How can organizations in contractual engagements mitigate their risk and increase partner satisfaction when the engagement may not last long enough to forge ‘traditional’ bonds of trust? We investigate perceptions of contract specificity, organizational similarity, contract monitoring costs, operational flexibility and fair treatment as antecedents to partner satisfaction. We empirically test our hypotheses using data collected on 72 contractual engagements from Canadian consulting engineering firms. Our results indicate that firms are likely to be more satisfied when they partner with organizations with which they have had a previous satisfying experience. Furthermore, written contracts with overly excessive specifications can have a negative effect on satisfaction.

Organizations operating in today’s unpredictable, dynamic environments are increasingly looking to inter-firm partnerships as a means of acquiring the flexibility required to adapt and survive (Lee, Chen & Kao, 2003). Prior research has, for the most part, focused on assessing the antecedents and outcomes of alliance partnerships and theoretical perspectives to describe the motivations behind such collaborative partnerships. However, little attention has been paid to the contractual engagement form of alliance (Lambe, Spekman & Hunt, 2000), which focuses on narrowly defined mutual objectives with an intentionally limited or closed-ended life-span. We define a contractual engagement to be “a close, collaborative, fast-developing, short-lived exchange relationship in which companies pool their skills and/or resources to address a transient, albeit important, business opportunity and/or threat” (Lambe et al., 2000: 213).

Prior research acknowledges the importance of the development of trust in mitigating risk and increasing partner satisfaction (Lambe et al., 2000). However, trust between alliance partners develops over time (Spekman, Isabella, MacAvoy & Forbes, 1996). Given that ‘longer-term’ alliances have the opportunity to evolve over time, our prior understanding of the evolutionary development of open-ended alliance relationships may not apply to contractual engagement forms (Lambe et al., 2000). Therefore, what still remains unknown is how contractually engaged partners mitigate the risks of their relationships when the partnership does not exist long enough for trust to develop.

Our objectives for this research are to develop and empirically test a model that examines specific constructs that may be important in mitigating risk within a contractual engagement. Specifically we ask: Given that contractual engagements may not exist long enough for trust to develop, how can parties to the engagement mitigate their risk and increase their satisfaction with the partner? We structure the paper as follows. First, drawing on exchange theory, transaction cost economics and expectancy theory, we develop a conceptual model of the
antecedents of partner satisfaction. Second, we empirically test our model via a Partial Least Squares approach (Wold, 1985) to structural equation modeling using cross-sectional survey data collected from a sample of contractual engagements within 24 consulting engineering firms in Canada (i.e.: firm A enters into a contractual engagement with firm B to complete a project for firm A’s client). Finally, we conclude with a discussion of the theoretical and managerial implications of the findings, as well as suggestions for future research.

Theoretical Framework and Conceptual Model

Expectancy theory suggests that parties to a contractual engagement will be satisfied with their partner if their expected outcomes are met. However, transaction cost economics informs us that regardless of the length of collaboration, partnering entails the willingness to accept a certain degree of risk, implying the need for trust between partners (Williamson, 1993). Thus, partner satisfaction will occur when risk is minimized and trust is maximized in such a way that expectations are collaboratively met (Vroom, 1964). Collaborating parties often employ governance mechanisms as a means of safeguarding themselves against potential risks such as outcome uncertainty (Kogut, 1988), opportunistic behavior (Williamson, 1993), and uncooperative behavior (Ring & Van de Ven, 1994). As a result, governance mechanism can increase trust by increasing a partner’s level of willingness to accept certain risks (Das & Teng, 2001). However, given the limited lifespan of a contractual engagement, common alliance governance mechanisms such as joint investments (Joshi & Stump, 1999), relational norms, standards and goal congruency (Jap, 2001), may not be suitable for contractual engagements. Furthermore, since trust evolves over time (Thibault & Kelley, 1959) the duration of a contractual engagement may restrict the ability of trust to evolve. In such cases, other governance and safeguarding mechanisms must be considered in order to mitigate risk, increase trusting behavior and ultimately increase partner satisfaction with the engagement. We propose five antecedents to contractual engagement partner satisfaction which we detail in the subsequent sections.

Antecedents to Partner Satisfaction

Contract Specificity: As contractual engagements are time constrained, the renegotiation of relationship terms becomes less viable (Reuer & Ariño, 2002). Thus, based on transaction cost economics theory, it is likely that the written contract will be the traditional protective mechanism in these circumstances. When explicit terms, expectations and potential penalties are detailed within the contract, parties are more likely to be motivated to comply (Macneil, 2000). Williamson (1993) suggests that written contracts produce calculative trust by minimize uncertainty through explicit agreements. Thus, contract specificity reduces risk since penalties for non-compliance are clearly stated (Parke, 1993).

Organizational Similarity: A significant tenet of social exchange theory is that continual interactions create trust and similarity (Thibault & Kelley, 1959). While the written contract is an important antecedent to satisfactory collaboration, organizations that have a shared common work history may experience lower perceptions of risk, reduced opportunistic behavior and increased inter-firm trust (Lane & Lubatkin, 1998). Thus, partners that perceive they are similar to each other are more likely to trust one another without the need for overly explicit contracts.
While previous empirical results suggest the importance of organizational similarity in long-term relationships (Reve & Stern, 1979), to date it does not appear to have been examined as an antecedent of partner satisfaction vis-à-vis contractual engagements (Lambe et al., 2000).

**Contract Monitoring Costs:** While contracts specify the norms of behavior and outcomes, organizations attempt to control risk by monitoring partners to ensure that activities and outcomes are conducted according to the contract (Das & Teng, 2001). However, the requirement to monitor the partnering firm’s activities to ensure contract compliance adds additional cost to the organization. Transaction cost economics suggests that the partners within the collaboration, striving to operate in the most efficient manner possible, will seek to incur a minimal level of contract monitoring costs (Zajac & Olsen, 1993). If outcomes and contingency issues are clearly defined within the contract, then parties are less likely to face situations where their roles or obligations are ambiguous. Therefore, we expect that as contract specificity increases, contractual partners will find that monitoring becomes more efficient and requires lower monitoring costs. Thus:

**Hypothesis 1a:** The specificity of the written contract will be negatively related to contract monitoring costs.

An organization that perceives a partnering firm to be similar in nature is more likely to trust its partner to carryout the terms of the contract. Empirical and theoretical evidence provided by Zajac and Olsen (1993), suggests that parties with a history of positive previous collaborative experiences, will enter into future relationships that require less explicit governance controls and monitoring. Therefore, as organizational similarity increases, a firm’s contract monitoring behavior and associated costs will decrease. Thus:

**Hypothesis 2a:** Organizational similarity will be negatively related to contract monitoring costs.

**Operational Flexibility:** Organizations require a specific level of operational flexibility in order to carry out their day to day operations. In collaborative engagements, a firm must carefully balance its individual flexibility within the context of the contractual agreement. Operational flexibility decreases risk since the collaborating firm will believe its capability to conduct its daily operations is not at jeopardy. Transaction cost theorists argue that excessively detailed contractual safeguards can create inflexible operating environments (Lui & Ngo, 2004) While we expect there to be a negative relationship between contract specificity and operational flexibility, we also suggest that organizational similarity will increase operational flexibility. Thus:

**Hypothesis 1b:** The specificity of the written contract will be negatively related to operational flexibility.

**Hypothesis 2b:** Organizational similarity will be positively related to operational flexibility.

**Perceived Fair Treatment:** Expectancy theory holds that partner satisfaction is dependent on the individual firm achieving the expectations it desires from the relationship. However, the nature of the interaction between partners influences the perception of the relationship and, ultimately, the economic value of the collaboration (Ring & Van de Ven, 1994). As such, favourable
perception of fairness during the life of the contract enhances partner satisfaction. Transaction cost economics suggests that contract specifications provide for the attainment of the stated outcomes, which in turn produces perceived justice and reciprocity in terms of fair treatment. Likewise, exchange theory indicates that organizational similarity enhances inter-organizational trust (Reve & Stern, 1979). Thus previous successful interactions with partners are likely to increase the chance of future satisfaction. Based on the above, we expect that higher levels of contractual specificity and increased levels organizational similarity will lead to higher levels of fair treatment. Thus:

**Hypothesis 1c:** The specificity of the written contract will be positively related to fair treatment.

**Hypothesis 2c:** Organizational similarity will be positively related to fair treatment.

**Partner Satisfaction**

The outcome of collaborations can be measured using various benchmarks such as profitability, competitive advantage, product effectiveness, et cetera. In many ways, appropriate measures of the outcomes of alliances are intrinsically tied to the purpose and objective of the alliance. Expectancy theory (Vroom, 1964), suggests that considering the effort required to execute the collaborative objective, if expected outcomes are met, firms will be satisfied with their partners. Thus, we measure partner satisfaction as the outcome of the efforts of the collaboration. Inter-organizational trust increases relationship satisfaction and the potential for meeting specific collaborative expectations (Ring & Van de Ven, 1994). When a firm does not have to invest significant amounts of time monitoring a partner’s behavior, then it is more likely to be satisfied with that partner. Correspondingly, if, during the life of the contract, the firm perceives it was able to maintain a sufficient degree of flexibility, it is likely to be more satisfied with the partner. Finally, the firm will be satisfied with its partner if it perceives that it was treated fairly during the contract.

**Hypothesis 3:** Contract monitoring costs will be negatively related to partner satisfaction.

**Hypothesis 4:** Operational flexibility will be positively related to partner satisfaction.

**Hypothesis 5:** Fair treatment will be positively related to partner satisfaction.

**Research Method**

**The Sample and Data Collection Method**

The subject for this study consisted of 24 consulting engineering firms. Within this industry, a significant amount of business is conducted through short-term, contract-based projects for the construction, transportation, and industrial sectors (Consulting Engineers of Alberta, 2002). Furthermore, given the required stringent professional qualifications, the consulting engineering industry will likely experience situations where success in certain alliance relationships will lead
to repeat partnering. The consulting engineering industry, therefore, is uniquely suitable for the investigation of contractual engagements.

Preliminary exploratory interviews with industry executives indicated that most major capital projects requiring consulting engineering contracts were completed by firms with 10 or more employees. Using this criterion, a list totalling 28 consulting engineering firms based in Alberta, Canada was generated from a consultant engineering association database. These 28 firms represented approximately 20% of the total consulting engineering firms (with more than 10 employees) in Canada. Twenty-eight senior executives (one from each targeted firm) were then contacted to request their firm's participation in the study, which involved the permission to interview and survey two project executives from the firm. Of the 28 senior executives contacted, 24 agreed to participate in the study. While most firms were able to provide two project executives, six of the 24 could only provide one. In total, 42 project executives participated in the research.

The survey questionnaire data was collected during personal interviews with project executives lasting approximately 70 minutes each. During the interview, the participant was asked to identify and discuss, one recent collaboration experience where expectations of the project were met, and one where expectations were not met. In 12 instances, only one recent engagement could be recalled. Following the discussion, the project executive then completed the survey instrument. From the 42 executives participating, data was collected regarding 72 recent contractual engagements. Of those 72 engagements, expectations were stated to have been met in 37 (51%) of the cases. The alliances reported in the surveys ranged from six months to three years in length, with the average engagement lasting approximately 18 months in duration.

The Measurement Instrument

Measurement items for the six constructs were developed by adapting existing scales to suit our research context, and by creating new scales items where existing items did not adequately suit our requirements. Prior to collecting data, we assessed the face validity of the measurement items by utilizing a panel of consulting engineers and management faculty of a large Western Canadian university (Hair, Anderson, Tatham & Black, 1998).

The Contract Specificity scale measured the specificity of detail in the written contract between the firm and the partner, using 11 contractual items (such as product design specifications, staffing levels, and project scope) found in existing contract studies and practice. The measure utilized a five-point Likert scale anchored at “much more detail than usual” and “much less detail than usual.” The Organizational Similarity scale measured the degree of organizational similarity across five specific dimensions. By reviewing extant theory (Jemison & Sitkin, 1986), we created the following five similarity measurement items: (1) organizational goals, (2) operating policies, (3) management accounting and information systems, (4) corporate culture, and (5) national culture. The items were measured using a five-point Likert scale anchored at “very low match” to “very high match.”

Building on Chiles and McMackin’s (1996), exploratory interviews and executive feedback, Contract Monitoring Cost was measured with seven items that asked respondents about specific
monitoring costs, such as travel costs, communication costs, inspection costs, et cetera. A five-point Likert scale, anchored at “much lower than usual” and “much higher than usual,” captured the costs relative to other contract experiences. The Operational Flexibility scale measured the degree to which the respondents believed they had the necessary flexibility to operate within the partnership based on what they would consider to be normal, given previous experience. The four-item scale was adapted from Mascarenhas' (1985) organizational flexibility scale using a five-point Likert scale anchored at “far lower than normal” and “far greater than normal.” Fair Treatment was measured using an adaptation of Greenberg's (1986) five-item interpersonal scale that measured determinants of perceived fairness of partner behavior. Examples of the adaptations included “openness to challenges or rebuttals when judging your firm's work” and “efforts to solicit input and use the information when making decisions which impact upon your firm.” The measure utilized a five-point Likert scale, anchored at “much lower than usual” to “much higher than usual.” Finally, Partner Satisfaction measured the degree to which the firm’s expectations were met, coupled with the level of satisfaction with the partnering firm. This scale was measured using a five-point Likert scale.

Control variables: We controlled for previous knowledge and interaction with partnering firms by way of three single-item scales modeled as formative indicators, creating one control index (Diamantopoulos & Winklhofer, 2001). Using a five-point Likert scale, these items included previous level of experience with the partnering firm, previous satisfaction with the firm, and prior knowledge of the firm.

Analysis Method & Measurement Model Results

We chose to use Wold’s (1985) Partial Least Squares approach to structural equation modeling to estimate the measurement model and the structural paths within the structural model itself (Lohmöller, 1989). Partial Least Squares differs from covariance-based models in that it utilizes a component-based analysis, which is more suitable for smaller sample sizes (Lohmöller, 1989), and is designed to minimize dependent variable variance for increased predictive ability. The Partial Least Squares procedure uses an iterative estimation algorithm, based on simple or ordinary least squares, allowing for the creation of factor loadings and standardized beta regression coefficients (Chin, 1998). As Partial Least Squares does not provide the goodness of fit indices common to most covariance-based methods, the stability of the beta coefficients was tested using the bootstrap resampling technique (Efron & Tibshirani, 1993). Using the Partial Least Squares method (Green, Barclay & Ryans, 1995) we assessed the measurement model for individual item reliability, internal consistency, convergent validity, and discriminant validity.

The measurement model was tested using standardized factor loading, t values, average variance extracted per construct, and composite reliability estimates Individual item reliability was found to exist by examining the standardized loadings of each item to its intended construct to ensure that at least 50% of the variance of the observed variable is shared with the construct (Green et al., 1995). Twenty-five of the 26 items had standardized loadings greater that .707, indicating individual item reliability (Carmines & Zeller 1979). Although one item (.620 within organizational similarity) was slightly below the recommended .707, it was retained, as all other items within the construct were well above .707 (Carmines & Zeller, 1979). Furthermore, the
average variance extracted of the reflective items for each of the latent variables ranged from .64 to .74, exceeding Fornell and Larcker’s (1981) suggested .50. Internal consistency was measured by determining the composite reliability of the construct measures (Fornell & Larcker 1981). Composite reliability, which ranged from .88 to .93, exceeded the minimum .70 suggested by Nunnally (1978), providing evidence of internal consistency.

To examine the likelihood of common method variance in the data, we performed Harman’s (1967) single factor test by conducting a factor analysis that included all variables. Using an unrotated factor analysis, and an eigenvalue criterion of one (Hair et al., 1998), seven separate factors were revealed, with the first factor explaining only 10.1% of the variance in the data. If common method variance was an issue, one significant factor would explain a significant portion of the variance in the data (Podsakoff & Organ, 1986). Since this was not the case, we concluded that common method bias was not an issue in this analysis. We assessed the potential for multicollinearity, given the number of respondents who reported on more than one engagement. The maximum variance inflation factor (VIF) for the independent variables was 1.03, well below the common cut-off threshold of 10 (Hair et al., 1998), indicating that multicollinearity was not an issue in the analysis reported below.

Results

Hypothesized Model

The assessment of nomological validity, and the hypotheses was completed by examining the size and significance of the path coefficients, and the coefficient of determination ($R^2$) value of the variance explained in the dependent variables. The Partial Least Squares method provides estimated standardized beta coefficients for each specified path in the structural model. To test the stability of the beta coefficients, the bootstrap resampling technique (Efron & Tibshirani, 1993) was used, with resampling sizes of 250, 500 and 1,000. The three resampling tests provided similar results, indicating the significance of the path coefficients. While seven of the nine structural paths were found to be significant, one path (contract specificity $\rightarrow$ fair treatment) was significant in the opposite direction of what was hypothesized. The structural model exhibited significant predictive power as 20% contract monitoring cost variance, 33% of operational flexibility variance, 42% of fair treatment variance and 72% of partner satisfaction variance was explained by the model.

As shown in Table 1, support was found for six of the nine hypotheses. Support was not found to indicate that ($H_{1a}$) contract specificity decreased contract monitoring costs ($\beta_{1a} = .14 p>.10$). Organizational similarity was found to decrease contract monitoring costs ($H_{2a}$) ($\beta_{2a} = -.42 p<.005$), with the amount of variance explained by organizational similarity being significant ($\Delta R^2 = .14, f^2 = .18$). As we hypothesized ($H_{1b}$), contract specificity did lead to a decrease in operational flexibility ($\beta_{1b} = -.36 p<.005$); while organizational similarity ($H_{2b}$) increased operational flexibility ($\beta_{2b} = .39 p<.005$). Furthermore, organizational similarity explained an additional 13% of the explained variance of operational flexibility ($R^2 = .33, f^2 = .19$). As mentioned above, the path contract specificity to fair treatment was significant in the opposite direction of what was hypothesized ($\beta_{1c} = -.35 p<.005$), rejecting this hypothesis. However, as predicted ($H_{2c}$), organizational similarity did lead to increased fair treatment ($\beta_{2c} = .49 p<.005$).
The two antecedent variables explained a total of 42% of the variance in fair treatment. As hypothesized (H₃), contract monitoring costs were found to be negatively related to partner satisfaction (β₃ = -.20 p<.05). While directionally accurate, operational flexibility did not increase partner satisfaction (H₄) (β₄ = .11 p<.10). Finally, fair treatment was found to be positively related to partner satisfaction (β₅ = .64 p<.005). Contract specificity and organizational similarity were also found to have significant indirect effects on partner satisfaction through four of the six paths. Contract specificity had significant negative indirect effects through operational flexibility (IE = -.05 p=.05) and fair treatment (IE = -.30 p=.00). Similarly, organizational similarity had significant positive indirect effects through operational flexibility (IE = .06 p=.04) and fair treatment (IE = .45 p=.00). Overall, the model accounted for 72% of the variance in partner satisfaction.

### Table 1

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<th>Hypotheses Results</th>
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**Interaction Effect and Mediation Analysis**

It is arguable that organizational similarity and contract specificity are not as independent of each other as our model posits. Although in certain cases, similar organizations may have less specified contracts, it is reasonable to assume that this is not necessarily true of all collaborations. To assess this assumption, we tested for interaction effects between contract specificity and organizational similarity on the dependent variables. The results indicated a non-
significant (p>.10) regression path coefficient for the interaction term. Furthermore, the significance of the change in $R^2$ for each dependent variable ranged from .137 - .829, with F values ranging from .076 to .900. Thus, we concluded that there were no linear interaction effects between contract specificity and organizational similarity within our model.

**Conclusion**

In our research, we have drawn on exchange theory, transaction cost economics, and expectancy theory to develop and test a model of how partners in contractual engagements might mitigate the risk of engagement to increase partner satisfaction. We empirically tested our conceptual model using survey data collected on 72 alliances. We found evidence to suggest that contract specificity and organization similarity along with contract monitoring cost, operational flexibility and fair treatment are important antecedents to increasing partner satisfaction. Broadly speaking, our research extends the literature by providing an empirical investigation of how organizations forming contractual engagements may increase partner satisfaction.

Our research provides three main implications to management practice. Firstly, where possible, managers of contractual engagements should seek to create partnerships with organizations with which they have had a previous satisfying relationship (Gulati, 1998). Secondly, managers must understand that although contracts are important in the formation and operation of the relationship, there is likely a point where increasing written specificity has diminishing returns in terms of overall satisfaction with the partner. Finally, managers should build in measures of monitor costs, operational flexibility and fair treatment between the principals.

This study is not without its limitations. The use of a cross-sectional survey methodology provides only a synchronic examination of contractual engagements. It is possible that outside influences beyond the scope of this study (temporal, psychological, physiological, et cetera) could impact the respondents. Future research may consider a longitudinal study that could measure the differences in judgment of the constructs over time. Furthermore, examining other industries (telecommunications and technology industries, for example) would allow for cross industry comparisons. As previously discussed, our sampling and survey administration design may have potentially biased executive’s responses. Therefore, future research might consider eliminating the pre-survey researcher interaction and request the respondent to report on a single encounter without instructing that it be either satisfactory or unsatisfactory.
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