao et al. (2005)</td>
<td>Survey 2,000 B (25.4%)</td>
<td>US</td>
<td>Product</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Griffith, Myers (2005)</td>
<td>Survey 450 B (20.4%)</td>
<td>US</td>
<td>Import</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Haugland, Reve (1993)</td>
<td>22 dyads farmer/exporter</td>
<td>Nor, US, UK, Fra, Ger</td>
<td>Distribution</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Heide, John (1990)</td>
<td>Survey 579 B (30%)</td>
<td>US</td>
<td>Product</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Heide, Miner (1992)</td>
<td>Survey 579 B (27%)</td>
<td>US</td>
<td>Product</td>
<td>X</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Joshi, Campbell (2003)</td>
<td>Survey 1,063 B (20.8%)</td>
<td>Can</td>
<td>Product</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Joshi, Stump (1999)</td>
<td>Survey 611 B (30%)</td>
<td>Can</td>
<td>Product</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Noordewier et al. (1990)</td>
<td>Survey 483 B (31%)</td>
<td>US</td>
<td>Product</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>Paulin et al. (1997)</td>
<td>Interview 61 dyads</td>
<td>Can</td>
<td>Banking</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Poppo, Zenger (2002)</td>
<td>285 outsourced services (B)</td>
<td>US</td>
<td>IS</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Siguaw et al. (1998)</td>
<td>Survey 2,254 B&amp;S (36.9%)</td>
<td>US</td>
<td>Distribution</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Zaheer et al. (1995)</td>
<td>Survey 1,000 B (33%)</td>
<td>US</td>
<td>Insurances</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Zhang et al. (2003)</td>
<td>Survey 623 S (22.6%)</td>
<td>US</td>
<td>Export</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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5 B: Buyer is respondent; S: Supplier is respondent  
6 AS: Asset Specificity; Gen: General asset specificity; SAS: Supplier Asset Specificity; BAS: Buyer Asset Specificity; UNC: Uncertainty; Gen: General uncertainty; ENV: Environmental Uncertainty; BEH: Behavioral Uncertainty; CG: Contractual Governance; RG: Relational Governance; Trust: Trust; Perf: Performance  
7 Can: Canada; Fra: France; Ger: Germany; Mex: Mexico; Net: The Netherlands; Nor: Norway; Swe: Sweden
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<td>neg**</td>
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<td>neg**</td>
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<td>Johnston et al. (2004)</td>
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8 AS: Asset Specificity; SAS: Supplier Asset Specificity; BAS: Buyer Asset Specificity; UNC: Uncertainty; ENV: Environmental Uncertainty; BEH: Behavioral Uncertainty; CG: Contractual Governance; RG: Relational Governance; Trust: Trust; Perf: Performance
9 NOT: assumed no impact; POS: assumed positive relation; NEG: assumed negative relation
10 **: significant; *: some significance found; : no significance found
11 (1) high versus low uncertainty and asset specificity; (2) dependent on levels of moderator; 3) high versus low uncertainty
FIGURE 1

Business Services Exchange Governance

Supplier Asset Specificity +

Contractual Governance +

Environmental Uncertainty -

Behavioral Uncertainty -

Relational Governance +

Trust +

Performance +

Buyer Asset Specificity +