Managing IT Outsourcing Relationships Using Service Level Agreements (SLAs): A Multi-Dimensional Fit Approach

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A Multi-Dimensional Fit Approach

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ABSTRACT
Changes in the current business atmosphere where speed and agility are crucial call for simple outsourcing to evolve into more complex models of IT outsourcing. Change is constant, and nothing is certain, therefore unseen factors such as trust and culture become more important in IT outsourcing arrangements. This research-in-progress examines the role of Service Level Agreements (SLAs) in managing IT outsourcing relationships in order to realize the effectiveness of IT outsourcing strategies under various outsourcing intents and contract environments. A multi-dimensional fit model is developed to illuminate outsourcing arrangements. Further, propositions are tested using partial least squares (PLS). The study provides insight into the development of relational governance through a contractual mechanism over the course of an outsourcing engagement drawing upon relational exchange theory (RET). In this “post-e” era, this study redefines roles and rules for effective outsourcing management and outlines new opportunities for business-aligned IT outsourcing, and creates a new platform for high quality, reliable but agile business-specific outsourcing solutions.

Keywords
IT outsourcing, Service level agreements (SLAs), Relational exchange theory, Fit approach.

INTRODUCTION
Gartner Dataquest estimates that the worldwide IT outsourcing market will continue to grow to $25 billion by year’s-end, 2005. With the massive adoption of the Internet, firms are moving to become agile and responsive to a dynamically changing business environment. As firms move ahead at lightning speed, business organizations increasingly employ Information Technology (IT) outsourcing to support strategic IT decisions that lead to dynamic access to technology, to other firms and new markets. Firms frequently demonstrate the use of multiple modes of resource mobilization and product/service delivery. However, while using a best-of-breed approach enables a firm to source a particular set of requirements in real-time, there has been a lack of focus on how to attain best practices from the multi-mode outsourcing environments (Scardino 2002). Most recent practices put more emphasis on managing the outsourcing relationship and on nurturing a high level of trust and commitment during the course of the relationship. Merrill Lynch signed a billion dollar deal with an all-star team of vendors and one general contractor who is responsible for forming and managing a trusted partnership (Datz September 15, 2003 2003). This example reflects the current trends and needs of industry practitioners.

According to the recent report by Gartner, many firms have failed to build a skills base to meet the new challenge of managing their outsourcing environment and are therefore vulnerable to a low return on service value (Scardino 2002). Several researchers (Fitzgerald et al. 1994; Singleton et al. 1988) point out the importance of working out details in advance of signing a contract so that both parties understand the goals, their responsibilities and They also agree as to how to handle difficult challenges that may arise in the future together, thus drawing outsourcing engagements toward trust-based partnerships. Despite the importance generally ascribed to partnership relations (Lee et al. 1999), IT outsourcing research has largely neglected the development and anticipatory aspect of the SR-SP relationships through the exchanges over time while tending to study transactions as discrete events based on transaction cost economics (TCE) (Williamson 1979). The lack of attention to antecedent conditions and processes for building exchange relations is a serious omission in the development of IT outsourcing knowledge. Therefore, to achieve meaningful and measurable success of IT outsourcing arrangements, this
study attempts to shed light on service level agreements (SLAs) and their alignment with outsourcing objectives and appropriate SLAs enforcement.

RELATIONAL ELEMENTS IN SLAS

An SLA is defined as a formal written agreement developed jointly between the service recipient (SR) and the service provider (SP) that specifies a product or service to be provided at a certain level required so as to meet business objectives (Sturm et al. 2000). As is true of any other legal documents, however, it is not possible to spell out every rule and agreement in SLAs. Incomplete contract theory (Grossman et al. 1986), gave rise to some types of relationships that extended beyond contractual binding. However, while theorists in social exchange theory argue that social governance mechanisms such as reputation, norms or personal relations may serve as substitutes for direct control, some have argued that contracts or direct control are necessary to serve as a "safety net" (Ring et al. 1994). This indicates that while it is difficult to define expectations when writing SLAs due to the variety of circumstances in IS outsourcing, the upfront structuring of an outsourcing relationship results in “seeds” from which flexibility and partner relations can grow and value can be created (Bendor-Samuel 1999). When a challenge arises, it prompts the need for a deeper level of cooperation or collaboration through the parties’ communication and involvement. Thus, the relationship can be restructured, and realigned based on evolving interests and trust.

Our study draws on RET, where partners rely heavily on "relational contracts" to govern the exchange process (Macneil 1980). Indeed, the IT outsourcing relationship might become more relational as exchange contingencies and duties become less codifiable (Cf., Gundlach et al. 1993). Appropriate outsourcing relationships may be shaped through relational elements in SLAs to reflect the dynamics of the exchanges over time. In a previous study, we have identified eleven contractual elements or seeds that would help in fostering intended exchange relations in a short period of time, cultivating continuous improvement and innovation, and sustaining the relationship over the strategic planning horizon. Appendix 1 summarizes the characteristics of those elements to see what different roles they might play within the context of relational exchanges. These eleven elements are categorized into three major dimensions: foundation, change management, and governance characteristics. Three dimensions may become a skeleton of SLAs in their structuration so as to nurture the relational outcomes of SR/SP relationships. While it is impossible to create a robust contract that spells out all future contingencies, our conceptualization with eleven constituent elements dramatizes the multidimensionality of exchange. In a real situation, more than eleven elements may be required. However, the value of focusing on the these elements will be reflected by relationships that are more efficiently administered, are capable of creating relational norms in a shorter period of time, and are less likely to end in litigation or significant dissatisfaction.

SLAS AND ITS FIT TO OUTSOURCING ENVIRONMENT

While the academic and popular press provide conjectures and anecdotal evidence concerning the importance of SLAs in IT outsourcing, empirical studies that investigate the roles the SLAs play in the development of favorable SR-SP relationships through exchanges over time are few and far between. Practitioners often proclaim that a key to managing sourcing relationships is the SLAs (Mingay et al. 2002). It is said that the conventional use of SLAs in the traditional command and control style management techniques is not optimal for dealing with the agility and new cultural dynamics of the outsourcing environment today (Dreyfuss 2002). As simple outsourcing evolves into more complex models of IT outsourcing deals, unseen factors such as trust and culture become more important. Thus, it is generally expected that management mechanisms require even more sophisticated contracts that address additional complexity as ambitions for outsourcing encompass multiple objectives.

In addition, it has been argued (Marcolin 2002) that the contract and governance scheme must be considered within the context which a type of outsourcing relationship favors. Outsourcing relationships are often shaped to reflect a client’s internal requirements, outsourcing intents, and a corporate culture (DiRomualdo et al. 1998).This view is consistent with the concept of fit in the contingency theory in that an organizational outcome is the consequence of a "fit" or match between two or more factors (Drazin et al. 1985). We propose that the relationship effectiveness and outsourcing effectiveness is a consequence of a fit
between SLA elements, IT outsourcing intents, and an atmosphere of engagements. We argue that a systematic research model utilizing a fit approach becomes critical in the context of outsourcing arrangements because (i) measurements should be well aligned to its intents because what we measure is what we get (DiRomualdo et al. 1998); (ii) successful outsourcing arrangements require dynamic and continuous relationships between SR and SP that tightly fit elements of sourced activities into IT infrastructure of the company (Lacity et al. 1995); (iii) a holistic view may represent a better approach in capturing such a complex relationship and in assuring outsourcing effectiveness. Thus, the current research employs the systems approach to a multi-dimensional fit model in order to investigate the effectiveness of outsourcing relationships, which in turn leads to outsourcing effectiveness. Figure 1 depicts the conceptual research framework under study, where any deviation from the optimal fit or ideal type designs should cause lower outsourcing performance results in a sub-optimal level of performance (Drazin et al. 1985). The source of the deviation in consistency originates in a conflicting contingency. Through this approach we attempt to examine the role of SLAs in managing outsourcing relationships under various outsourcing intents and institutional environments and the relationship between the fit and the outsourcing performance.

**RESEARCH FRAMEWORK AND PROPOSITIONS**

Borrowing the notions of three IT outsourcing intents from the work by DiRomualdo et al. (1998), the fit model incorporates two dimensions along with SLA elements in order to examine the consistent patterns of SLA structure with them. This includes outsourcing intents such as IS improvement, business improvement, and A transformation and engagement atmosphere such as types of outsourcing relationships the both parties wish to develop (i.e., operation-based buyer-supplier relationship vs. trust-based partner relationship) and the degree of SLAs enforcement (i.e., the tight vs. loose imposition of SLAs in the course of relationship; the level of interpretation strictness). Different objectives of outsourcing arrangements may favor different types of outsourcing relationships so as to effectively accomplish the desired objectives (DiRomualdo et al. 1998). Thus, SLAs, with a different emphasis on elements, are likely to be formed to nurture and govern the appropriate relationships. For example, SLAs that relied heavily on the enforcement and measurement charter elements through outcome-based measures will unlikely shape the relationships that facilitate the development of innovative systems and applications over the years. This is because implementing innovative systems demands management mechanisms that encourage and lure the SP that is undertaking the risks inherent in innovation. It also fits with the engagement atmosphere that relies more on relationship management and a loser interpretation of details. In addition, we believe that the emphasis on and the inclusion/exclusion of a specific element in drafting SLAs should be aligned to the factors of atmosphere of engagements. For example, the structuralization of SLAs should be coupled with types of outsourcing relationships that the SR and SP wish to pursue and thus declare and with the corporate culture of the enforcement of SLAs. We believe that a tight fit between outsourcing intents, SLA elements, and environmental factors as is shown in the multi-dimensional fit model of IT outsourcing in Figure 2, leads to effective outsourcing relationship management and high performance. Thus, we first estimate the fit scores of each subject following Drazin et al. (1985), followed by testing a basic premise of the fit theory in the context of IT outsourcing arrangements that the relationship effectiveness and outsourcing effectiveness are a consequence of fit among three dimensions.

According to the RET, the relationship is a critical governance mechanism and, therefore, a key determinant of relational exchange success. In other words, relational exchange (i.e., exchange where relational contracts are highly effective) requires a relationship that has high levels of such relational attributes as relational norms, commitment, etc. that help govern the exchange (Lambe et al. 2000). Building on the eleven relational elements in SLAs identified by Goo et al. (2003), this paper discusses
how the structure of relational elements in SLAs boost the success of an outsourcing relationship. In doing so, we capture the alignment of the structure of SLAs with the contextual factors such as outsourcing intents and the atmosphere in IT outsourcing engagements in order to examine if the fit between SLAs and contextual variables are related to the development of relationship attributes such as the relational norm and commitment, conflict resolution, trusting behavior, and mutual dependence in the course of an outsourcing relationship. We propose that these traits should be cultivated as antecedents to engender the successful practice of IT outsourcing. The well-suited relational elements of SLAs along with the contextual factors may nourish the development of appropriate exchange relationships that lead to best practices for managing outsourcing relationships. This discussion leads to the following propositions as summarized in Table 1.

<table>
<thead>
<tr>
<th>Propositions</th>
<th>Key supporting literatures</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>The fit scores among SLA elements, outsourcing intents, and atmosphere of engagements will be positively associated with the relationship effectiveness between the SR and SP.</td>
</tr>
<tr>
<td>P2</td>
<td>The fit scores among SLA elements, outsourcing intents, and atmosphere of engagements will be positively associated with the IT outsourcing effectiveness.</td>
</tr>
<tr>
<td>P3</td>
<td>The relationship effectiveness will be positively associated with IT outsourcing effectiveness.</td>
</tr>
</tbody>
</table>

Table 1. Propositions and Key Supporting References

RESEARCH METHODS

Data Collection

Data is being collected using both mail and Web survey methods. A list of IT professionals was obtained from the Directory of Top Computer Executives. Preliminary tests of the questionnaire and interviews with IT faculty were performed to clarify the questionnaire. 3000 questionnaires were sent to top IT managers or CIOs in the U.S. and Canada. We requested that it be forwarded to an executive (e.g., CIO, senior IT manager, procurement executive, contract manager, the head of IT outsourcing management team, etc.) who has been involved in any IT outsourcing decision which has been implemented through SLAs with an external IT provider within the last five years.

The Outsourcing Fit Model

The level of fit between outsourcing intents, SLAs elements, and institutional environmental factors can be estimated as follows (Drazin et al. 1985): (i) Under each set of three intents, select the highest performing firms in IS outsourcing arrangements based on the effectiveness measure. (ii) Using the scales that measure the eleven SLA elements and their combination and the environmental factors, compute the geographic mean scores of these units for each intent and factor, which serve as empirically derived ideal types. Using the computed means as a centroid coordinate, then differences between these ideal patterns and the patterns of the remaining units are calculated using a Euclidian distance metric.

\[
F_i = \sqrt{\sum (X_{ij} - X_{jM})^2},
\]

where \(F_i\) = The level of fit (fit score) of firm \(i\); \(X_{ij}\) = Measurement score for firm \(i\), factor (or elements) \(j\); \(X_{jM}\) = Centroid score for factor \(j\).

(iii) The fit score (the level of fit) for each firm is then represented by the geographic distance of the firm from the centroid. The fit score will be used for proposition testing and model assessment.

Analysis Methodology

This study plans to analyze the data using Partial Least Squares (PLS). It allows optimal empirical assessment for a theoretical structural model as well as its measurement model. PLS has several strengths that made it appropriate for this study, including its ability to handle small sample sizes and dealing with potential multicollinearity problems (Chin 1998a).
Given the fact that the response rate of the field survey targeting an executive level in IS field gets lower and lower, we chose this method for the safety sake.

**EXPECTED CONTRIBUTION OF THIS STUDY**

This study adds value in two ways. First, results obtained from this research are expected to be significant to private and public decision makers for developing decision guidelines for structuring optimal SLAs and their ongoing management for building exchange relationships in IT outsourcing. Second, this paper is among the earliest attempts to employ the lens of RET to examine how firms can build up a relational governance mechanism through SLAs in IT outsourcing arrangements. At the conference, we will present detailed results based on the complete analyses of fit model and PLS model and their theoretical and practical implications.

**REFERENCE:**

Space limitations preclude a complete list of references cited, which is available upon request.
### Appendix 1. Relational Elements in SLAs Derived from a Relational Exchange Perspective

<table>
<thead>
<tr>
<th>Characteristics of Relational Elements of SLAs</th>
<th>Contractual Issues in RET</th>
<th>Relational Exchange</th>
<th>Discrete Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foundation Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Level Objectives</td>
<td>Spirit of contractual solidarity and regulation of exchange behavior to ensure performance</td>
<td>Increased emphasis on legal and self-regulation; psychological satisfactions cause internal adjustments</td>
<td>Governed by social norms, rules, etiquette, and prospects for self-gain</td>
</tr>
<tr>
<td>Process Ownership Plan</td>
<td>Number of entities taking part in some aspect of the exchange process</td>
<td>Often more than two parties involved in the process and governance of exchange</td>
<td>Two parties</td>
</tr>
<tr>
<td>Service Level Contents</td>
<td>Obligations in terms of three aspects: sources of content, sources of obligation, and specificity</td>
<td>Content and sources of obligations are promises made in the relation plus customs and laws; obligations are customized, detailed, and administered within the relation</td>
<td>Content comes from offers and simple claims, obligations come from beliefs and customs (external enforcement), standardized obligations</td>
</tr>
<tr>
<td><strong>Change Management Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Demand Management Plan</td>
<td>Planning the process and mechanisms for coping with change and contingencies</td>
<td>Significant focus on the process of exchange; detailed planning for the future exchange within new environments and to satisfy changing goals; tacit and explicit assumptions abound</td>
<td>Primary focus on the substance of exchange; no future is anticipated</td>
</tr>
<tr>
<td>Anticipated Change Plan</td>
<td>Expectations for relations, especially concerned with anticipated conflicts of interest, the prospects of unity, and potential trouble</td>
<td>Anticipated conflicts of interest and future trouble are counterbalanced by trust and efforts at unity</td>
<td>Conflicts of interest (goals) and little unity are expected, but no future trouble is anticipated because cash payment upon instantaneous performance precludes future interdependence</td>
</tr>
<tr>
<td>Innovation Plan</td>
<td>Cooperative innovation, especially joint efforts at continuous performance improvement and planning</td>
<td>Joint efforts related to both performance and planning over time; adjustment over time is endemic</td>
<td>No joint efforts</td>
</tr>
<tr>
<td>Feedback Plan</td>
<td>Transferability; the ability to transfer knowledge, obligations, and satisfactions to other parties over time</td>
<td>Limited transferability; exchange is heavily dependent on the identity of the parties</td>
<td>Complete transferability; it matters not who fulfills contractual obligation</td>
</tr>
<tr>
<td>Communication Plan</td>
<td>Primary personal relations and organizational interaction and communication</td>
<td>Important personal, noneconomic satisfactions derived; both formal and informal communications are used</td>
<td>Minimal personal relationships; ritual-like communications predominate</td>
</tr>
<tr>
<td>Measurement Charter</td>
<td>Measurement and specificity for calculating and reckoning of exchange performance</td>
<td>Significant attention to measuring, specifying, and quantifying all aspects of performance, including psychic and future benefits</td>
<td>Little attention to measurement and specifications; performance is obvious</td>
</tr>
<tr>
<td>Governance Characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arbitration</td>
<td>Balance of power that imposes one's will on others</td>
<td>Increased interdependence increases the importance of judicious application of power in the exchange</td>
<td>Power may be exercised when promises are made until promises are executed</td>
</tr>
<tr>
<td>Enforcement</td>
<td>Carrot-and-stick; division of benefits and burdens (the extent of sharing of benefits and burdens)</td>
<td>Likely to include some sharing of benefits and burdens and adjustments to both shared and parcelled benefits and burdens over time</td>
<td>Sharp division of benefits and burdens into parcels; exclusive allocation to parties</td>
</tr>
</tbody>
</table>

* Adapted from Macneil (1980) and Dwyer et al. (1987)