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Strategic Partnerships versus Captive Buyer and Supplier Relationships

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ABSTRACT
The face of customer relationship management has shifted as business partners on both sides of the relationship deploy technology to better manage relationships, streamline business processes and achieve integration. The phenomenon of captive buyer and supplier relationships grounded in substantial unilateral monetary and organizational investments in achieving business objectives contrast with strategic partnerships, which emerge through bilateral investments. The current research examines buyer/supplier relationship dyads finding that buyers’ trust has a direct effect on the occurrence of captive buyer relationships; moreover, captive buyer and supplier relationships have a direct effect on each parties’ respective perceived benefits. More importantly, each partners’ trust has a direct effect upon the occurrence of strategic partnerships, which in turn has a direct effect on perceptions of derived benefits for each.

Keywords
Asset specificity, captive buyer/supplier, perceived benefits, strategic partnerships, trust.

INTRODUCTION
Organizations making unilateral investments in achieving objectives create captive buyer and supplier relationships, while bilateral investments result in strategic partnerships (Bensaou 1999). Digital technologies possess the ability to manage relationships, streamline business processes and integrate partners (Grover et al. 2004; Straub et al. 2004; Tapscott et al. 2000). The current study focuses on the question of whether both buyer and supplier trust shape the development of captive buyer and supplier relationships as well as strategic partnerships. Moreover, this work examines whether or not such relationships yield greater perceived benefits for parties involved. Employing data on buyer/supplier relationship dyads, this research examines the role of each partners’ trust in determining the nature of their relationships, in addition to the extent to which subsequent relationships yield perceived benefits across participants.

The next section reviews the theoretical background relevant to the study and proposes specific research hypotheses. The following section details the methodology including measurement development, survey protocols, validity assessment, and data analysis. The final sections respectively discuss the findings and conclude the paper.

THEORETICAL BACKGROUND
The relational view of the firm proposes ways in which organizations overcome core constraints with respect to resources, knowledge stocks and capabilities (Dyer et al. 1998). Specifically, firms differ in their investments in relationship specific assets in accordance with the notion of asset specificity advanced in transaction cost economic theory (Williamson 1989). Prior research examines key factors present in strategic alliances, concluding that they ultimately shape the specific nature of subsequent relationships (Gulati 1998). In examining supply chain relationships within the U.S. and Japanese automobile industries, effective management of product and market conditions dictates relationship choice (Bensaou 1999). Additionally, an examination of marketing relationships provides a typology of potential relationships (spot, commodity, project, and customer integration) based on relationship intensity and degree of customization (Kleinaltenkamp et al. 2002). By contrast the current study seeks to understand the relationship between trust and the presence of captive buyer and supplier relationships and strategic partnerships as well as the subsequent perceived benefits realized by each party.

Asset Specificity
From an economic perspective the presence, perceived or real, of “switching costs” allows for an operationalization of buyer/supplier relationship dependence, or the degree to which one party relies upon another for the ongoing fulfillment of recurring transactions (Klepperer 1987a; Klepperer 1987b; Lipman et al. 2000; Nilsson 1992). Continued participation with minimal or no costs acknowledged exemplifies low switching costs. By contrast, faced with significant costs in discontinuing
recurring interactions, high switching costs exist. Hence, such costs measure each party’s level of investment in the business relationship (Nootenboom 1996).

The concept of asset specificity from transaction cost economics theoretically defines relationship investment (Williamson 1989). Asset specificity considers the degree to which a tangible or intangible asset holds value within a specific domain or environment and loses some or all of that value in a different domain or environment (Whyte 1994). Investments, whether physical or human, dedicated to a specific partner can entail considerable switching costs to firms through redeployment. Asset specificity increases dependence on partners and serves to escalate the transaction cost economic situation (Ganesan 1994). Transaction specific assets dedicated to specific relationships hold minimal or no value outside of the relationship (Lohtia et al. 1994; Williamson 1989). Not limited to physical assets, transaction specific investments can include training and experience (Anderson et al. 1986).

Similarly, within the context of buyer/supplier relationships, non-specific asset investments by both parties yield market exchanges (Bensaou 1999), as depicted in Figure 1. Captive supplier relationships arise where non-specific assets exist on the buyer side and highly specific assets exist on the supplier side. Given these conditions the supplier might be subject to sunk costs as a result of substantial investments in developing processes for a buyer who could easily change providers at any time (Dasgupta et al. 1993; Roodhooft et al. 1999; Worthington 1995). Likewise, captive buyer relationships emerge when clients make highly specific asset investments while the supplier invests in non-specific assets. Under such circumstances buyers might be subject to a lack of control within the relationship as the supplier could change or discontinue existing processes forcing buyers to adjust. Finally, where both parties invest in highly specific assets, strategic relationships emerge.

Prior research on asset specificity finds embeddedness within buyer/supplier networks influence asset specificity in driving opportunistic behaviors on the part of individual suppliers (Provan 1993). EDI furthers market coordination by reducing asset specificity and freeing up partners (Prosser et al. 1997). The concept of information specificity, borrowing from the original economic concept, examines the allocation of environmental scanning resources within organizations (Choudhury et al. 1997). In computing the transaction cost for products on the Web uncertainty and asset specificity play a greater role than for traditional retail products (Liang et al. 1998). Implementation of specific assets effects manufacturer/supplier relationships (Joshi et al. 1999a; Joshi et al. 1999b), and transaction specific assets mitigate opportunism in marketing channels (Brown et al. 2000).

The current research operationalizes captive buyer and supplier relationships as well as strategic partnerships through each party’s relationship specific investments and subsequent asymmetry/symmetry between parties’ investments, as depicted in Figure 2. This study examines the effects of buyer and supplier trust on captive buyer and supplier relationships and strategic partnerships, as well as the type of relationships’ effect on both buyer and supplier perceived benefits.
Figure 2. Research Hypotheses

Trust

Trust influences cooperation and teamwork within organizations (Jones et al. 1998); moreover, alliance arrangements require an adequate level of confidence in partners’ cooperative behavior (Das et al. 1998). “Trust beliefs” include benevolence, competence, honesty and predictability, in addition to “institutional based trust” beliefs, situational normality and structural assurance, as determinants (McKnight et al. 1998). Based on an integrated model of organizational trust (Mayer et al. 1995), three characteristics of trust (ability, benevolence, and integrity) appear in existing literature and provide a basis for evaluating trust in conjunction with institutional based beliefs (McKnight et al. 1998).

In considering these dimensions, “situational normality beliefs” include situations or settings where conditions should in all likelihood yield a successful interaction between the parties involved (McKnight et al. 1998). By contrast, “structural assurance beliefs” speak to the existence of safeguards; such as regulations, guarantees, and legal resources; that often manifest themselves in initial relationship development. Consistent with the integrated model of organizational trust (Mayer et al. 1995), ability constitutes a set of skills, competencies, and/or characteristics that enable either party to exert influence within some specific domain of expertise. Benevolence entails the belief that either party acts in a positive manner with regard to their interactions with the other party, excluding egocentric profit considerations. Finally, integrity considers either party’s perception of the other’s devotion to a set of generally accepted principles.

Research Hypotheses

| H1. Buyers’ trust will have a positive direct effect on the presence of captive buyer relationships. |
| H2. The presence of captive buyer relationships will have a positive direct effect on buyers’ perceived benefits. |
| H3. Suppliers’ trust will have a positive direct effect on the presence of captive supplier relationships. |
| H4. The presence of captive supplier relationships will have a positive direct effect on suppliers’ perceived benefits. |
| H5. Buyers’ trust will have a positive direct effect on the presence of strategic partnerships. |
| H6. Suppliers’ trust will have a positive direct effect on the presence of strategic partnerships. |
| H7. Strategic partnerships will have a positive direct effect on buyers’ perceived benefits. |
| H8. The presence of strategic partnerships will have a positive direct effect on suppliers’ perceived benefits. |

Table 1. Research Hypotheses

The current study proposes that buyer and/or supplier trust impacts the subsequent type of relationship that emerges within recurring supply chain interactions. In turn, these relationships whether captive buyer/supplier or strategic partnerships impact parties’ perceptions of benefits derived. Consistent with the model detailed in Figure 2 and hypotheses stated in Table 1, this research posits that buyer trust will positively effect the emergence of captive buyer relationships that will in turn impact perceived benefits realized, as stated in Hypotheses 1 and 2 respectively. Hypotheses 3 and 4 state, suppliers see a
similar emergence of captive supplier relationships, which yield increased perceived benefits. Most important this research examines whether both buyer and supplier trust shapes the development of strategic relationships and do such relationships influence higher perceived benefits for both parties. Accordingly, Hypotheses 5 and 6 explore the impact of buyer and supplier trust on the presence of strategic relationships. Finally, hypotheses 7 and 8 examine the direct effect of strategic relationships on higher levels of buyer and supplier perceived benefits.

RESEARCH METHODOLOGY

This study comprised two parts, an exploratory and confirmatory phase. During the exploratory phase, both buyers and suppliers provided input on the development of a survey instrument used in the subsequent confirmatory phase (Creswell 1994; Kaplan et al. 1988; Mason 1996; Stone 1978).

In pursuit of this study, the investigation of inter-firm relationships dictates dyadic research designs, where the relationship constitutes the focal unit of analysis (Anderson et al. 1994; Chen et al. 2004; Clemons et al. 1993; Dyer 1996). Traditionally, practical difficulties often associated with such research designs lead to collection, or subsequent examination, of data on only one side of the relationship.

A worldwide logistics supply chain service provider headquartered in the southeastern U.S. served as the research site for this study. The firm’s clients represent a broad spectrum of industries, employing strategic IT-related supply chain products and services supported by technically trained account managers. Vendor account managers and designated client contacts engage in recurring interactions, providing for a setting well suited to studying inter-firm relationships. This research focuses on the electronic commerce market segment, as buyers and suppliers routinely interact on IT-related products and services beyond basic package delivery. Vendor account managers and their counterparts at respective client firms ultimately completed the survey.

Qualitative Analysis

The initial exploratory phase employed a case study technique (Yin 1994). The analysis included historical and archival data specific to the vendor site along with comparative data pertinent to the logistics industry as a whole. Data included annual reports, published case studies, marketing material, press releases, and commercial news reports. Given the richness of this comparative industry and vendor data, multiple interviews employing an open ended interview technique generated additional background data from the vendor and its clients (Yin 1994). Length constraints of this report preclude a more detailed discussion of these efforts.

Measurement Development

Based upon information obtained through interviews, this study adopted an eleven item scale of omnibus measures of trust (McKnight et al. 2002). The researcher developed and validated a three item scale of omnibus measures and eight item subjective measures for perceived benefits. These include eight specific performance outcomes, namely, improved asset management, improved capacity planning, improved resource control, increased flexibility, increased productivity, lower operating costs, and reduced workflow.

Matched dyadic measures of buyers’ and suppliers’ investments in developing the relationship serve to operationalize the type of relationship: captive buyer, captive supplier, or strategic partnership. The researcher developed a three item scale of omnibus measures for relational asset specific investment. Measures focus on the financial costs and physical effort expended in developing the existing relationship that would be lost switching vendors. Measurement of relationship investment for the parties employs a summed index of the level, \( l_i \), of each item, \( x_i \), that belongs to the set of items, \( x_1, x_2, \ldots x_n \). In a technique previous employed (Straub et al. 2004), the summed index yields measures of symmetry, or asymmetry. As depicted in Figure 2, averaging the summed buyer measure of investment and asymmetry between parties defines captive buyer relationships, with captive supplier relationships derived in the same manner. Averaging the summed buyer and supplier measures of relationship investment with symmetry defines strategic relationships.

Survey Procedures

Final survey administration occurred utilizing a commercial Internet survey site. Employing a previously used survey strategy for gathering dyadic data (Dyer 1996), a senior executive within the marketing organization contacted a total of 183 of the supplier’s account managers via email on behalf of the researcher. URLs to the buyer and supplier versions of the Internet surveys and respective passwords accompanied the instructions. Only the respective account managers knew the identity of the individual client firm consistent with confidentiality policies. In total 132 of the 183 account managers
responded to the survey for a response rate of 72 percent on the supplier side of the survey. On the buyer side, some 91 of the 183 client contacts responded for a response rate of 49 percent. Response rates using the respective dyadic survey strategy saw comparable results (Dyer 1996). Ultimately, the collective responses yielded 91 usable dyads.

**Analysis of Non-response Bias**

The vendor firm’s participation in the study precluded direct contact with client firms in an effort to assess potential non-response bias. Comparing construct means between the early wave of respondents and those who responded during the fourth and final week of data collection assessed any potential bias. This wave technique treats late respondents as a proxy for non-respondents (Bailey 1978). Exactly 43 of the 183, or 22.9 percent, of the total respondents completed the survey during the latter period. ANOVAs for waves in their primary industry, primary location by region, number of employees, and relationship longevity, as well as the individual respondent’s gender, years of overall work, relationship management, and IT experience detected no significant differences.

**Analysis and Results**

A two phased quantitative analysis includes measurement validation and hypothesis testing. The validation phase assesses the reliability and validity of constructs, while the hypothesis-testing phase analyzes outlined hypotheses. The research model calls for examining relationships between latent variables and accommodating the presence of multiple interdependent relationships within the model. Hence, the analysis employs a form of Structural Equation Modeling (SEM), Partial Least Squares (PLS). PLS allows for concurrent examination of measurement and structural models (Barclay et al. 1995; Chin 1998; Sambamurthy et al. 1994). In the measurement model, indicator weights and loadings provide proof of the strengths of measures. While in the structural model, estimated path coefficients reflect the strength and sign of hypothesized relationships (Igbaria et al. 1995).

Assessing the convergent and discriminant validity of the measures necessitates the implementation of different validation techniques, due to the presence of both formative and reflective constructs. Formative measures include buyer and supplier perceived benefits, while reflective measures include buyer and supplier trust, relationship investment as well as investment symmetry/asymmetry. The measurement model assesses instrument validity within PLS, allowing for assessment of the relationship between the observed, or indicator, variables (Igbaria et al. 1995).

**Reliability Assessment**

Cronbach’s α’s in excess of 0.7 serve as the commonly accepted standard for evaluating the reliability of scales (Nunnally et al. 1994). Moreover, this 0.7 standard also allows for assessing adequacy of Composite Reliability scores (Fornell et al. 1981). Average Variance Extracted (AVE) measures the percentage of overall variance in indicators captured by latent constructs through the ratio of the sum of captured variance and measurement error (Hair et al. 1998). In assessing the AVEs of all constructs, 0.5 serves as the commonly accepted standard (Fornell et al. 1981).

The Cronbach’s α’s for reflective measures all exceed the prescribed 0.7 threshold (Nunnally et al. 1994), as detailed in Table 2. Additionally, all of the outer model loadings for items exceed 0.7 (Fornell et al. 1981). Moreover, the magnitudes of the square root of the AVEs exceed 0.8, converging toward 1 (Fornell et al. 1981).

<table>
<thead>
<tr>
<th></th>
<th># of Items</th>
<th>Composite Reliability</th>
<th>Cronbach α’s</th>
<th>Matrix of Intercorrelations and Square Root of AVEs*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Buyer Trust</td>
<td>11</td>
<td>0.752</td>
<td>0.927 0.872* 0.308 0.921* 0.317 0.109 0.920* 0.332 0.186 0.864 0.923* 0.054 0.174 0.350 0.149 0.861* 0.004 0.893*</td>
</tr>
<tr>
<td></td>
<td>2. Supplier Trust</td>
<td>11</td>
<td>0.851</td>
<td>0.961 0.308 0.921* 0.317 0.109 0.920* 0.332 0.186 0.864 0.923* 0.054 0.174 0.350 0.149 0.861* 0.004 0.893*</td>
</tr>
<tr>
<td></td>
<td>3. Buyer Investment</td>
<td>3</td>
<td>0.696</td>
<td>0.909 0.317 0.109 0.920* 0.332 0.186 0.864 0.923* 0.054 0.174 0.350 0.149 0.861* 0.004 0.893*</td>
</tr>
<tr>
<td></td>
<td>4. Supplier Investment</td>
<td>3</td>
<td>0.815</td>
<td>0.911 0.317 0.109 0.920* 0.332 0.186 0.864 0.923* 0.054 0.174 0.350 0.149 0.861* 0.004 0.893*</td>
</tr>
<tr>
<td></td>
<td>5. Buyer Performance</td>
<td>8</td>
<td>0.855</td>
<td>0.965 0.317 0.109 0.920* 0.332 0.186 0.864 0.923* 0.054 0.174 0.350 0.149 0.861* 0.004 0.893*</td>
</tr>
<tr>
<td></td>
<td>6. Supplier Performance</td>
<td>8</td>
<td>0.778</td>
<td>0.915 0.317 0.109 0.920* 0.332 0.186 0.864 0.923* 0.054 0.174 0.350 0.149 0.861* 0.004 0.893*</td>
</tr>
</tbody>
</table>

**Table 2. Reliability and Validity Analysis**
Discriminant Validity

The AVEs and intercorrelations among measures serve as a means for assessing the discriminant validity, or extent to which indicators differentiate among constructs. Adequate discriminant validity exists when the square root of the AVE of a measure exceeds the correlations between individual measures and all other measures (Gefen et al. 2000). As reported in Table 2, intercorrelations and square roots of AVEs reflect no discriminant validity issues.

The AVE analysis assumes reflective measures. An alternate assessment of discriminant and convergent validity calls for a variation (Loch et al. 2003) of the multitrait-multimethod (MTMM) analysis (Campbell et al. 1959). In testing formative constructs, items correlate with a “global item that summarizes the essence of the construct (p. 272),” employing an established formula (Diamantopoulos et al. 2001). An alternate version of this technique uses the product of normalized item scores and their PLS weights to derive a weighted item score (Ravichandran et al. 2000). The summated weighted scores for items that measure the same construct yield a composite score for the construct (Bagoozzi et al. 1982). An item-to-construct correlation matrix compares weighted item and composite construct scores.

Using both approaches items should correlate more highly with each other than with measures of other constructs and with their own composite constructs. Hence, no significant discriminant validity issues exist. For comparison purposes, the analysis includes variables not specific to the constructs within the study typically demographic variables. These variables should bear no significant correlation with study constructs. Few exceptions to inter-item and item-to-construct correlations exist. Specifically, the number of employees correlates with two of the eleven buyer trust items at a significant level, although low compared with item-to-item and item-to-construct correlations. Normal statistical distributions in large matrices can result in not necessarily meaningful exceptions (Campbell et al. 1959). Ultimately, construct validity conclusions lie in overall patterns. The sizes of the resulting matrices preclude inclusion in this report.

Convergent Validity

In assessing convergent validity, measures believed to be part of the same construct correlate at a significant level with one another (Campbell et al. 1959). Significance of individual measure correlations with weighted composite constructs uses composite scores for each construct and original items. Each construct should only include items where the respective measure explains 50 percent of their variance (Fornell et al. 1981). Loadings in excess of 0.7 provide evidence of convergent validity (Fornell et al. 1981). Moreover, measures thought to be part of same construct correlate highly at a significant level with one another. Significance at a 0.01 level for all dependent and independent variables’ item-to-construct correlations indicate no convergent validity issues with measures in the current study.

Hypothesis Testing
SEM techniques evaluate the explanatory power of the proposed model and significant paths, or hypothesized relationships, among unobservable variables, or latent constructs (Igbaria et al. 1995). The analysis treats captive buyer and supplier relationships and strategic partnerships as three independent models, yielding independent R²’s. As depicted in Figure 3, buyer trust has a significant direct effect on the occurrence of captive buyer situations, supporting Hypothesis 1. Moreover, the analysis detects significant direct effects between captive buyers and buyers’ perceived benefits, Hypothesis 2. In analyzing captive supplier relationships, Hypothesis 3, not supported by the analysis, examines direct effects between supplier trust and captive supplier relationships. The analysis supports Hypothesis 4, with significance detected along the captive supplier and supplier perceived benefits path. Central to this research, analysis with respect to strategic partnerships detects significant positive effects for both buyer and supplier trust on strategic partnerships, supporting Hypotheses 5 and 6, as well as strategic partnerships on both parties’ perceived benefits, supporting Hypotheses 7 and 8.

**DISCUSSION**

Grounded in substantial unilateral financial and organizational investments, captive buyer and supplier relationships seek to achieve business objectives (Bensaou 1999). This study finds significant direct effect between buyers’ trust and the presence of captive buyer relationships, in addition to such relationships and buyers’ perceived benefits. Trust in respective supply chain partners influences buyer willingness to make financial investments in addition to dedicating time and resources. Moreover, buyers derive performance benefits from unilateral asset specific investments. With respect to captive supplier relationships, no significant direct effects exist between supplier trust and the occurrence captive supplier relationships. However, such relationships have a positive direct effect on suppliers’ perceived benefits. Trust in respective clients does not appear to drive supplier investments in time, money, and resources developing relationships. However, higher occurrences of captive supplier relationships realize increased performance results, justifying investments. Antecedents to unilateral supplier investments do not include trust; however, investments yield higher benefits. Predicated on mutual investments of participating parties, strategic partnerships aim to achieve goals of all participants (Bensaou 1999). Here, this study finds that both parties’ trust in the other has a positive direct effect on the occurrence of strategic relationships. Moreover, strategic partnerships have a positive effect on both higher buyer and supplier perceptions of realized benefits. Clearly strategic partnerships require mutual trust in achieving bilateral investment, in addition to delivering mutual returns.

**CONCLUSION**

This study examines buyer/supplier relationship dyads finding that buyers’ trust has a positive effect on the occurrence of captive buyer relationships, which in turn have a direct effect on buyers’ perceived benefits. Captive supplier relationships have a positive direct effect on suppliers’ perceived benefits. More importantly, this research finds that both buyers’ and suppliers’ trust influence the occurrence of strategic partnerships, and such partnerships yield derived benefits for both parties.

**REFERENCES**