Examining the Conditional Limits of Relational Governance: Specialized Assets, Performance Ambiguity, and Long-Standing Ties

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Abstract Despite recognition of the benefits of relational governance in inter-organizational exchanges, factors that may erode its value have received little examination. We extend the literature by asking whether self-interested opportunities and long-standing ties erode the positive association between relational governance and performance. Consistent with transaction cost and moral hazard logics, exchange hazards, particularly asset specificity and difficult performance measurement, dampen the positive association of relational governance and performance. We further find, consistent with recent inquiries into the dark side of embedded ties that the performance benefits associated with relational governance decline when parties rely on repeated partnerships.

Introduction
The importance of social relations in supporting economic exchange has been recognized across a wide range of theoretical perspectives (Eccles, 1981; Granovetter, 1985; Macaulay, 1963). Most agree that relational governance, which is based on trust as well as cooperative norms and information sharing routines, figures prominently in explaining the success and stability of inter-organizational exchanges. Because relational governance safeguards parties from the risk inherent in many market transactions (Bradach and Eccles, 1989; Ring and Van de Ven, 1994), it can complement the use of formal contracts (Poppo and Zenger, 2002), enhance coordination, lower transaction costs, and improve exchange performance (Dyer and Singh, 1998; Macaulay, 1963). Although many conceptual (e.g. Bradach and Eccles, 1989; Dyer and Singh, 1998; Uzzi, 1997) and empirical (e.g. Artz and Brush, 2000; Dyer and Chu, 2003; Poppo and Zenger, 2002) works have established the benefits of trust-based forms of governance, little research has examined the factors or situations that may limit their positive effects on performance.
inter-organizational exchanges. Recently, some literature has begun to discuss the trade-offs involved in trust-based relationships, but such inquiries generally are sparse and empirically underexplored (McEvily et al., 2003, p. 100).

Possibly the most debated topic in this limited literature stream pertains to whether relational governance still mitigates losses when opportunities for self-interested behaviour exist. According to Granovetter (1985), parties that trust each other may still cheat if they confront self-interested opportunities, which suggests trust may be a false pretence for trustworthy behaviour. Transaction cost and moral hazard logics indicate that the two most likely situations for malfeasance occur in the presence of specialized assets or ambiguities in measuring performance (Alchian and Demsetz, 1972; Williamson, 1996, p. 65). However, another perspective counters that such self-interest is unlikely to prevail when trust exists, because behavioural patterns and intent support mutuality, fairness, and cooperation (Bradach and Eccles, 1989; Macneil, 1978; Uzzi, 1997). Despite this significant debate, to our knowledge, little empirical work exists, with the exception of Krishnan et al. (2006), who find that trust likely is associated with improved performance when task interdependence (e.g. joint development of technology) and inter-partner competition are high.

A second debate has also emerged regarding whether firms realize performance benefits from relational governance in their repeated partnerships (Goerzen, 2007). Some suggest that long-standing ties enable the accumulation of specific experiences and routines, which then augment the performance of inter-organizational exchanges (Mayer and Argyres, 2004; Zollo et al., 2002). However, other researchers caution that over time, inter-organizational exchanges may become rigid and fail to restructure when necessary (Ernst and Bamford, 2005) or that parties in long-standing exchanges limit their search for new partners and capabilities, even when such newness is desirable (Gulati and Gargiulo, 1999; Uzzi, 1997). Anderson and Jap (2005, p. 79) further indicate that close relationships are most vulnerable to the relational dark side, such as when older relationships come to be taken for granted. Empirical studies examining this dark side of embedded ties remain nascent, though Goerzen (2007) finds that repeated partnerships are associated with lower firm performance.

To address these debates, we examine empirically three contingencies that may limit the commonly observed positive association between relational governance and performance: asset specificity, difficult performance measurement, and exchange tenure. The first two conditions inform the unresolved debate regarding whether exchange hazards undermine the positive relationship between relational governance and performance (Uzzi, 1997; Williamson, 1996). The third condition pertains to the emerging, yet unresolved, issue of a potential dark side of long-standing, embedded ties (McEvily et al., 2003, p. 100). We argue that over time, relational governance comes to be associated with stale products or services, because such exchanges lack broad oversight mechanisms that interject and promote changes in response to issues of strategic fit or alignment. Thus, long-standing ties may limit the performance benefits associated with relational governance. Overall, our focus on factors that moderate the relationship between relational governance and performance informs an important and unresolved issue associated with the contingent value of relational governance.

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CONCEPTUAL DEVELOPMENT

Theoretical Overview

Relational governance refers to a social institution that governs and guides exchange partners on the basis of cooperative norms and collaborative activities (Heide and John, 1992; Macneil, 1980; Zaheer and Venkatraman, 1995). Among various theoretical perspectives of relational governance (Eccles, 1981; Granovetter, 1985; Macaulay, 1963), Granovetter’s concept of socially embedded exchanges has profoundly influenced this general line of inquiry. The embeddedness perspective focuses on ‘the role of concrete personal relations and structures (or “networks”) of such relations in generating trust and discouraging malfeasance’ (Granovetter, 1985, p. 490). Granovetter assumes that because economic behaviour is closely embedded in social networks, economic logic should acknowledge the influence of social action. Consistent with this claim, Macneil (1978, p. 12) argues that to eliminate economic exchange from social influences requires exchanges to occur instantaneously and involve no past or future interactions. Of course, this assumption reflects an unreasonable characterization of economic exchange, because all exchanges take place in some type of social setting (Macneil, 1980, p. 1041).

Central to this stream of literature are the presumed advantages of relational governance. First, when trust exists, parties can ‘act as if the future were more certain’ (Zajac and Olsen, 1993, p. 140). That is, parties that engage in entrusted ties are guided by a particular heuristic: We act on a basis of trust and continuance in this relationship. As a result, a bilateral intent to cooperate exists. Second, because parties tend to use these heuristics when making decisions, they benefit from reduced transactions costs, such as revising formal contracts in response to changes (Dyer and Chu, 2003; Dyer and Singh, 1998) and the search required to make risk-based decisions (Uzzi, 1997).

Third, because relational governance enhances the well-being of the mutual relationship (Heide and John, 1992; Macneil, 1980), over time, parties develop relational routines, such as information sharing and deep collaboration, that mitigate coordination costs, conflicts, and information-gathering problems (Zollo et al., 2002). Thus, as a multidimensional construct, relational governance involves trust as an organizing principle, as well as specific routines and actions that facilitate work and information coordination (McEvily et al., 2003, p. 92). In turn, beliefs and activities that benefit the relationship as a whole enhance performance outcomes (Heide and John, 1992). For example, the exchange of high-quality information about short- and long-term business plans becomes a central means for adjusting existing exchanges to comply with short- and long-term business goals (Palay, 1984). In truly collaborative relationships, mutuality and flexibility characterize the decision processes, because the parties view changes in light of their mutual, rather than selfish, interests.

However, critics of this view, such as those who embrace transaction cost economics, posit that calculation, not trust, determines the degree of cooperative behaviour in market exchanges, so situations fraught with self-interested opportunities undermine the performance of relational exchanges (Williamson, 1996). Moreover, recent developments in the trust literature indicate that trust not only binds, but also blinds parties. For example, long-standing, relationally embedded exchanges may suffer from liabilities such as less-than-optimal information search (Uzzi, 1997), ignorance of necessary
restructuring (Ernst and Bamford, 2005), and fatigued interest (Anderson and Jap, 2005). These unresolved issues motivate our conceptual model (see Figure 1), in which we specify three contingencies – asset specificity, difficult performance measurement, and exchange history – as possible moderators of the positive relationship between relational governance and performance.

The Moderating Role of Exchange Hazards: Asset Specificity and Performance Measurement Difficulty

Transaction cost logic posits that in situations fraught with the potential for opportunistic behaviour, parties may forgo cooperative behaviour to pursue their self-interests (Williamson, 1996). This calculative logic contrasts with the rather stoic characterization of parties’ behaviour in trust-based relationships that often pervades conceptual (Bradach and Eccles, 1989; McEvily et al., 2003; Uzzi, 1997) and empirical (Dyer and Chu, 2003; Mohr and Spekman, 1994) work, namely, that trust and relational norms guarantee trustworthy and cooperative behaviour. Heuristics, such as ‘We act on the basis of trust’, theoretically guide behaviour in these risky settings, so theorists assume that parties forgo gains from self-interested action to preserve trust, conform to social obligations, or generate gains from repeated exchanges (Bradach and Eccles, 1989). If, however, a calculative logic characters parties in economic exchange, one party may shirk some of its duties when opportunities for self-gain exist. This alternative position suggests that when the gains from self-interested behaviour are sufficient, the performance benefits associated with relational governance decline. Borrowing from transaction cost and agency literature, we examine two conditions in which the opportunity to gain from calculated (i.e. self-interested) behaviour may be greatest: asset specificity and performance measurement difficulty (Alchian and Demsetz, 1972; Williamson, 1996).

According to transaction cost logic, managers face the greatest losses from opportunism in market exchanges that feature specialized assets; the presence of specialized investments encourages parties to be opportunistic, which in turn increases transaction
costs. If asset specificity induces parties to act in a self-interested manner, it also should weaken the relationship between relational governance and performance. For example, with specialized assets, exchange parties may strategically disclose private information to foster their bargaining position or hold up the transaction through delays or by undermining concerns about product quality, costs, or performance. However, this performance decrease is likely to be subtle and slight, because in general, relationally governed exchanges indicate both parties are satisfied and receive ongoing benefits (Anderson and Jap, 2005, p. 76). Moreover, perceptual biases about the nature of a relationship in ‘good standing’ may reframe a strategic ploy as justifiable, because of the belief that the one party would not exploit the other when they discuss costs and profits. Alternatively, it may be hard to know precisely when one party extracts a quasi-rent from the other without complete access to the other parties’ operating information.

Regardless of the framing of the performance decline, a partner’s willingness to cheat another or extract quasi-rents occurs because it does not envision a severe penalty for its actions. These opportunistic ploys derive from one party’s bargaining power and are associated with weakened performance; that is, self-interested acts arising from specialized assets are associated with poorer performance in relational exchanges relative to exchanges that lack opportunities for self-interest.

As we stated previously, this self-interested logic is orthogonal to the perspective that relational governance enables incentive alignment. For example, Uzzi (1997, p. 43) explains that relational governance enables the coordination of more complex, customized exchanges that enhance a firm’s competitiveness. Such effective coordination occurs because exchange partners trust that the other party will not act in a self-interested manner. Similarly, Krishnan et al. (2006, p. 897) argue that trust implies a mutuality that ‘encourages partners to provide the substantive resources and accurate and timely information that enhances collaborative benefits’. As a result, trust should diminish incentives to appropriate resources. This alternative logic also implies that because relational governance ensures a bilateral intent, the performance of relational governance exchanges should not decrease in the presence of specialized assets. However, consistent with the calculation view, we hypothesize:

**Hypothesis 1**: The higher the level of asset specificity, the weaker is the relationship between relational governance and performance.

A second factor that creates incentives for partners to shirk cooperative behaviour and damage product performance is difficult performance measurement. Alchian and Demsetz (1972) suggest that markets succeed when they can link rewards to productivity effectively; that is, they can measure productivity and pay for it accordingly. However, when performance is difficult to measure, parties have incentives to limit their efforts because their partner cannot accurately measure and reward performance. Lower performance thus results from the inability to measure effort (Poppo and Zenger, 1998, p. 858). In turn, parties try to structure their exchange with governance choices that minimize the losses that arise from the exchange hazard.

Although various researchers argue that relational governance offers a means for incentive alignment, especially in response to behavioural uncertainty (Krishnan et al.,
2006; Uzzi, 1997), we advance an alternative: Difficulties in measuring the performance contribution of a partner may erode the positive relationship between relational governance and exchange performance. Our logic is similar to that advanced in the context of specialized assets. When determining whether to take advantage of asymmetric information arising from difficult performance measurement, parties systematically weigh the costs of getting caught and the benefits of shirking (Anderson and Jap, 2005, p. 77). That is, if caught, what are the costs they will suffer from having their trustworthy status or reputation revised? Deceit can take several forms. For example, an information technology (IT) contractor may minimize the cost of a project by shirking on quality, such as using a poor platform or architecture that requires significant modification to accommodate upgrades and changes (Mayer and Nickerson, 2005, p. 228). Alternatively, it might simply overcharge and underdeliver, because the other party cannot verify with complete accuracy the level of effort or quality required or stipulated by the agreement. In turn, parties pursue self-interested rather than joint outcomes.

**Hypothesis 2**: The higher the level of performance measurement difficulty, the weaker is the relationship between relational governance and performance.

The Moderating Role of Long-Standing Ties

Many theorists argue that an economic exchange cannot be separated from the pattern of social links and affiliations in which it exists. A primary influence on the quality and depth of a social relationship is exchange tenure – how long the parties have been doing business together (Blau, 1964; Firth et al., 2006; Rempel et al., 1985). In long-standing ties, prior transactions enable personal experiences through which parties gain information about their partner’s motives, type, and competences. This information reduces uncertainty and fosters greater confidence. In young exchange relationships that lack sufficient history, parties are less inclined to develop relational practices and norms. Trust, if it exists, likely is very fragile because little personal history provides a basis for it (Gulati, 1995; Larson, 1992; Uzzi, 1997). As a result, parties minimize their risky actions, such as forming relational governance bonds with a relatively unknown partner, because they face significant vulnerability if they commit too much, too quickly.

Once established, relational governance operates as an organizing principle and represents a general logic for work coordination and information processing (McEvily et al., 2003, p. 92). As such, it represents a heuristic that employs social knowledge, in sharp contrast with the classic, rational decision-making view, in which all relevant information comes from exhaustive search and then informs the choice of decision alternatives, given probabilistic outcomes. Uzzi (1997, pp. 43–4) explains that ‘trust in embedded ties is unlike . . . the calculativeness that underlies risk-based decision making. . . . Information needed to compute the risk (i.e. the expected value) of an action was not culled by trusting parties. . . . Information needed to make risk-based decisions [is] not systematically compiled, nor [are] base rates closely attended to’. Heuristics, according to Uzzi, do not jeopardize the quality of decisions but rather improve ef-
ciency, because people can make quick decisions in complex situations without needing to attend to, gather, and process information.

Although such heuristics may support efficient routines, over time, those underlying routines may not entail the same level of performance. That is, relational governance no longer optimally supports the task exchange, and as a result, relationally embedded ties may relate to poorer performance than younger relational ties. The general phenomenon of the potential dark-side of long-standing, embedded ties suggests routines undermine exchange performance because there is no obvious (or built-in) mechanism to interject or promote change or permeate communication boundaries (Granovetter, 1985; McEvily et al., 2003). As a result, exchange partners ‘wallow in their collective ignorance’ (Jones et al., 1997, p. 926), and exchange performance results in unmet expectations.

Many researchers attribute the downfall of long-standing, embedded ties to biases or shortcomings that arise from set routines. For example, in relationally embedded ties, standard coordination procedures do not endorse optimal search and selection, because the operating heuristic is simply ‘work with this partner’. As a result, the involved parties are less likely to search for new partners and capabilities over time (Gulati and Gargiulo, 1999; McEvily et al., 2003; Uzzi, 1997, p. 99). Parties also may be more resistant to new or novel information, because they have become entrenched in their existing business practices. Long-standing exchanges thus become trapped with the ‘wrong’ knowledge, given current market conditions (Afuah, 2000; Grabher, 1993; Lazzarini et al., 2008). As their knowledge and approach grow increasingly stale, the exchange parties may lose objectivity and creativity in delivering their service, which lowers performance. This complacency may occur because firms engaged in long-standing ties lack the mechanisms, such as business- or corporate-level audits, to restructure partnerships periodically on the basis of performance and strategic fit (Ernst and Bamford, 2005).

Thus, as their tenure increases, the performance benefits associated with relational governance may erode because the exchanges lack the broad oversight mechanisms that interject and promote changes in response to strategic issues of fit and alignment. Consistent with this logic, exchange partners appear more inclined to resist cognitive processing about their partner over time because of their strong beliefs about its type, competences, and motives (Poppo and Lambe, 2006). Furthermore, discontented parties often linger in states of deterioration for surprisingly long periods of time rather than confront their disappointment (Anderson and Jap, 2005, p. 76). More generally, Goerzen (2007) finds that repeated partnerships are associated with lower firm performance. Therefore, we predict that long-standing ties weaken the positive association between relational governance and performance.

Hypothesis 3: The longer the exchange tenure, the weaker is the relationship between relational governance and performance.

METHODS

Data Collection and Sample

Our research context pertains to IT outsourcing. For turbulent business environments, rapid technological change makes IT outsourcing an increasingly important manage-
rial decision (Mayer and Nickerson, 2005). Consistent with previous studies of partnerships (e.g. Goodman et al., 1995; Mohr and Spekman, 1994; Noordewier et al., 1990), we obtain data from key informants, namely, top computer executives who hold positions as either (1) senior corporate IT services managers, who provide overall guidance and planning for information services, or (2) managers with control over major data processing facilities in operating departments, divisions, or subsidiaries. These administrators both manage and review outsourced activities. We rely on key informant data from the buyer side because previous work has indicated that buyers and suppliers overall have consistent perceptions regarding their exchange relationships (Anderson and Narus, 1990; Zaheer et al., 1998). Further, the careful selection of key informants together with multi-item scales can provide reliable and valid information (John and Reve, 1982), as suggested by many empirical studies on interorganizational relationships (e.g. Jap and Ganesan, 2000; Kumar et al., 1992; Noordewier et al., 1990).

Our list of key informants comes from the Directory of Top Computer Executives. This directory, which has been in existence since 1972, includes top computer executives of Fortune 500 companies and companies with annual data processing budgets of $250,000 or more. Some previous studies have constrained their samples to single industries (e.g. Goodman et al., 1995; Mohr and Spekman, 1994; Zaheer and Venkatraman, 1995), but we seek to enhance external validity by using a sample that includes various industries.

We mailed surveys to a randomly selected set of 3000 names from the Directory of Top Computer Executives, without resorting to the popular precommitment step. Altogether, we obtained responses from 181 firms. To gauge our comparability with studies that obtain completed surveys from precommitted populations, we performed a supplemental telephone survey of 300 executives to solicit commitments. Eleven per cent responded that they would complete surveys. In extrapolating this number to the broader population of 3000, we argue that our low response rate is consistent with studies that use precommitment sampling techniques (Anderson and Narus, 1990; Mohr and Spekman, 1994). The survey requests information about the various types of IT services the firm employs, including data entry, data centre operations, network design, network operations (data), network operations (voice), end user support, training and education, applications development, and applications maintenance.

Of these 181 firms, 20.4 per cent use no outsourced services, 45.9 per cent use one, 8.8 per cent have two, 9.9 per cent employ three, 6.6 per cent have four, 5.0 per cent have five, 2.8 per cent use six, and 0.6 per cent employ seven outsourced services. On average, each firm outsources 1.65 IT services. For this study, the unit of analysis is each individual outsourced service, instead of the firm, so we obtain a usable sample of 299 services. Among these 299 functional services, 9.0 per cent refer to data entry, 5.7 per cent to data centre operations, 10.7 per cent to network design, 8.0 per cent to network operations (data), 5.7 per cent to network operations (voice), 11.0 per cent to end user support, 16.4 per cent to training and education, 19.4 per cent to applications development, and 14.0 per cent to applications maintenance.

Following Armstrong and Overton (1977), we test for potential response bias by comparing early with late responses on measures of both the conceptual constructs and the control variables. On the basis of multivariate analysis of variance (MANOVA), we
find no significant differences for these measures between early and late responders (Wilks’ $\Lambda = 0.972$; $F = 1.038$; $df = 10, 288$; $p = 0.407$). Thus, we find no evidence of response bias in our study.

**Measures**

*Relational governance.* Relational governance is characterized by both trust and relational routines. In the context of IT, we view relational routines as collaborative problem solving and the sharing of business plans, which are critical success factors that underlie the effective integration of IT into the partner’s core business. Therefore, consistent with prior work (Heide and John, 1992; Palay, 1984; Poppo and Zenger, 2002; Zaheer and Venkatraman, 1995), we employ items that assess the degree of information exchange (including private information) and collaboration. In addition, we include a trust indicator that measures the confidence each partner has in the other’s integrity and reliability (Bradach and Eccles, 1989; Uzzi, 1997). The three items for this construct are as follows: (1) the buyer has an extremely collaborative relationship with the vendor (RG1); (2) both parties share long- and short-term goals and plans (RG2); and (3) the buyer can rely on the vendor to keep promises (RG3) (seven-point Likert scales: 1 = strongly disagree, 7 = strongly agree). We infer that high levels correspond to an increased commitment to use relational governance to guide behaviour in buyer–supplier exchanges.

*Exchange hazards.* We examine two types of exchange hazards: *asset specificity* and *performance measurement difficulty*. Firm-specific assets include human assets, physical assets, and company-specific routines and knowledge that are not redeployable for alternative uses (Williamson, 1996). Because human capital is a critical component of information services, our measurement focuses primarily on specialized human assets, such as knowledge and skills. We use three items (seven-point scales: 1 = low degree, 7 = high degree) to measure the degree to which the assets used to produce an information service are tailored to the buying firm: (1) to what degree must individuals acquire company-specific or division-specific information to adequately perform the IS function? (AS1); (2) to what degree is your approach to this function (or set of applications) custom-tailored to the company? (AS2); and (3) how costly would it be to switch outsourcing vendors? (Consider the time required to locate, qualify, train, make investments, conduct testing, and develop a working relationship) (AS3).

Consistent with Mayer and Nickerson (2005), our operationalization of measurement difficulty focuses on the level of ease in measuring worker performance by asking: To what degree is it easy to measure the collective performance of those individuals who perform this function? (1 = very difficult, 7 = very easy). We reverse-code this item to create a measure of measurement difficulty (MD).

*Exchange tenure.* Exchange tenure normally pertains to how long the two parties have worked together, but Macneil (1978, p. 903) describes a more qualitative approach that considers duration as long-term, with no finite beginning. Because our focus is the interaction between duration and relational governance, we want to capture parties’ perception that the exchange is long-term with no finite beginning. Thus, we measure
exchange tenure with a seven-point scale (1 = strongly disagree, 7 = strongly agree) evaluating the following statement: We have worked with the vendor for years and years.

Performance. Consistent with previous empirical studies (Goodman et al., 1995; Mohr and Spekman, 1994), we measure partnership success as the level of customer satisfaction with exchange performance. This perceptual measure distinguishes whether the vendor has realized preestablished performance expectations; high levels of satisfaction represent realized performance expectations. We measure the level of satisfaction with three common performance goals, determined early in the exchange relationship, to guide the general evaluation of exchange performance: (1) the overall cost (P1); (2) the quality of the output or service (P2); and (3) the vendor’s responsiveness to problems or inquiries (P3) (1 = dissatisfied, 7 = satisfied).

Control variables. To account for extraneous variables that might influence a firm’s performance, we include technological change, contract duration, firm size, job tenure, industry, and IT service type as controls. Technological change refers to the pace of technological development in an industry. Because technological change may undermine the effects of repeated exchanges (Goerzen, 2007), we control for it with a two-item measure: (1) to what degree are the underlying skills associated with this IS function (or set of applications) rapidly changing? (CH2); and (2) to what degree is the optimal configuration of hardware and software required to perform this function (or set of applications) rapidly changing? (CH1) (seven-point scales: 1 = low degree, 7 = high degree).

We measure contract duration by asking the respondents about the duration (in years) of the contract (CD). We use the log of the number of employees in the company to indicate firm size (SIZE). We measure job tenure as the years that the respondents have been in their jobs and use the log of job tenure in our subsequent analysis (JT).

Because our sample of firms includes industry variance, we use two dummy variables to control for the differences in the primary industry in which the firm operates: manufacturing (Manu) or banking/financial services /insurance (Finance), with the other industry as the baseline. Similarly, we control for the potential differences in the types of IT services with three dummy variables: Data (data entry and data centre operations), Network (network design and operation), and Support (end user support and training and education), with application development and maintenance as the baseline service type.

Construct Validity

We assess the convergent and discriminant validity of the multiple-item measures (i.e. relational governance, asset specificity, performance, and technological change) with a confirmatory analysis (see Table I). The model provides a satisfactory fit to the data (goodness-of-fit index [GFI] = 0.946, comparative fit index [CFI] = 0.957, incremental fit index [IFI] = 0.957; root mean squared error of approximation [RMSEA] = 0.070), and all factor loadings are highly significant (p < 0.001), in support of the unidimensionality of our measures (Anderson and Gerbing, 1988). Furthermore, the composite reliabilities of all constructs (from 0.779 to 0.835) are greater than the usual 0.70 benchmark, and all
average variances extracted (from 0.543 to 0.696) exceed the 0.50 cut-off. Thus, these measures demonstrate satisfactory convergent validity (Anderson and Gerbing, 1988). In addition, pairwise chi-square difference tests run for all of multiple-item scales to determine whether a restricted model (correlation fixed at 1.0) is significantly worse than a freely estimated model (correlation estimated freely) reveal that all chi-square differences are highly significant (e.g. the test for relational governance and performance: $\Delta \chi^2 (1) = 138.70, p = 0.00$), in support of discriminant validity (Anderson and Gerbing, 1988). Overall, these results suggest our measures possess satisfactory reliability and validity. In Table II, we present the basic descriptive statistics and correlations of all measures.

**Common Method Assessment**

Because objective measures of supplier performance are not available at the exchange level, we rely on the key informant to obtain the perceptual measure. Since information regarding the dependent and independent variables comes from the same respondents, a common method bias exists. We check for the potential influence of this bias in our analyses with the Harman one-factor test (Podsakoff and Organ, 1986). A factor analysis of all the measurement items results in a solution accounting for 65.46 per cent of the total variance; the first factor only accounts for 17.79 per cent of the variance. While by no means definitive, because a dominant, single factor does not emerge, it does not appear that the observed relationships among the constructs are largely accounted for by a systematic source of variance due to our measurement technique.
Table II. Basic descriptive statistics of the constructs

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<td>8. Firm size</td>
<td>0.21**</td>
<td>0.19**</td>
<td>0.15**</td>
<td>0.02</td>
<td>0.10</td>
<td>0.12*</td>
<td>0.06</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Job tenure</td>
<td>0.13*</td>
<td>0.17**</td>
<td>0.05</td>
<td>0.01</td>
<td>0.08</td>
<td>0.02</td>
<td>0.01</td>
<td>0.02</td>
<td>1.00</td>
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<tr>
<td>10. Manufacturing</td>
<td>0.01</td>
<td>0.19**</td>
<td>0.10</td>
<td>0.06</td>
<td>0.06</td>
<td>0.02</td>
<td>0.02</td>
<td>0.04</td>
<td>1.00</td>
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<tr>
<td>11. Finance</td>
<td>-0.16**</td>
<td>0.20**</td>
<td>0.01</td>
<td>0.18**</td>
<td>0.03</td>
<td>0.07</td>
<td>0.25**</td>
<td>0.06</td>
<td>0.01</td>
<td>0.48**</td>
<td>1.00</td>
<td></td>
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<tr>
<td>12. Data</td>
<td>0.04</td>
<td>0.34**</td>
<td>0.31**</td>
<td>0.03</td>
<td>0.06</td>
<td>0.44**</td>
<td>0.05</td>
<td>0.02</td>
<td>0.03</td>
<td>0.04</td>
<td>-0.01</td>
<td>1.00</td>
<td></td>
<td></td>
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<tr>
<td>13. Network</td>
<td>0.07</td>
<td>-0.10</td>
<td>0.01</td>
<td>0.13*</td>
<td>0.12*</td>
<td>0.10</td>
<td>0.15*</td>
<td>0.02</td>
<td>0.01</td>
<td>0.02</td>
<td>0.00</td>
<td>-0.24**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>14. Support</td>
<td>0.12*</td>
<td>-0.03</td>
<td>0.17**</td>
<td>-0.18**</td>
<td>-0.15**</td>
<td>0.06</td>
<td>0.18**</td>
<td>0.02</td>
<td>0.03</td>
<td>0.04</td>
<td>0.06</td>
<td>-0.26**</td>
<td>-0.35**</td>
<td>1.00</td>
</tr>
<tr>
<td>Mean</td>
<td>4.87</td>
<td>4.25</td>
<td>3.47</td>
<td>4.28</td>
<td>4.71</td>
<td>4.50</td>
<td>2.08</td>
<td>7.21</td>
<td>1.56</td>
<td>0.37</td>
<td>0.28</td>
<td>0.15</td>
<td>0.24</td>
<td>0.27</td>
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<tr>
<td>Standard deviation</td>
<td>1.15</td>
<td>1.42</td>
<td>1.55</td>
<td>1.93</td>
<td>1.33</td>
<td>1.49</td>
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<td>0.48</td>
<td>0.45</td>
<td>0.35</td>
<td>0.43</td>
<td>0.45</td>
</tr>
</tbody>
</table>

Notes: N = 299.
** p < 0.01, * p < 0.05.
Analysis

Our model assesses the interaction effects between relational governance and exchange hazards and tenure, which makes a moderated regression analysis appropriate for testing these effects (Aiken and West, 1991). In our model, relational governance (RG) is likely an endogenous factor, affected by asset specificity (AS), measurement difficulty (MD), exchange tenure (ET), and contract duration (CD). As Hamilton and Nickerson (2003) indicate, two- and three-stage methods can correct for the endogeneity when both strategy (in our case, relational governance) and performance are continuous. Therefore, we test our hypotheses with a three-stage hierarchical regression model (cf. Slotegraaf et al., 2003). In the Appendix, we give details of the equations used in each of the three stages. In particular, Stage 1 regresses RG against AS, MD, ET, and CD to obtain residuals free of the influence of these variables. Then in Stages 2 and 3, we use the residuals as the indicators of RG. Stage 2 regresses performance against AS, MD, ET, the residuals of RG, and the controls. Stage 3, the full model, adds the interaction terms between the residuals of RG and AS, MD, and ET. The results of Stages 2 and 3 are reported in Models 2 and 3 in Table III. We also estimate a model that includes only the control variables (see Model 1 in Table III). To deal with possible multicollinearity between the interaction terms and their components, we mean-centre each scale that constitutes an interaction term and create interaction terms by multiplying the relevant mean-centred scales (Aiken and West, 1991). As a result, the largest variance inflation factor (a multicollinearity indicator) in these models is 1.89, well below the usual 10.0 benchmark. Thus, multicollinearity is not a concern in our analysis.

RESULTS

Stage 1 Estimation

The results of the Stage 1 estimation indicate that relational governance is positively associated with asset specificity ($b = 0.11, p < 0.05$), exchange tenure ($b = 0.39, p < 0.01$), and contract duration ($b = 0.18, p < 0.01$). Furthermore, relational governance relates negatively to measurement difficulty ($b = -0.07, p < 0.10$). These findings confirm our use of the three-stage model to correct for the potential endogeneity of relational governance.

Hypothesis Testing

Table III, Model 3, presents the results of the direct and interaction effects of AS, MD, ET, and RG. Not surprisingly, high levels of asset specificity and measurement difficulty are associated with decreased performance satisfaction (AS: $b = -0.17, p < 0.01$; MD: $b = -0.09, p < 0.05$). In contrast, a long exchange tenure is associated with improved performance satisfaction ($b = 0.18, p < 0.01$). Consistent with prior empirical work, relational governance is strongly and positively associated with performance ($b = 0.47, p < 0.01$).

Hypotheses 1 and 2 examine whether the positive association between relational governance and performance declines for high levels of asset specificity and measure-
ment difficulty. The interaction between RG and AS is negatively associated with performance ($b = -0.11, p < 0.05$), in support of Hypothesis 1. In addition, the interaction between RG and MD relates negatively to performance ($b = -0.13, p < 0.05$), in support of Hypothesis 2.

To gain more insight into the interaction effects of Hypotheses 1 and 2, we follow the procedure of Aiken and West (1991) to decompose the interactive terms. Specifically, we conduct simple slope tests and plot the relationships in Figure 2. For Hypothesis 1, we split the AS variable into two groups – low (one standard deviation below the mean) and high (one standard deviation above the mean) – and estimate the effect of RG on performance for both levels. As we show in Figure 2a, the relationship between RG and performance is much weaker when AS is high (simple slope $b = 0.32, p < 0.01$) than

---

**Table III. Results of regression analysis: standardized coefficient estimates (t-value)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
</tr>
<tr>
<td></td>
<td>$b$</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
</tr>
<tr>
<td>Technological change</td>
<td>-0.08</td>
</tr>
<tr>
<td>Contract duration</td>
<td>0.19**</td>
</tr>
<tr>
<td>Firm size</td>
<td>0.21**</td>
</tr>
<tr>
<td>Job tenure</td>
<td>0.14**</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-0.04</td>
</tr>
<tr>
<td>Finance</td>
<td>-0.20**</td>
</tr>
<tr>
<td>Data</td>
<td>0.05</td>
</tr>
<tr>
<td>Network</td>
<td>0.07</td>
</tr>
<tr>
<td>Support</td>
<td>0.11†</td>
</tr>
<tr>
<td>Direct effects</td>
<td></td>
</tr>
<tr>
<td>Asset specificity (AS)</td>
<td>-0.17**</td>
</tr>
<tr>
<td>Measurement difficulty (MD)</td>
<td>-0.09**</td>
</tr>
<tr>
<td>Exchange tenure (ET)</td>
<td>0.17**</td>
</tr>
<tr>
<td>Relational governance (RG)</td>
<td>0.47**</td>
</tr>
<tr>
<td>Interaction effects</td>
<td></td>
</tr>
<tr>
<td>H1: RG $\times$ AS</td>
<td>-0.11**</td>
</tr>
<tr>
<td>H2: RG $\times$ MD</td>
<td>-0.13**</td>
</tr>
<tr>
<td>H3: RG $\times$ ET</td>
<td>-0.12**</td>
</tr>
<tr>
<td>$R^2$</td>
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<tr>
<td>Adjusted $R^2$</td>
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</tr>
<tr>
<td>$\Delta R^2$</td>
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</tr>
<tr>
<td>Model F</td>
<td>5.21**</td>
</tr>
<tr>
<td>df</td>
<td>9, 289</td>
</tr>
</tbody>
</table>

**Notes:** The variance inflation factors (VIF) range from 1.01 to 1.89; RG values are residuals ($Y - Y_{\text{predicted}}$ from Stage 1 estimation.

**p < 0.01, * p < 0.05, † p < 0.10.**
(a) Hypothesis 1

(b) Hypothesis 2

(c) Hypothesis 3

Figure 2. Decomposing the interaction effects
when it is low ($b = 0.61, p < 0.001$). Similarly, we decompose the interaction for Hypothesis 2 and depict it in Figure 2b; the relationship between RG and performance is much weaker when MD is high ($b = 0.30, p < 0.01$) than when it is low ($b = 0.63, p < 0.001$). These results suggest the positive association between relational governance and performance declines as exchanges become more hazardous.

Consistent with our prediction in Hypothesis 3, the interaction between RG and ET is negatively associated with performance ($b = -0.12, p < 0.05$). We similarly decompose the interactive term and plot it in Figure 2c, which shows that the relationship between RG and performance becomes much weaker when ET is high ($b = 0.24, p < 0.01$) than when it is low ($b = 0.69, p < 0.001$). Therefore, the positive association between relational governance and performance declines for long-standing exchange relationships. These findings fully support Hypothesis 3.

**Effects of Controls**

As Table III, Model 3, shows, contract duration relates positively to performance ($b = 0.14, p < 0.01$). We posit that long-term contracts may promote efficiency in exchanges because they prevent repetitive bargaining costs and reduce transaction risks. In addition, firm size is positively associated with performance ($b = 0.20, p < 0.01$), perhaps because large firms are likely to have greater leverage and bargaining power, which encourages suppliers of IT services to deliver better performance and more equitable negotiations to large firms. Longer job tenure also relates positively to performance ($b = 0.13, p < 0.01$). In response, we infer that the experience of senior managers serves as a proxy for firm knowledge about outsourcing issues, which translates to better IT vendor selection and management and consequently better performance.

Regarding industry differences, firms in the financing sector are less satisfied with their outsourcing partners ($b = -0.14, p < 0.05$). In terms of service type, firms tend to have higher evaluations of their partners’ performance if the service type is end-user support or training and education ($b = 0.13, p < 0.05$).

**DISCUSSION**

Although the positive effects of relational governance on performance are well conceptualized and empirically verified, its potential contingencies have received little conceptual and empirical attention. With this article, we contribute to the literature by examining two research questions that probe the potential limits of relational governance. Our first question assesses whether exchange hazards erode the positive relationship between relational governance and exchange performance, and the second question examines whether exchange tenure limits this same relationship. The results clearly show that the benefits of relational governance are conditional, such that (1) exchange hazards, namely, asset specificity and difficult performance measurement, weaken the positive relationship of relational governance and exchange performance, which suggests that trust does not ensure fully cooperative behaviour; and (2) exchange tenure weakens the positive relationship between relational governance and exchange performance, which...
indicates that over time, partnerships come to lack the necessary restructuring efforts that ensure optimal exchange performance. Accordingly, our study contributes to the literature in two major ways.

First, though the debate about whether trust guarantees the display of trustworthy behaviour continues (McEvily et al., 2003; Uzzi, 1997; Williamson, 1996), empirical work remains limited (Krishnan et al., 2006). By examining whether calculation poses a boundary constraint on the effectiveness of relational governance and drawing from transaction cost and agency theory logics, we assert that relational governance may not safeguard those exchanges from self-interested opportunities that arise. In these settings, despite the prevailing norms, parties may simply posture and act on real opportunities for individual gain, which decreases the positive association between relational governance and exchange performance.

Our results strongly endorse this logic. In high asset specificity settings, the positive association of relational governance and performance satisfaction declines significantly compared with low asset specificity settings, because of the opportunity for individual gain in high asset specificity settings. This result amplifies the risk and vulnerability incurred from investments in specialized assets and signifies the importance of this hazard, as emphasized by transaction cost scholars. We further find that measurement difficulty dampens the positive association of relational governance and performance satisfaction, revealing that suppliers will shirk their expected effort levels and quality, as well as use this hidden information to augment their costs.

These results run contrary to Uzzi’s (1997) observation that buyer–supplier relationships do not exhibit signs of calculation. Research contexts may account for such differences; Uzzi studies the apparel industry in New York City, whereas we examine IT outsourcing. Measurement and asset specificity may represent greater concerns in IT outsourcing, or at least in some areas of IT outsourcing. Furthermore, Uzzi does not systematically test his heuristic proposition with a broad sample of exchanges that vary in terms of exchange hazards, as we do.

Our results also contrast with Krishnan et al.’s (2006) findings that the positive relationship between trust and performance is stronger under high behavioural uncertainty, specifically when parties work extensively together or compete with each other. One explanation for the divergence in findings may be that Krishnan et al.’s measure of task interdependence actually measures the level of behavioural monitoring, not behavioural uncertainty as they suggest. This alternative interpretation of their measure of task interdependence may suggest that rather than diminish behavioural uncertainty, trust in combination with task interdependence enables the alliance partners to identify value-creating opportunities (e.g. Dyer and Singh, 1998; Madhok and Tallman, 1998). Our empirical study differs from Krishnan et al.’s in two other significant respects. Whereas we focus on single-country (US) IT outsourcing, Krishnan et al. sample international strategic alliances. In addition, our measures of exchange hazards focus on asset specificity and difficult performance measurement, whereas their study examines task interdependence and inter-partner competition. Further work thus is needed to explore the lack of convergence in these contexts.

Second, our findings unveil an important constraint on the optimal performance of relationally governed exchanges: exchange tenure. In extending extant literature, we
advance that exchange history may moderate the relationship of relational governance and performance, such that as exchange tenure increases, the routines that characterize relationally governed exchanges become decoupled from those that optimally support the task, including external information searches, knowledge of alternatives, and routine evaluations of the supplier, partnership, and fit with the external environment. Without such mechanisms, exchange relationship performance may decrease over time as products or services become outdated and stale, which creates a misalignment between the buyer’s expectations and the IT supplier’s fit. This result is broadly consistent with Goerzen’s (2007) finding that repeated partnerships have a negative effect on economic performance; in addition, our findings enrich understanding of the potential dark side of long-standing ties.

Managerial Implications

Recent work cautions managers to be wary of alliances that are excessively stable and constrain performance through rigidity; for example, Ernst and Bamford (2005) suggest that managers should create institutional and formal provisions for flexibility, such as processes that restructure poorly performing alliances. Our findings endorse the need for managers to interject mechanisms for evaluating and restructuring partnerships, because the performance of relationally governed exchanges appears to decline over time. However, our findings also caution about the unconditional use of relational governance when exchange hazards are higher. In particular, relational governance becomes less effective when asset specificity is high and performance measurement is difficult. Therefore, firms should consider other means, such as joint incentives and credible commitments to foster greater interdependence of the two parties. As others point out, complex inter-organizational relationships require the joint use of informal, trust-based mechanisms and formal controls, incentives, and their enforcement (Das and Teng, 1998; Poppo and Zenger, 2002; Srinivasan and Brush, 2006).

Limitations and Further Work

Our results must be interpreted within the limitations of the study. First, our research design uses a single key informant, so common method bias is a concern. Future work is needed to validate our findings using multiple respondents, informants from both buyer and supplier, as well as objective dependent measures. Future research is also needed to develop a more refined measure of measurement difficulty and exchange tenure. Moreover, the cross-sectional nature of our design cannot determine causal links in the model, though theory suggests that a direct causal link exists. For example, Granovetter (1985, p. 491) states that ‘the trust engendered by personal relations presents, by its very existence, enhanced opportunity for malfeasance’. Consistent with this claim, we suspect that suppliers shirk their responsibilities but not enough to damage a long-term relationship. Longitudinal research could examine this causal logic further.

Second, though our sample consists of companies in various industries, the specific context pertains to the outsourcing of IT services; therefore, our findings apply to a single-context case in which technological change was generally quite rapid. In fast
changing environments, engaging in long-standing relationships may be more problematic, because they constrain the flexibility to access new technological information from outside of the relationship. However, in mature or geographically constrained industries, long-standing ties may strengthen the performance benefits of relational governance. Comparisons of our results on relational governance with others (e.g. Dyer and Chu, 2003; Uzzi, 1997) suggests that this contingency is important, yet further work is needed to verify this proposition.

Third, our measurement of relational governance focuses on private information exchange, collaboration, and trust. Future work may consider what kind of administrative practices are most critical for creating value in relational governance. For example, recent work suggests that joint-problem solving is a primary determinant of a buying firm’s acquisition of competitive capabilities from their supplier (McEvily and Marcus, 2005). That is, while trust and shared information are important, they have an indirect effect on knowledge acquisition through joint problem solving. For long-standing ties, our results suggest a different kind of administrative practice: buyers should routinely search for and integrate new knowledge, which may require terminating the long-standing tie in favour of a new one with the requisite capabilities. Such routine evaluations of the fit of the partnership and the supplier, given the external and task environments, may be an optimal process forcing adaptation and mitigating performance losses due to a stale partnership.

In summary, our findings demonstrate the conditional limits of relational governance by showing that its performance benefits erode for transactions characterized by exchange hazards and long-standing ties. Left unexamined in our research is whether different governance choices can mitigate these conditional limits. Prior works show that managers learn over time how to adjust the formal aspects of outsourcing decisions to reflect learning from poor outcomes (Mayer and Argyres, 2004; Nickerson and Silverman, 2003) and that firms do not necessarily have the same capability to learn how to best contract for coordination and communication (Argyres and Mayer, 2007). One research extension is whether managers ‘learn’ to augment the performance of relational governance by changing particular contract terms. For example, more specific provisions regarding each parties’ roles and responsibilities should mitigate the moral hazard problem arising from unobservability. Related to this, recent works show that trust hinges critically upon a shadow of the future (Poppo et al., 2008) and that managers typically do not outsource transactions involving technological capabilities or specialized assets unless managers craft self-enforcing agreements bolstered through credible commitments (Mayer and Salomon, 2006; Srinivasan and Brush, 2006). Thus, future work may also examine whether and how formal and informal governance choices can overcome the conditional limits of relational governance.

ACKNOWLEDGMENTS

We gratefully acknowledge helpful comments from seminar participants at Rice University, Boston University, and Purdue University, three anonymous reviewers, and Timothy Clark. This study was supported by a grant from the Research Grants Council, Hong Kong SAR Government (CERG HKU 7430/06H).
NOTE

[1] We assess the variances of major constructs (i.e. performance, relational governance, asset specificity, measurement difficulty, and exchange tenure) in low/high level cells. The results show that the standardized deviations of each construct in low/high exchange hazards, low/high relational governance, and short/long exchange tenure are comparable to that of the overall sample, which suggests our sample varies in all the theoretical cells.

APPENDIX: THREE-STAGE HIERARCHICAL REGRESSION MODEL

Stage 1

\[ RG_i = \alpha_i + \beta_{11} AS_i + \beta_{12} MD_i + \beta_{13} ET_i + \beta_{14} CD_i + \epsilon_i \]

to obtain \( RG_{\text{residual}} = RG - RG_{\text{predicted}} \)

Stage 2 (Model 2 in Table III)

\[ \text{Performance}_i = \alpha_2 + \beta_{21} AS_i + \beta_{22} MD_i + \beta_{23} ET_i + \beta_{24} RG_{\text{residual}} + \beta_{25} \text{Controls}_i + \epsilon_i \]

Stage 3 (Model 3 in Table III)

\[ \text{Performance}_i = \alpha_3 + \beta_{31} AS_i + \beta_{32} MD_i + \beta_{33} ET_i + \beta_{34} RG_{\text{residual}} + \beta_{35} RG_{\text{residual}} \times AS_i + \beta_{36} \text{CA}_{\text{residual}} \times MD_i + \beta_{37} \text{CA}_{\text{residual}} \times ET_i + \beta_{38} \text{Controls}_i + \epsilon_i \]

REFERENCES


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