CHAPTER 11

VENDOR COMMITMENT IN AN
ASP OUTSOURCING CONTEXT

A Comparative Evaluation of the Roles of Power and Partnership

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Abstract: De-escalation of commitment by service providers is a major risk in information technology (IT) outsourcing projects and it can lead to project failure. However, current research is still unclear about how best to maintain service provider commitment in IT outsourcing contexts. The goal of this research is to understand which of two alternative influence sources—power, a unilateral influence source, or partnership, a bilateral influence source—better explains service provider commitment in application service provider (ASP) outsourcing relationships. Data are collected through a controlled laboratory experiment to determine precisely the relative impact of these two variables on service provider commitment. The results of the study indicate that both power and partnership play critical roles in shaping service provider commitment in ASP outsourcing relationships, with partnership having a stronger influence. The findings suggest that client IT managers should seek a balance between the two control levers—power and partnership—as a means of managing their service providers more effectively to achieve outsourcing success.

Keywords: Application Service Providers (ASP), Client Power, Provider Dependence, Client-Provider Partnership, Experimental Methodology, Information Technology (IT) Outsourcing, Provider Commitment

INTRODUCTION

Outsourcing has emerged as a key method for managing information technology (IT) in the current era. One of the critical issues associated with the success of IT outsourcing projects is the commitment of outsourcing providers to outsourcing relationships. Recent studies have shown that in IT outsourcing projects a major risk that can lead to project failure is vendor de-escalation of commitment to the outsourcing project (e.g., Natovich, 2003). If a current vendor withdraws from its commitments to a client contract owing to expected heavy losses, the client may have to switch to another vendor for ongoing operations or to get the outsourced project completed. However, switching IT providers generally undermines the economic and technical benefits of outsourcing due to the enormous start-up and learning costs associated with developing new relationships (Whitten et al., 2004). Thus, the issue of provider commitment to outsourcing relationships is very important to the success of outsourced IT projects. However, the IT outsourcing literature is
quite silent about this particular vendor aspect as it has paid only scant attention to vendor issues in IT outsourcing relationships and has focused predominantly on client aspects (Dibbern et al., 2004; Lee et al., 2003).

The present research seeks to fill this void. In this chapter, we examine two alternate influence sources of vendor commitment that are under the control of clients to quite a large extent: (1) vendor perceptions of client power over them, and (2) vendor perceptions of the client–vendor partnership. These two constructs capture both unilateral (power) and bilateral (partnership) mechanisms that have the potential to shape vendor commitment toward the outsourcing relationship. While the notion of client–vendor partnership has been examined often in the IT outsourcing literature (e.g., Grover, Cheon, and Teng, 1996; Lee and Kim, 1999; Randeree, Kishore, and Rao, 2007 Sabherwal, 1999; see also chapter 9 in this volume), there are no studies that examine the influence of this construct on vendor commitment to the outsourcing relationship. Furthermore, to our knowledge, the notion of client power over vendor has not been studied directly in the IT outsourcing literature, although the notion of dependence, which is at the root of the power construct as discussed in later sections, has been studied in the interorganizational relationships (IOR) literature that considers variables from the transaction cost economics (TCE) theory (e.g., Bensaou and Anderson, 1999; Poppo and Zenger, 1998; Subramani and Venkatraman, 2003). Our focus in this research is vendor dependence over client insofar as it can lead to vendor perceptions of client power over vendor, which in turn can influence vendor commitment to the outsourcing relationship. While the early TCE literature focused predominantly on client dependence on vendor emanating from transaction-specific assets, recent TCE and IOR literatures acknowledge the presence of both vendor dependence on client and mutual dependence between vendor and clients in IORs (Rindfleisch and Heide, 1997). But as mentioned above, the impact of client power over vendor (emanating from vendor dependence on client) on vendor commitment to an outsourcing relationship has not been examined in previous IT outsourcing research.

We choose the application service provider (ASP) outsourcing paradigm for the present study as there are hardly any studies of partnership in the ASP outsourcing context in the IT outsourcing literature. The ASP model is a new outsourcing paradigm in which vendors generally provide access to predefined business application systems as an outsourcing service to multiple clients. As a result, services provided by ASP vendors are comparatively simpler and more straightforward and service levels are more clearly defined than those involved in traditional outsourcing relationships. Consequently, ASP relationships tend to be quite contractually based and it is not clear whether the notions of partnership will apply in this particular outsourcing context in a manner similar to more traditional outsourcing contexts.

We also take the alternate theoretical perspectives approach in this chapter and compare the two alternate influence sources—power and partnership—in a single model to understand which influence source better explains vendor commitment to an outsourcing relationship. Our approach is similar to the competing theoretical perspectives approach that is gaining currency in the organizational literature as it integrates and synthesizes knowledge in competing and often complementary theoretical paradigms and provides much deeper insights about the phenomenon of interest. Examples of recent papers that follow this approach include: Young, Charns, and Heeren (2004), comparing the structural contingency perspective with the professional autonomy perspective in the context of studying quality of and innovation in professional services; Ketokivi and Schroeder (2004), applying three different theoretical perspectives (strategic contingency, structural contingency, and institutional isomorphism) to investigate how innovative manufacturing practices diffuse in organizations; Wareham's paper (2003), synthesizing the competing theoretical perspectives of transaction cost economics and social networking theory in a study of.
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interorganizational governance; Reuer and Koza (2000), applying arguments from the asymmetric information view and the indigestibility to joint venture formation; and Schroth and Shah (2000), comparing the group-value model and attribution theory as competing theoretical perspectives in examining the effects of procedural justice on an individual’s self-esteem.

The chapter is organized as follows. First, we provide an introduction to the ASP outsourcing paradigm and discuss how ASP outsourcing differs from traditional IT outsourcing. We then discuss the relevant prior literature pertaining to the social and relational aspects of IT outsourcing. Next, we discuss the underlying theories, research models, and hypotheses pertaining to the impact of power and partnership on a service provider’s commitment. We then describe the research method and analysis techniques. Finally, we discuss the results, the limitations of the study, implications for managers, and future directions for research. We use the terms service provider, provider, supplier, and vendor interchangeably in this chapter to refer to a vendor who provides IT services in the context of ASP outsourcing.

THE APPLICATION SERVICE PROVIDER PARADIGM

According to the ASP Industry Consortium, an ASP “manages and delivers application capabilities to multiple entities from a data center across a wide area network.” The ASP model is a new form of IT outsourcing and it differs from the more traditional IT outsourcing relationships on four key dimensions: service customization, data location, asset ownership, and provider presence. First, ASP vendors generally offer their business applications as packaged solution services with little customization. Their intent is to mass serve multiple clients. In traditional IT outsourcing contexts, each customer is treated individually and solutions are designed to fit a client’s unique needs. Second, the client data reside on the ASP platform in the ASP model whereas in the traditional IT outsourcing relationships, client data resides on the client’s platform. Third, the client retains ownership of software applications in traditional outsourcing environments whereas software applications are rented/leased to the client on a recurring fee basis in the ASP context. Applications provided by the ASP are accessed by customers using browser windows through public and private networks, quite often the Internet. Finally, unlike traditional IT outsourcing contexts where providers may have employees stationed at client locations, or employees who at least make regular visits to client locations, the ASP model allows providers to service customers over greater distances using networks without maintaining any physical presence at client locations. As a result of these unique properties, the ASP model is geared predominantly toward providing application services that are relatively straightforward and can be well defined under service levels that can be easily specified and measured. Consequently, ASP relationships tend to be quite contractually based.

The unique properties of the ASP model discussed above allow clients to achieve such benefits as increased access to technical knowledge and wider breadth of applications, accelerated speed of deployment of IT applications, seamless connectivity and integration among diverse business partners through shared Web-based applications, scalability of IT infrastructure, and a lower and predictable total cost of ownership (Booker, 2000; Boyd, 2000; Johnson, 2000; Morgan, 2000). However, an important prerequisite for a client to reap these promised benefits is to have a high degree of vendor commitment toward the client relationship. As mentioned before, there is a paucity of research pertaining to vendor commitment in IT outsourcing in general and there is no research that examines vendor commitment, power, and partnership in the context of the contractually oriented application services arena. The ASP model, thus, provides an appropriate setting for testing the relative influences of power and partnership on vendor commitment in the context of IT outsourcing relationships.
RELEVANT PRIOR LITERATURE

Case studies on managing IT outsourcing relationships have found that the use of multiple service providers, detailed contracts, penalty clauses, short-term agreements, IT legal experts, and promises of contract extensions were effective mechanisms for establishing a client’s power in the relationship in order to achieve successful outsourcing outcomes (e.g., Lacity and Hirschheim, 1993a, 1993b; Lacity and Willcocks, 1998; Lacity, Willcocks, and Feeny, 1995, 1996; Saunders, Gebell, and Hu, 1997). These studies focused on how to efficiently structure the governance of an IT outsourcing engagement from a contractual viewpoint but generally ignored the relational dynamics involved in the outsourcing relationship. Concentrating on the contractual view and failing to incorporate the relational aspects may provide only a limited view of how to best manage IT outsourcing relationships. For example, researchers have argued that short-term contracts provide no incentive for service provider performance improvements (DiRomualdo and Gurbaxani, 1998); detailed contracts make less economic sense during the later years of the relationship (McFarlan and Nolan, 1995); exhaustive contracts may be impossible to construct for large and/or complex IS functions (Kishore et al., 2003); and trusting, cooperative relationships are often difficult to develop under conditions of tight governance control (Sabherwal, 1999). Therefore, as Macneill (1978a; 1978b) proposed, contracts are inherently incomplete and are not sufficient by themselves to ensure successful interorganizational relationships.

Recognizing the limitations of contracts as governance mechanisms for IT outsourcing relationships, researchers turned to relational exchange theories in order to identify additional factors critical to outsourcing success (e.g., Grover, Cheon, and Teng, 1996; Lee and Kim, 1999). In these studies, trust and partnership were considered as factors necessary for achieving better IT outsourcing relationships (Grover, Cheon, and Teng, 1996; Lee et al., 2002; Sabherwal, 1999). Further, these studies demonstrated that the intangible elements associated with IT outsourcing relationships (e.g., service quality, innovation, knowledge sharing, etc.) could be captured only through partnership-based outsourcing relationships (Lee et al., 2003). These studies show that win-win relationships can be developed only if the parties in an outsourcing foster an environment of trust, open communication, and cooperation. Evidence also supports the fact that both detailed and not-so-detailed contractual IT outsourcing relationships are more successful in partnership-based environments (Saunders, Gebell, and Hu, 1997). As a result of these studies, the virtues of partnership are now generally accepted in the context of traditional IT outsourcing.

However, studies in the IT outsourcing area have not directly addressed the role of power as an alternate and/or complementary mechanism for managing IT outsourcing relationships, even though the literature on interorganizational relationships (IOR) has considered both power and partnership as constructs that play an important role in shaping relationships between interacting organizations. It is not unusual for a service provider’s profit motives to run counter to the client’s service needs, especially in situations when the client’s service needs are dominated by the desire for cost efficiency (Lee et al., 2003), thereby making a partnership-based relationship less effective. In such situations of goal asymmetry, that is, when parties involved in the relationship have different and conflicting goals, power wielded by the client can play a key role in ensuring the continued commitment of the service provider to the relationship. Furthermore, power not only may provide an alternate relationship management mechanism but also may complement a partnership-style approach to relationship management by allowing the client to effectively resolve impasses that cannot be resolved with purely cooperative actions.

Therefore, we draw from literature on IT outsourcing, social and relational exchange, and interorganizational relationships to develop a research model that incorporates both power and
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Figure 11.1 Primary Research Model

partnership as two distinct influence sources that may have an impact on service providers' commitment. As discussed above, the ASP model tends to be highly contractual and research on partnership and power in the context of ASPs may provide new insights about the importance of the social and relational aspects in this new form of IT outsourcing. The underlying theories and the research model are discussed next.

THEORY AND RESEARCH MODEL

The chapter presents two research models, as shown in Figures 11.1 and 11.2. In both models, the constructs of power and partnership are hypothesized to influence a service provider's level of commitment (consisting of three distinct dimensions). In the first model (the primary research model), commitment is conceptualized as a second-order construct with three distinct and non-related first-order constructs. This conceptualization is the traditional representation of the multidimensional nature of the commitment construct. In the second model (the alternate research model), commitment is represented as three distinct but interrelated constructs based on the work of Gundlach, Achrol, and Mentzer (1995). A detailed discussion of the underlying theories and arguments supporting these two research models is provided next.

Provider Commitment

Commitment is defined as a service provider's desire to remain in an IT outsourcing relationship and to continue to invest in the relationship to further its existence. The literature on IORs views commitment as a key factor in determining long-term relationships (Dwyer, Schurr, and Oh, 1987; Gundlach, Achrol, and Mentzer, 1995; Morgan and Hunt, 1994). Dwyer, Schurr, and Oh (1987) propose that "commitment represents the highest stage of relational bonding." Parties who are committed to an IOR work harder at handling problems and ensuring the achievement of both individual
and joint goals (Mohr and Spelkman, 1994) and they are more likely to accept or adhere to another party’s requests (Morgan and Hunt, 1994). Research on IORs has considered commitment as the key dependent variable when viewing decisions in exchange relationships from the vendor’s perspective (Andaleeb, 1996). Furthermore, as discussed earlier, vendor commitment is very important to achieving successful outcomes in IT outsourcing (Nativich, 2003). Therefore, following the IOR literature and the central role commitment plays in the IT outsourcing context, this study considers provider commitment as the dependent variable of interest in the research model.

Given the importance of commitment in IORs, it is not surprising to find diversity in the manner in which commitment has been conceptualized and defined. For example, commitment has been defined as:

- “an exchange partner’s belief that an ongoing relationship with another is so important that it warrants maximum effort to maintain it” (Morgan and Hunt, 1994, 23).
- “an implicit or explicit pledge of relational continuity between exchange partners” (Dwyer, Schurr, and Oh, 1987, 19).
- “an enduring desire to maintain a valued relationship” (Moorman, Zaltman, and Deshpande, 1992, 316).

Commitment has also been associated with relational concepts such as motivation, loyalty, involvement, durability, consistency, pledges, idiosyncratic investments, and dedicated resources. Recently, there has been a growing perception that commitment is composed of three distinct dimensions (Gundlach, Achrol, and Mentzer, 1995; Kumar, Scheer, and Steenkamp, 1995). Kumar, Scheer, and Steenkamp (1995) classify these dimensions as willingness to invest, affective commitment, and expectation of continuity. Willingness to invest is the intention to become more deeply involved in the relationship through investments of capital and effort. Expectation of continuity is the firm’s perceptions of both its own and its partner’s intent to remain in the relationship. Affective commitment is the desire to continue the relationship because of positive affect toward the partner.
Determinants of Service Provider Commitment

Power as a Function of Dependence

Over the years there has been an increased interest in the study of power in the information systems (IS) domain (e.g., Jasperson et al., 2002). In order to facilitate the study of power in the IS domain, Jasperson and colleagues (2002) have provided a paradigm based in part on Bradshaw-Camball and Murray’s (1991) power framework. Jasperson and colleagues’ framework uses four power lenses to classify the various conceptual forms of power in IS: rational, pluralist, interpretive, and radical. This research uses the pluralist view of power, which assumes that parties involved in the relationship have different, often conflicting, goals. In this view, development, prioritization, and execution of organizational goals is an explicitly political process involving conscious negotiation based on control of resources and information. Power is viewed in terms of an objective reality in which there are objectively identifiable sets of optimal goals for each participant in an organization (Bradshaw-Camball and Murray, 1991). This view of power in the context of IT outsourcing relationships seems quite reasonable, since in most cases, a service provider’s profit motives run counter to the client’s service needs (Lacity, Willcocks, and Feeny, 1995). The pluralist view of power has been defined in a number of ways. Some of the key definitions are provided below:

- “The strength of power of O/P in some system A is defined as the maximum potential ability of O to influence P in A” (French and Raven, 1959, 152).
- “The power of actor A over actor B is the amount of resistance on the part of B which can be potentially overcome by A” (Emerson, 1962, 32).
- “If O has the capability of influencing P, we say that O has power over P” (Cartwright, 1965, 4).

The underlying theme of these conceptualizations of power is the potential ability of one party to influence another: Emerson (1962), who originally conceptualized the role of power in relationships, further proposed that the basis of one party’s power over another party lies in the other party’s dependence on the relationships; where “dependence of Actor A upon Actor B is (1) directly proportional to A’s motivational investment in goals mediated by B and (2) inversely proportional to the availability of these goals to A outside the A-B relationship (Emerson, 1962).” El-Ansary (1975) later expanded and formalized the functional relationship between power and dependence as it pertains to IORs as follows:

\[ P_{ij} = f(D_{ij}) \]

\[ D_{ij} = f(G_{ij}, M_{ij}, A_{ij}, C_{ij}) \]

Where:

\[ P_{ij} = \text{power of } i \text{ over } j; \]
\[ D_{ij} = \text{dependence of } j \text{ on } i; \]
\[ G_{ij} = \text{goals mediated by } i \text{ to } j; \]
\[ M_{ij} = \text{motivational investment of } j \text{ in goals mediated by } i; \]
\[ A_{ij} = \text{alternatives available to } j \text{ to substitute for } i; \]
\[ C_{ij} = \text{cost to } j \text{ of discontinuing relation with } i. \]
While there are some other conceptualizations of power (e.g., Etgar, 1978; French and Raven, 1959), in this research we use El-Ansary’s (1975) conceptualization of power as a function of dependence. We do so for a number of reasons. First, past interorganizational IS literature using the pluralist view of power (e.g., Hart and Saunders, 1997, 1998; Iacovou, Benbasat, and Dexter, 1995; Premkumar and Ramamurthy, 1995; Reckers and Smithson, 1996; Remus, 1986) has conceptualized power as a function of dependence. Further, the more one party is dependent on the other party in a relationship, the more the first party will be subject to the influence of the various powers exhibited and exercised by the second party (such as those exercised through rewards and coercion). This view is quite consistent with Emerson’s (1962) conceptualization that the degree of a party’s power in a relationship is a function of the other party’s dependence on the relationship. Finally, in many cases in both the traditional and newer forms of IT outsourcing, such as the ASP model, a client’s power over a service provider generally results from the service provider’s dependence on the relationship with the client. This latter item is discussed next.

Based on El-Ansary’s (1975) conceptualization, the dependence of a service provider on a client is theorized to be a function of the goals mediated by the client \( G_q \), motivational investment of the service provider toward those goals \( M_r \), availability of alternative clients \( A_r \), and the costs associated with terminating the relationship \( C_r \). This conceptualization of power and dependence seems to adequately explain some well-publicized outsourcing relationships, such as those between Xerox and EDS (Applegate and Davis, 1995), Kodak-IBM-DEC (Applegate, Montenagle, and Kodak, 1991), and USAA and IBM (Lasher, Ives, and Jarvenpaa, 1991). In each case the service provider was highly dependent on the outsourcing relationship at the time of the agreement. This is because each of these contractual relationships was substantial and made up a significant proportion of the service provider’s IT outsourcing business. Further, these relationships involved the initial commitment of substantial capital and human and technical resources on the part of the service providers. In addition, at that time there were very few large businesses looking to outsource their IT departments, and these service providers needed big-name partners not only to promote but also to provide legitimacy to the then-fledgling IT outsourcing phenomenon. Finally, termination costs were very high at the onset of the relationships since service providers needed several years to see a return on their investments. Similar arguments for service provider dependence can also be made with respect to new forms of outsourcing such as ASPs. ASPs suffer from a very competitive environment with switching costs that are lower than those for traditional outsourcing; initial investments in technology and licensing are large and are recouped gradually over time through application lease agreements; and motivating client firms to adopt and continue to use this new and somewhat unproven outsourcing model has been difficult. Therefore, dependence represents an appropriate measure of a client’s power in both traditional and new forms of IT outsourcing.

Social exchange theorists (Dwyer, Schurr, and Oh, 1987; Heide, 1994; Morgan and Hunt, 1994) have used power, conceptualized by dependence, as a means of explaining motivational forces for sustaining IORs. Their arguments for why parties choose to remain in IORs are grounded in economic theory. In this view, parties are committed to relationships that generate economic value or prevent economic losses (e.g., the cost of dissolving the relationship or of replacing the client). Others who have investigated the effect of asset specificity (one source of dependence) on industrial alliance from a transaction cost theory perspective have found empirical support for the concept that increased relationship-specific investments lead to increased levels of commitment in the relationship (Heide and John, 1990). Thus, the more dependent a service provider perceives itself to be in an outsourcing relationship, the more committed the service provider is expected to be to that relationship. Therefore, we hypothesize:


**H2:** A service provider’s perception of a client’s power over the provider in terms of the provider’s dependence on the client in an outsourcing relationship has a positive effect on the service provider’s commitment to that particular relationship.

**Partnership Quality**

Drawing on the work of Grover, Cheon, and Teng (1996), partnership quality is defined in this study as consisting of four dimensions: trust, satisfaction, communication, and cooperation. A conscious effort was made to use a definition of partnership quality that did not imply any economic constructs, since profit motives of a service provider often run counter to the service desires of a client (Lacity, Willcocks, and Feeny, 1995). This definition of partnership quality is congruent with the concepts of relationship quality (Crosby, Evans, and Cowles, 1990) and relational norms (Macneil, 1978a, 1978b) in the IOR literature and does not include economic constructs.

The importance of partnership quality in IT outsourcing is predominantly based on Macneil’s relational exchange theory (Macneil, 1978a, 1978b), which is founded on the notion that contracts alone are not enough for effectively managing the complexity inherent in IORs. It has been argued that the quality of the relationship between IT service providers and clients significantly impacts the success of IT outsourcing engagements (McFarlan and Nolan, 1995). According to McFarlan and Nolan (1995), if there is mutual interest in the relationship and if there are shared approaches to problem solving, IT outsourcing engagements have a greater chance of achieving their objectives. As IT outsourcing relationships become more complex and vendors take on ever-increasing portions of clients’ IT infrastructures involving a high degree of strategic impact on clients’ businesses, partnership-style relationships have become necessary to manage the outsourcing relationships effectively to achieve engagement goals (Kishore et al., 2003). In partnerships, parties develop an understanding of each others’ organizational processes and engage in complementary activities to achieve mutual goals (Skinner, Gassenheimer, and Kelly, 1992). By working together they acquire much deeper knowledge about each others’ unique needs and problems, and this may lead to relinquishing some control and forfeiting individual gains in favor of mutually compatible objectives (Goles and Chin, 2002). This leads to the development of trust in the relationship, instills confidence in the exchange partner’s abilities, provides a feeling of security, and alleviates fears that the exchange partner will act opportunistically (Kim, 2000). Therefore, when the partnership quality in an outsourcing relationship is high, parties are more likely to be willing to make a commitment to the relationship because of the increased benefits to them and a decrease in behavioral uncertainty from the other party on account of opportunism. Thus, we hypothesize that:

**H3:** A service provider’s perception of partnership quality in an outsourcing relationship has a positive effect on the service provider’s commitment to that particular relationship.

**Alternate Model of Commitment**

The research model discussed above treated commitment as a second-order construct comprised of three dimensions based on the work of Kumar, Scheer, and Steenkamp (1995). However, Gundlach, Achrol, and Mentzer (1995) provided some theoretical reasoning and empirical evidence of causal and temporal relationships among the three dimensions of commitment and referred to the influence of these dimensions on each other as a “self-enforcing cycle.” Therefore we propose an alternate model, shown in Figure 11.2, in which the three dimensions of commitment are treated as three
Figure 11.3 Commitment Cycle: Development of Long-term Relationships

independent constructs. While there is little known about the individual impacts of partnership and power on the three dimensions of commitment, we propose a causal model based in part on the work by Gundlach, Achrol, and Mentzer (1995). Figure 11.3 shows a "self-enforcing cycle" between individual dimensions of commitment; it portrays two repeating phases, an economic phase, involving the investment of resources, and a relational phase, in which parties develop attitudes and expectations about the future of their relationship. A discussion of this figure will provide the basis for hypotheses 1 to 3 in our alternate model. As shown in Figure 11.3, long-term relationships start with parties making credible investments (Gundlach, Achrol, and Mentzer, 1995); this is consistent with the recent TCE view that idiosyncratic inputs by both parties lead to long-term relationships (Bensou and Anderson, 1999; Williamson, 1988). In the context of IT outsourcing, such inputs may include dedicated technology resources, personnel, and stock options in the other organization. These inputs represent a vested interest in the relationship and perpetuate a belief that parties want to become more deeply involved with each other (Kumar, Scheer, and Steenkamp, 1995). Economic commitments are similar to a signaling mechanism, demonstrating to the other party that the relationship is valuable. These economic commitments help generate a sense of security as well as a sense of worth with respect to the relationship, thus enhancing the affective commitment of the parties. Such investments, especially if very specific to the outsourcing relationship, also create high switching costs and result in a greater desire to maintain and continue the relationship into the future (Heide and John, 1990). Gundlach, Achrol, and Mentzer (1995) provided empirical evidence that the commitment of credible inputs positively relates to long-term commitment intentions.

After credible investments in a relationship are made, a transition from the economic phase to the relational phase begins. In the economic phase, dedicated resources influence increased commitment; in the relational phase, both affective commitment and expectations of continuity begin their impact on increasing commitment levels. In service relationships, including ASP outsourcing, it is often more cost effective for the service provider to maintain current customers as opposed to continually acquiring and developing new ones, especially if the current services are satisfying their clients' needs. Having made credible investments in a relationship, the service provider now feels committed to the relationship, that is, the provider's affective commitment toward the relationship increases. These positive attitudes about the relationship further increase the provider's
willingness to make additional investments in the relationship. A positive view of the relationship may make investments seem less risky and/or increase the perception that such investments will be adequately compensated by the other party. Additional investments in the relationship may also happen if the service provider believes the relationship will last long enough for sufficient returns to be realized. Thus, providers are more likely to invest in a relationship when they believe a relationship will continue into the future. Gundlach, Achrol, and Mentzer (1995) also provided some empirical support for these relationships among the three dimensions of commitment.

We model only the relational, and not the economic, phase of commitment in this research, as shown in Figure 11.2. We do this for several reasons. First, this study is focused on the social factors (power and partnership) impacting an IT service provider’s commitment to an outsourcing relationship, making the relational phase of commitment more germane to this research. Second, the setting of this research is the ASP outsourcing model. The economic cycle of commitment in terms of credible investments by the ASP service providers has already taken place as the ASP model requires substantial up-front client-neutral investments by ASP service providers before they enter into any specific client contracts. Finally, this is not a longitudinal study, and thus Gundlach, Achrol, and Mentzer’s complete self-enforcing cycle cannot be modeled here. Therefore we hypothesize that:

\[ H_{1a} : \] A service provider’s expectation about continuing an outsourcing relationship will have a positive effect on the service provider’s willingness to invest further in that particular relationship.

\[ H_{2a} : \] A service provider’s affective commitment to an outsourcing relationship will have a positive effect on the service provider’s willingness to invest further in that particular relationship.

\[ H_{3a} : \] A service provider’s affective commitment to an outsourcing relationship will have a positive effect on the service provider’s expectation of continuity of that particular relationship.

As stated previously in the section on power as a function of dependence, parties are committed to IORs that generate economic value or prevent economic losses. This reasoning is well grounded in economic and power theories that posit that the more dependent one party is on another party, the higher the commitment of the former party will be to the relationship. As also discussed earlier, the power of a client over a vendor is conceptualized in this research as the dependence of the vendor on the client. Vendor dependence on the client is similar to the notion of relational investments in Gundlach, Achrol, and Mentzer’s conceptualization (shown in Figure 11.3) in terms of the fact that one source of vendor dependence is the investments made by the vendor in the particular client relationship. However, there is a major difference between the notions of vendor dependence and relational investments. The notion of relational investments includes investments made by both a client and a vendor in the relationship. Thus, while relational investments are shown to impact both affective commitment and expectations of continuity in Gundlach, Achrol, and Mentzer’s self-enforcing cycle shown in Figure 11.3, we expect client power over a vendor as a function of vendor dependence on the client to impact only the vendor’s expectation of continuity but not its affective commitment. Arguably, a vendor’s affective commitment toward the relationship with a client will increase with the client’s increased investments in the relationship. Therefore, we hypothesize that:

\[ H_{4a} : \] A service provider’s perception of a client’s power over the provider in terms of the provider’s dependence on the client in an outsourcing relationship has a positive effect on the service provider’s expectation of continuity of that particular relationship.
As mentioned before, past IS outsourcing research has examined the role of partnership quality on a client's perceptions but has not examined its influence from the service provider's viewpoint. As was also mentioned before, the previous literature is silent about the potential impact of partnership quality on the individual dimensions of the larger commitment construct. However, as we discussed in the section on partnership quality, partnership quality consists of trust, satisfaction, communication, and cooperation constructs, and these constructs have substantial affective aspects. Therefore, we expect partnership quality to have a direct impact on the affective commitment of the vendor, and the impact of partnership quality on the other two commitment constructs—expectation of continuity and willingness to invest—is expected to be mediated by the affective commitment construct through the mechanisms of Gundlach, Achrol, and Mentzer's self-enforcing cycle. Therefore, we hypothesize that:

H3a: A service provider's perception of partnership quality in an outsourcing relationship has a positive effect on the service provider's affective commitment to that relationship.

RESEARCH METHODOLOGY

We chose the research methodology for this research carefully, considering the state of knowledge in the field pertaining to this research and the goals of this particular study. As discussed in earlier sections, power, partnership, and commitment are well-developed and well-established constructs in the area of IOR and IT outsourcing literatures. However, the impact of power and partnership on vendor commitment has not been tested in prior research, particularly in the context of the highly contract-oriented ASP outsourcing paradigm. Therefore, the state of knowledge pertaining to these constructs and their relationships in this research can be best characterized as moderate. Further, the goal of this research is to establish the comparative influence of the two influence sources—one a unilateral source (power) and the other a bilateral source (partnership)—on vendor commitment. This goal can be characterized as theory testing rather than theory building.

McGrath's (1979) five-stage "theory of method" provides an excellent contingency framework for choosing appropriate research methods, dependent upon the state of knowledge and research goals. McGrath suggests using field studies for exploratory theory-building efforts in the earlier stages of the knowledge cycle and then for cross-validation of developed theories in real-life settings in the later stages of the knowledge cycle. He suggests using laboratory experiments for precise testing of key hypotheses during the intermediate stages of the knowledge cycle. Bonoma (1985) also provides a contingency model for choosing research methods and discusses the tradeoff between currency and integrity. Currency is more relevant in the context of exploratory theory-building studies whereas the integrity afforded by laboratory experiments, simulations, and models is more relevant when the goal is explanation and theory testing. Therefore, the laboratory experiment appears to be an appropriate choice for the current study, insofar as the state of knowledge pertinent to the constructs and relationships of this research is somewhere in the middle of the knowledge continuum and our goal in this study is theory testing to assess the comparative impact of the two influence sources on vendor commitment.

Further, the experimental research methodology has been used frequently in past IS research dealing with decision making at the organizational and project levels of analysis, particularly in the context of IS project management and IS implementation research (e.g., Harrison and Harrell, 1993; Keil et al., 1994–95, 2000b, 2004; Smith, Keil, and Depledge, 2001; Tan et al., 2003). In addition, published studies in other management disciplines (Andaleeb, 1995,
1996; Gundlach and Cadotte, 1994) have used experimental methodology to test theoretical models involving similar relational and/or power constructs in the context of IOR. Therefore, we tested the hypothesized causal relationships in our proposed theoretical models (see Figures 11.1 and 11.2) using a controlled laboratory experiment. The experiment we conducted used a 2 × 2 factorial design in which the degree of partnership quality (strong/weak) and the level of dependence (high/low) were independently manipulated. We discuss the experimental design in detail in the following section.

**Experimental Design**

The experimental design involved a role-play exercise by subjects as client account managers for an ASP company. Subjects were asked to read a brief scenario, similar to a mini-case, about a contractual service relationship between the ASP vendor and an individual client company. The same background information about the ASP-client relationship, such as the services contracted, the service-level agreements (SLAs), and the length of the contract were provided to each participant. Four treatments were created by manipulating the degree of partnership (strong/weak) and level of dependence (high/low). Partnership was manipulated by a letter given to the subjects in which they were told they had already written to the ASP’s vice president of contract management. A similar approach was used by Andaleeb (1995, 1996), Schurr and Ozanne (1985), and Sullivan and Peterson (1982) to manipulate trust in the context of IOR. Based on the four dimensions of partnership relevant to outsourcing practices as defined by Grover, Cheon, and Teng (1996), the letter described the levels of communication, trust, cooperation, and satisfaction with the client. The four dimensions were portrayed favorably under the strong partnership treatment and unfavorably under the weak partnership treatment. The dependence manipulation was derived from El-Ansary’s (1975) functional definition of power and dependence. The high dependence treatment was represented by stating that few potential clients exist in the current market segment; revenues from services provided to this particular client substantially contributed to the ASP’s profits; a large portion of the ASP’s manpower and equipment had been solely allocated to fulfilling this particular client’s needs and it would be very difficult and costly for the ASP to reallocate these resources to other customers. For the low dependence treatment the statements were reversed. Based on the recommendations of Dennis and Valacich (2001), treatment levels were sufficiently differentiated in order to maximize effects. The case scenario template and the treatments are provided in the appendix.

Refinement of the case scenario was done in two stages. First, a group of seven management information systems (MIS) faculty and four MIS Ph.D. students, most of whom either had prior experience in managing IT outsourcing relationships or had worked for IT consulting firms or were currently doing research in the IT outsourcing area, evaluated the experimental material and provided feedback. After revising the experimental material based on their suggestions, a group of nineteen MBA and forty-four upper-level undergraduate students enrolled in MIS courses were selected for pretesting the experimental material and protocols. This pretest resulted in no changes in the experimental material and only minor adjustments to the experimental protocol.

**Subjects**

A total of 140 MBA and upper-level undergraduate students at a large state university in the northeastern United States were recruited as subjects for the actual experimental study; 48 were
Table 11.1

Sample Characteristics

<table>
<thead>
<tr>
<th>Frequencies</th>
<th>All</th>
<th>Graduate</th>
<th>Undergraduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Males</td>
<td>110</td>
<td>45</td>
<td>65</td>
</tr>
<tr>
<td>(Females)</td>
<td>83 (27)</td>
<td>34 (11)</td>
<td>49 (16)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Descriptive</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information technology (IT) work experience (months)</td>
<td>24.64</td>
<td>33.71</td>
<td>41.22</td>
<td>42.51</td>
<td>13.17</td>
<td>19.16</td>
<td>Yes</td>
</tr>
<tr>
<td>General management experience (months)</td>
<td>19.13</td>
<td>22.16</td>
<td>23.78</td>
<td>26.19</td>
<td>15.92</td>
<td>18.41</td>
<td>No</td>
</tr>
<tr>
<td>IT management experience (months)</td>
<td>8.11</td>
<td>20.39</td>
<td>14.33</td>
<td>29.07</td>
<td>3.82</td>
<td>9.00</td>
<td>Yes</td>
</tr>
<tr>
<td>GPA</td>
<td>3.37</td>
<td>0.39</td>
<td>3.63</td>
<td>0.21</td>
<td>3.24</td>
<td>0.40</td>
<td>Yes</td>
</tr>
<tr>
<td>Age</td>
<td>24.54</td>
<td>4.71</td>
<td>27.22</td>
<td>4.88</td>
<td>22.66</td>
<td>3.56</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Graduate students taking an MBA-level MIS course and 92 were undergraduate students taking a senior-level MIS course. The subject pool was familiar with the particular issues surrounding ASP outsourcing since it was an area recently covered in their MIS coursework. Of the 140 potential subjects, one declined to participate, and 29 were removed from the initial data set because they had no professional experience in information technology, general management, or information technology management. It was felt that subjects should have at least some relevant work experience in order to adequately assume the role of decision maker in the experiment. A total of 110 cases (45 graduate and 65 undergraduate) comprised the final data set, about which Table 11.1 provides demographic information.

There is some debate in the literature about the use of students as surrogates for managers. However, Remus (1986) provided empirical support for the use of students as surrogates in the context of managerial decision making. In addition, there are a number of precedents for using student subjects, both graduate and undergraduate, for high-level managerial decision-making tasks in organizational research, such as those dealing with business risk (Sitkin and Weingart, 1995), project management (Harrison and Harrell, 1993) including software projects (Keil et al., 1994–95, 2000a, 2000b, 2004; Keil, Mixon, and Truex, 1995; Smith, Keil, and Depledge, 2001; Tan et al., 2003); new product development (Schmidt, Montoya-Weiss, and Massey, 2001); and manufacturer and distributor exchange relationships (Andaleeb, 1995, 1996; Gundlach and Cadotte, 1994), including IT exchange channels (Gundlach, Achrol, and Mentzer, 1995). In these studies, student subjects have been asked to make organizational investment decisions in relation to corporate projects, software projects, new product development, manufacturer and distributor exchange relationships, including those in the IT domain. Further, to make these decisions students assumed the roles of company presidents (Keil, Mixon, and Truex, 1995; Keil et al., 2000b), upper-level managers (Gundlach, Achrol, and Mentzer, 1995; Gundlach and Cadotte, 1994), new product development managers (Schmidt, Montoya-Weiss, and Massey, 2001), system development project managers.
(Keil et al., 2004), project managers (Harrison and Harrell, 1993), software project leaders (Tan et al., 2003), and lead systems analysts (Smith, Keil, and Depledge, 2001).

The experimental task in the present study does not involve executive decision making. Rather, it involves providing middle managerial level (client account manager) recommendations to executive management about workforce and technological investments needed to serve individual clients. The experimental scenario and the recommendation task are quite realistic from the viewpoint of the student subjects who have learned about the issues involved in ASP outsourcing in their programs and who may be expected upon graduation to perform duties similar to the recommendation task involved in the experiment. Therefore, student subjects are expected to act as effective surrogates for client account managers in this experimental research.

Decision Situation

As noted before, subjects were asked to imagine themselves in the role of the client account manager for the ASP company described in the scenario. The role of a client account manager was chosen in this research, as opposed to that of a chief information officer or chief executive officer, because a client account manager is expected to possess much better and direct information about the various study constructs. Further, as discussed above, student subjects are also expected to better relate to this position level and therefore to more easily project themselves into the experimental role. Subjects were told that in two weeks top executives of the ASP would meet to discuss plans for future workforce and technological investments needed to service current and future customers; and that their boss has asked them to write a report describing how best to service their individual clients. In order to efficiently measure and capture all independent and dependent variables in our research model, subjects were provided a list of items (measures) corresponding to each construct. They were told that the items were a series of possible recommendations on how to manage the client relationship, and they were asked to rate them from 1 (strongly disagree) to 7 (strongly agree).

Constructs and Measures

A conscious effort was made to adapt established and validated measures for the research constructs so as to facilitate comparison, replication, generalization, and validation. Measures were needed to (1) check whether treatment manipulations pertaining to the two independent constructs were properly administered and (2) capture all of the endogenous constructs. The individual items and their sources for each construct are provided in Tables 11.2 and 11.3. All items were measured using a seven-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (7).

Procedures

The subjects were randomly assigned to one of the four treatment groups: (1) strong partnership and high vendor dependence (i.e., high client power); (2) strong partnership and low vendor dependence (i.e., low client power); (3) weak partnership and high vendor dependence (i.e., high client power); and (4) weak partnership and low vendor dependence (i.e., low client power). Subjects were told before actually conducting the experiment that the case scenarios were developed using information from actual published ASP and IT outsourcing cases in order to simulate an actual situation an ASP may face. This was done to induce the feeling that the experimental conditions represented a real-world scenario. While the instructors who made their classes available for the
<table>
<thead>
<tr>
<th>Constructs and source</th>
<th>Item code</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (Dependence)-MPD (Heide, 1994)</td>
<td>MPD1</td>
<td>4.26</td>
<td>1.95</td>
<td>If your company decided to stop supplying application services to SouthBank, you could easily replace their profit contribution with application service supplied to other customers. (reverse scored)</td>
</tr>
<tr>
<td></td>
<td>MPD2</td>
<td>4.75</td>
<td>1.86</td>
<td>If the relationship with SouthBank were terminated, it would not hurt our operations. (reverse scored)</td>
</tr>
<tr>
<td></td>
<td>MPD3</td>
<td>4.28</td>
<td>1.78</td>
<td>Finding new buyers for the application services currently supplied to SouthBank would not have a negative impact on our costs. (reverse scored)</td>
</tr>
<tr>
<td></td>
<td>MPD4</td>
<td>4.07</td>
<td>1.87</td>
<td>It would be relatively easy for us to find other buyers for the application services currently supplied to SouthBank. (reverse scored)</td>
</tr>
<tr>
<td>Partnership Trust-MTR (Zaheer, McEvily, and Perrone, 1996)</td>
<td>MTR1</td>
<td>4.09</td>
<td>1.64</td>
<td>SouthBank has always been even handed in its negotiations with us.</td>
</tr>
<tr>
<td></td>
<td>MTR2</td>
<td>3.54</td>
<td>1.84</td>
<td>SouthBank may use opportunities that arise to profit at our expense. (reverse scored)</td>
</tr>
<tr>
<td></td>
<td>MTR3</td>
<td>3.99</td>
<td>1.83</td>
<td>Based on past experience, we cannot with complete confidence rely on SouthBank to keep its promises. (reverse scored)</td>
</tr>
<tr>
<td></td>
<td>MTR4*</td>
<td>3.24</td>
<td>1.60</td>
<td>We would be hesitant to conduct transactions with SouthBank when the specifications are vague. (reverse scored)</td>
</tr>
<tr>
<td></td>
<td>MSF1</td>
<td>3.95</td>
<td>2.22</td>
<td>SouthBank is trustworthy.</td>
</tr>
<tr>
<td>Satisfaction-MSF (Andaleeb, 1996)</td>
<td>MSF2</td>
<td>4.09</td>
<td>1.97</td>
<td>The relationship between our company and SouthBank does not seem to reflect a happy situation. (reverse scored)</td>
</tr>
<tr>
<td></td>
<td>MSF3</td>
<td>4.02</td>
<td>1.97</td>
<td>We are very satisfied with SouthBank.</td>
</tr>
<tr>
<td>Communication-MCC (Morgan, 1994)</td>
<td>MCC1</td>
<td>4.07</td>
<td>1.59</td>
<td>SouthBank keeps us informed of new developments.</td>
</tr>
<tr>
<td></td>
<td>MCC2</td>
<td>3.93</td>
<td>1.59</td>
<td>SouthBank provides us with frequent positive feedback on our performance.</td>
</tr>
<tr>
<td></td>
<td>MCC3</td>
<td>4.35</td>
<td>1.71</td>
<td>SouthBank offers us very poor recognition programs. (reverse scored)</td>
</tr>
<tr>
<td></td>
<td>MCC4</td>
<td>4.28</td>
<td>1.94</td>
<td>SouthBank communicates well their expectations for our company's service performance.</td>
</tr>
<tr>
<td>Cooperation-MCO (Andaleeb, 1996 #58)</td>
<td>MCO1</td>
<td>4.09</td>
<td>1.77</td>
<td>SouthBank collaborates with us in developing application services.</td>
</tr>
<tr>
<td></td>
<td>MCO2</td>
<td>4.21</td>
<td>1.74</td>
<td>SouthBank endeavors to work with us as a team.</td>
</tr>
<tr>
<td></td>
<td>MCO3</td>
<td>4.14</td>
<td>1.94</td>
<td>SouthBank has built and maintained a harmonious relationship with us.</td>
</tr>
<tr>
<td></td>
<td>MCO4</td>
<td>4.20</td>
<td>2.11</td>
<td>SouthBank does not cooperate with us. (reverse scored)</td>
</tr>
</tbody>
</table>

*Items dropped because of poor factor loading.
Table 11.3

Construct Measurement Items for Partial Least Squares Model

<table>
<thead>
<tr>
<th>Constructs and Source</th>
<th>Item code</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment</td>
<td>DCA1</td>
<td>4.11</td>
<td>1.78</td>
<td>Even if we could, our organization should not drop SouthBank as a customer because we like being associated with them.</td>
</tr>
<tr>
<td></td>
<td>DCA2</td>
<td>3.95</td>
<td>1.85</td>
<td>We should remain a service provider to SouthBank because we genuinely enjoy our relationship with them.</td>
</tr>
<tr>
<td></td>
<td>DCA3²</td>
<td>4.22</td>
<td>2.04</td>
<td>Our positive feelings toward SouthBank are a major reason we should continue working with them.</td>
</tr>
<tr>
<td>Expectation of continuity</td>
<td>DCE1²</td>
<td>4.63</td>
<td>1.57</td>
<td>Our relationship with SouthBank should continue for a long time.</td>
</tr>
<tr>
<td></td>
<td>DCE2</td>
<td>3.80</td>
<td>1.64</td>
<td>The renewal of our contractual relationship with SouthBank should be virtually automatic.</td>
</tr>
<tr>
<td></td>
<td>DCE3</td>
<td>4.93</td>
<td>1.68</td>
<td>Our firm should not be doing business with SouthBank in the near future. (reverse scored)</td>
</tr>
<tr>
<td>Willingness to invest</td>
<td>DCW1</td>
<td>4.52</td>
<td>1.32</td>
<td>If SouthBank requested it, we should be willing to make further investment to support their needs.</td>
</tr>
<tr>
<td></td>
<td>DCW2</td>
<td>4.75</td>
<td>1.49</td>
<td>We should be willing to put more effort and investment into building our business with SouthBank.</td>
</tr>
<tr>
<td></td>
<td>DCW3²</td>
<td>4.15</td>
<td>1.63</td>
<td>In the future we should work to link our firm with SouthBank.</td>
</tr>
</tbody>
</table>

²Items dropped to maintain an equal number of items in each of the first-order constructs for partnership Modeling of second-order molecular constructs requires that all first-order constructs have the same number of items (Chin, 1995; Chin et al., 1996).

³Items dropped because of poor convergent and discriminant validity.

The experiment had the option to offer their students extra credit for participating, no such rewards were offered and no other incentives were mentioned or given by anyone involved in conducting the experiment. Subjects were also informed that there were no right or wrong answers and participation was completely voluntary. All participants were required to sign a consent form before participating and after completing the experiment all participants were debriefed about the motivation and possible contributions of the research.

RESULTS

The research model was assessed using the partial least squares (PLS) technique and the PLS Graph Software Version 03.00 Build 1126. PLS is a component-oriented structural equation modeling technique (Chin, 1998a, 1998b; Gefen, Straub, and Boudreau, 2000; Lohmoller, 1989). It was selected for this research because it allows for modeling of second-order factors (Chin and Gopal, 1995; Chin, Marcolin, and Newsted, 1996), places minimal demands on sample sizes (Chin and Newsted, 1999; Gefen, Straub, and Boudreau, 2000), and is well suited for both exploratory and confirmatory research (Chin, 1998a, 1998b; Gefen, Straub, and Boudreau, 2000).
Table 11.4

Factor Analysis of Manipulation Checks

<table>
<thead>
<tr>
<th>Variable</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTR1</td>
<td>0.818</td>
<td>-0.018</td>
<td>-0.192</td>
</tr>
<tr>
<td>MTR2</td>
<td>0.636</td>
<td>0.004</td>
<td>0.508</td>
</tr>
<tr>
<td>MTR3</td>
<td>0.565</td>
<td>0.112</td>
<td>0.347</td>
</tr>
<tr>
<td>MTR4</td>
<td>0.302</td>
<td>0.230</td>
<td>0.375</td>
</tr>
<tr>
<td>MTR5</td>
<td>0.869</td>
<td>0.084</td>
<td>-0.160</td>
</tr>
<tr>
<td>MC01</td>
<td>0.728</td>
<td>-0.152</td>
<td>-0.271</td>
</tr>
<tr>
<td>MC02</td>
<td>0.869</td>
<td>0.013</td>
<td>-0.050</td>
</tr>
<tr>
<td>MC03</td>
<td>0.886</td>
<td>0.051</td>
<td>-0.064</td>
</tr>
<tr>
<td>MC04</td>
<td>0.785</td>
<td>-0.099</td>
<td>0.190</td>
</tr>
<tr>
<td>MSF1</td>
<td>0.815</td>
<td>0.054</td>
<td>0.310</td>
</tr>
<tr>
<td>MSF2</td>
<td>0.820</td>
<td>-0.125</td>
<td>-0.221</td>
</tr>
<tr>
<td>MSF3</td>
<td>0.926</td>
<td>0.018</td>
<td>-0.095</td>
</tr>
<tr>
<td>MCC1</td>
<td>0.749</td>
<td>-0.061</td>
<td>-0.320</td>
</tr>
<tr>
<td>MCC2</td>
<td>0.776</td>
<td>-0.172</td>
<td>-0.183</td>
</tr>
<tr>
<td>MCC3</td>
<td>0.619</td>
<td>0.088</td>
<td>0.439</td>
</tr>
<tr>
<td>MCC4</td>
<td>0.771</td>
<td>-0.151</td>
<td>-0.042</td>
</tr>
<tr>
<td>MPD1</td>
<td>0.106</td>
<td>0.826</td>
<td>-0.164</td>
</tr>
<tr>
<td>MPD2</td>
<td>0.033</td>
<td>0.819</td>
<td>-0.053</td>
</tr>
<tr>
<td>MPD3</td>
<td>0.113</td>
<td>0.777</td>
<td>-0.053</td>
</tr>
<tr>
<td>MPD4</td>
<td>0.022</td>
<td>0.860</td>
<td>-0.053</td>
</tr>
</tbody>
</table>

The results presented in the following sections are based on the final set of measurement items as indicated in Tables 11.2 and 11.3. Notes associated with the tables explain the reasoning for dropping selected items from further analysis. The tables also display the descriptive statistics for each item grouped by construct. Before addressing the reliability and validity process for the research model, the manipulation checks are examined.

Manipulation Checks

Following established procedures in the literature (e.g., Sitkin and Weingart, 1995; e.g., Smith, Keil, and Depledge, 2001), manipulation checks were conducted to ensure that the experimental treatments were successfully administered. This was done by comparing the treatment level for a particular construct with the average score for that construct measured through its individual items shown in Table 11.2. For example, the group of students who were administered a strong partnership treatment should report their instrument's high agreement with items pertaining to the partnership construct. High partnership scores on the individual items from this group would indicate that the strong partnership manipulation was successfully administered.

To perform these comparisons, or manipulation checks, we first factor analyzed the four items for the power construct and the sixteen items for the partnership construct (see Table 11.4). Three component factors were extracted with all but one item for the partnership constructs (MTR4) loading higher on the first factor and all the items for the power construct loading higher on the second measure. We dropped MTR4 from further analysis due to low loading on the partnership factor. Individual items for the four partnership subconstructs were averaged to produce single
Table 11.5

Manipulation Checks

<table>
<thead>
<tr>
<th>Partnership</th>
<th>Weak</th>
<th>Strong</th>
<th>N = 27</th>
<th>Mean</th>
<th>N = 27</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnership</td>
<td>4.67</td>
<td></td>
<td>Partnership</td>
<td>4.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>3.84</td>
<td></td>
<td>Power</td>
<td>5.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N = 27</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Partnership</td>
<td>2.74</td>
</tr>
<tr>
<td>Power</td>
<td>3.77</td>
</tr>
</tbody>
</table>

Low | Power | High

Note: Means are based on the final set of items for the power and partnership constructs; see Table 11.2.

partnership subconstruct scores. The four partnership subconstruct scores were further averaged to produce a single composite score for the partnership construct. The composite score for the power construct was similarly calculated by averaging the four items of the power construct.

Next, the group means for the four experimental treatment groups were calculated for the power and partnership constructs using their respective composite scores. These group means are shown in Table 11.5 in appropriate treatment cells. As Table 11.5 shows, the composite score for the power construct is larger (smaller) under the high (low) treatment level of power and the composite score for the partnership construct is larger (smaller) under the strong (weak) partnership treatment level. This indicates that the treatments were successfully administered.

To further verify the effectiveness of the treatments and to investigate any interactions, a 2 x 2 Type III MANOVA was run using the experimental treatments as the independent variables and the composite scores were calculated as described above for these variables as the dependent variables. The results of this MANOVA are given in Table 11.6. Again, as expected, the main effects for power and partnership are significant only for their respective composite scores. In addition, the interaction effect between the two manipulations was not found to be significant for either the power or the partnership composite scores, indicating the absence of any interaction between the two treatments. Based on the information presented in both Table 11.5 and Table 11.6, it is concluded that the manipulations (treatments) administered in the experiment were quite effective.

Measurement Model

The individual items for the partnership and power constructs shown in Table 11.2 were used only to assess the effectiveness of the four treatments administered in this study. These items were not used any further to assess the impact of power and partnership on vendor commitment. The actual experimental treatment levels for the power (high and low) and partnership (strong and weak) were used as the values for the two independent variables for hypotheses testing in this research. Low and high power were coded as 0 and 1, respectively. Similarly, weak and strong partnership were coded as 0 and 1, respectively.

By using actual experimental treatments for the two independent variables instead of subject responses on items pertaining to these two independent variables, we eliminated any concerns about common method bias in this study. Common method bias generally occurs in survey/experimental data collection when respondents are asked to provide responses both to independent
Table 11.6

Results of the $2 \times 2$ Type III MANOVA

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Type III sum of squares</th>
<th>$F$-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>Partnership</td>
<td>1,537.652</td>
<td>776.963</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Power</td>
<td>2,046.509</td>
<td>4,231.185</td>
<td>0.000</td>
</tr>
<tr>
<td>Main effect: Partnership</td>
<td>Partnership</td>
<td>115.905</td>
<td>58.464</td>
<td>0.000</td>
</tr>
<tr>
<td>manipulation</td>
<td>Power</td>
<td>1.370</td>
<td>2.833</td>
<td>0.095</td>
</tr>
<tr>
<td>Main effect: Power</td>
<td>Partnership</td>
<td>0.137</td>
<td>0.069</td>
<td>0.793</td>
</tr>
<tr>
<td>manipulation</td>
<td>Power</td>
<td>28.438</td>
<td>58.796</td>
<td>0.000</td>
</tr>
<tr>
<td>Interaction effect:</td>
<td>Partnership</td>
<td>0.355</td>
<td>0.180</td>
<td>0.673</td>
</tr>
<tr>
<td>Partnership * Power</td>
<td>Power</td>
<td>0.594</td>
<td>1.228</td>
<td>0.270</td>
</tr>
</tbody>
</table>

Notes: A Type III MANOVA was run because of the uneven number of observations in the manipulation cells (see Figure 11.4).

Means are based on the final set of items for the partnership and power constructs (see Table 11.2).

Table 11.7

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Weight</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willingness to invest (DCW)</td>
<td>DCW1</td>
<td>0.55</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>DCW2</td>
<td>0.57</td>
<td>0.91</td>
</tr>
<tr>
<td>Expectation of continuity (DCE)</td>
<td>DCE2</td>
<td>0.57</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>DCE3</td>
<td>0.63</td>
<td>0.85</td>
</tr>
<tr>
<td>Affective commitment (DCA)</td>
<td>DCA2</td>
<td>0.54</td>
<td>0.95</td>
</tr>
<tr>
<td></td>
<td>DCA3</td>
<td>0.52</td>
<td>0.94</td>
</tr>
</tbody>
</table>

and dependent variables on the same instrument. The concern is that respondents somehow see the relationship between independent and dependent variables and this colors their responses. We used actual experimental treatment levels as independent variable values. These were under the control of the researcher and were completely independent of subjects' responses on the items pertaining to the dependent variable. Thus, this study does not suffer from common method bias.

Because we used treatment levels for independent variables in the PLS model in this study, we performed the reliability and validity assessments only for the three subconstructs of the dependent variable. We assessed item reliability, convergent validity, and discriminant validity of the three constructs following procedures described in the literature (Chin, 1998b; Gefen, Straub, and Boudreau, 2000; Hulland, 1999). An item demonstrates good reliability if it has a loading greater than 0.70 on its respective construct (Chin, 1998b; Fornell and Larcker, 1981; Hulland, 1999). As Table 11.7 shows, loadings for all items are above the 0.70 threshold, and range from 0.84 to 0.95, thus demonstrating good item reliability for the three constructs. The convergent validity or internal consistency of the constructs was assessed using Fornell and Larcker’s (1981) internal consistency measure. This measure is similar to Cronbach’s alpha but without the assumption that all indicators are equally weighted (Chin, 1998b). Data in Table 11.8 show that composite reliabilities for the three dimensions of the commitment construct are above the 0.70 threshold limit, with the lowest being 0.82 for expectation of continuity (DCE). The discriminant validity was assessed using two methods. First, the average variance extracted (AVE) score for each construct
Table 11.8

Composite Reliabilities, Average Variance Extracted (AVE), and Interconstruct Correlations

<table>
<thead>
<tr>
<th>Construct</th>
<th>Composite reliability</th>
<th>No. of items</th>
<th>DCW</th>
<th>DCE</th>
<th>DCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willingness to invest</td>
<td>0.89</td>
<td>2</td>
<td>0.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expectation of continuity</td>
<td>0.82</td>
<td>2</td>
<td>0.45</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>Affective commitment</td>
<td>0.94</td>
<td>2</td>
<td>0.52</td>
<td>0.56</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Notes: Diagonal elements in bold type are the square root of AVE, which should be larger than interconstruct correlations in the off-diagonal cells for discriminant validity. Fornell and Larcker's internal consistency measure shown in the composite reliability column is a measure for convergent validity and should usually be higher than 0.70. Signs for interconstruct correlations have been changed appropriately to account for negative signs for partial least squares weights. Composite reliability column is a measure for convergent validity and should usually be higher than 0.70. Negative signs for weights and loadings have been changed appropriately to aid interpretation and to be consistent with actual partial least squares outputs.

Table 11.9

Item Construct Loadings and Cross-Loadings

<table>
<thead>
<tr>
<th></th>
<th>Willingness to invest</th>
<th>Expectation of continuity</th>
<th>Affective commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCW1</td>
<td>0.90</td>
<td>0.37</td>
<td>0.47</td>
</tr>
<tr>
<td>DCW2</td>
<td>0.91</td>
<td>0.44</td>
<td>0.47</td>
</tr>
<tr>
<td>DCE2</td>
<td>0.32</td>
<td>0.81</td>
<td>0.46</td>
</tr>
<tr>
<td>DCE3</td>
<td>0.42</td>
<td>0.85</td>
<td>0.47</td>
</tr>
<tr>
<td>DCA2</td>
<td>0.54</td>
<td>0.54</td>
<td>0.95</td>
</tr>
<tr>
<td>DCA3</td>
<td>0.44</td>
<td>0.52</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Notes: Bold values are the self-loadings (loadings of items on their own construct) while other cells contain cross-loadings (loadings of items on constructs other than their own). Self-loadings should be higher than cross-loadings for convergent and discriminant validity. Signs for loadings and cross-loadings have been changed appropriately to account for negative signs for partial least squares weights.

was calculated and compared with the minimal acceptable limit of 0.50. For each construct, the square root of the average variance extracted was compared to the correlations of the construct with all other constructs (Fornell and Larcker, 1981). Second, we also examined the loading and cross-loading of each item on different constructs. For good discriminant validity, items should load higher on their respective constructs than on other constructs. The cells in bold type along the diagonal in Table 11.8 contain the square root of the AVEs for the respective constructs and represent the variance shared between a construct and its measures. The off-diagonal cells in this table show interconstruct correlations and they represent the variance a construct shares with other constructs. As shown in Table 11.8, all AVEs are above the 0.50 minimum threshold and the square roots of all of the AVEs are greater than the respective interconstruct correlations. Table 11.9 is now used for the second test of discriminant validity. Moving across the rows in Table 11.9 and comparing the item loadings (cells in bold font) and cross-loadings (other cells), the values in the bold font cells should be and are greater than any other values in the row. Based on the data presented in Tables 11.8 and 11.9 all constructs demonstrate good discriminant validity. The results presented indicate that the measurement model displays good item reliability, conver-
Figure 11.4 Partial Least Squares Results

![Diagram of Partial Least Squares Results]

Notes: TYP—student type; ITE—IT work experience; GME—general management experience; ITM—IT management experience

*p < 0.05
**p < 0.01

gent validity, and discriminant validity, and confirms that the three constructs associated with the multidimensional conceptualization of commitment are distinct constructs.

Hypothesis Testing

The research model was assessed using a PLS structural model following procedures suggested in the literature (Chin, 1998b; Gefen, Straub, and Boudreau, 2000; Hulland, 1999). In addition to the two independent variables, the PLS structural model also included controls for the direct effect of student type (TYP), IT work experience (ITE), general management experience (GME), and IT management experience (ITM). We examined the $R^2$ value for the endogenous construct, which indicates the amount of variance explained, as well as the coefficient and significance of each structural path in the model. As shown in Figure 11.4, the $R^2$ value for the dependent variable is sufficiently high with the model explaining 42.4 percent of the variance in the service provider's commitment.

After examining the $R^2$ values for the endogenous constructs, the coefficient and significance of each path were explored. Each structural path in the model corresponds to a testable hypothesis. Interpretation of the path coefficients is similar to simple regression (Chin, 1998b) with the caveat that the absolute value of the coefficients must be greater than the minimum threshold of 0.20 to eliminate the possibility of chance correlations (Chin, 1998a). In order to test the significance of each path, a bootstrapping procedure recommended in the literature was performed (Chin, 1998b, 2002) with 1,000 random subsamples. All path loadings for the three first-order constructs of the second-order molecular commitment construct were significant at the $p < 0.01$ level (see Figure...
Table 11.10

Summary of Path Coefficients for Second-Order Constructs

<table>
<thead>
<tr>
<th>Second-order construct</th>
<th>Dimensions</th>
<th>Path coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment</td>
<td>Willingness to invest</td>
<td>0.790**</td>
</tr>
<tr>
<td></td>
<td>Expectation of continuity</td>
<td>0.786**</td>
</tr>
<tr>
<td></td>
<td>Affective commitment</td>
<td>0.680**</td>
</tr>
</tbody>
</table>

*Notes: The signs for path coefficients have been changed appropriately to account for negative signs for partial least squares weights used to calculate second-order construct scores.

*p < 0.05; **p < 0.01.

Table 11.11

Summary of Hypothesis Tests

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path coefficient</th>
<th>Supported?</th>
</tr>
</thead>
<tbody>
<tr>
<td>( H_1: ) Power ( \rightarrow ) Commitment</td>
<td>0.170*</td>
<td>Yes (weakly)</td>
</tr>
<tr>
<td>( H_2: ) Partnership ( \rightarrow ) Commitment</td>
<td>0.566**</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Notes: The signs for path coefficients have been changed appropriately to account for negative signs for partial least squares weights.

*p < 0.05; **p < 0.01.

11.4 and Table 11.10). The path between power and commitment was significant at \( p < 0.05 \), but the path coefficient at 0.170 was slightly below the 0.20 threshold. The other path between partnership quality and commitment was significant at \( p < 0.01 \) with a path coefficient of 0.566 (see Figure 11.4 and Table 11.11). None of the control variables was found to have a significant coefficient over the minimum 0.20 threshold. Therefore, hypotheses 1 concerning the impact of client power on vendor commitment is weakly supported whereas hypothesis 2 concerning the impact of partnership quality on vendor commitment is strongly supported.

We also performed a 2 \( \times \) 2 Type III ANOVA using the actual manipulations as independent variables and the composite scores for commitment, calculated by averaging the six commitment items specified in Table 11.3, as the dependent variable. Results for this ANOVA are shown in Table 11.12. As expected, the main effects of power and partnership on commitment were both significant. However, the ANOVA results also indicate that the interaction between power and partnership had a significant impact on vendor commitment. This interaction effect was not captured in our PLS model. These results indicate that while power may have a weak direct effect on vendor commitment (based on the PLS path coefficient from power to commitment), it does have a significant moderating influence on the impact of partnership quality on vendor commitment.

Alternate Model

The full alternate model shown in Figure 11.5 was tested using the same constructs and items as the PLS model described in the measurement model section. The results of PLS reliability and validation for the alternate model were very similar to those of the PLS models presented in Tables 11.7, 11.8, and 11.9. The alternate model measurement results again indicated that the measurement model displays good item reliability, convergent validity, and discriminant validity.
Table 11.2

Results of the $2 \times 2$ Type III ANOVA of Commitment

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Type III sum of squares</th>
<th>$F$-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>Commitment</td>
<td>2,040.249</td>
<td>2,130.287</td>
<td>0.000</td>
</tr>
<tr>
<td>Main effect:</td>
<td>Commitment</td>
<td>52.809</td>
<td>55.140</td>
<td>0.000</td>
</tr>
<tr>
<td>Partnership manipulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main effect:</td>
<td>Commitment</td>
<td>4.517</td>
<td>4.716</td>
<td>0.032</td>
</tr>
<tr>
<td>Power manipulation</td>
<td>Commitment</td>
<td>7.540</td>
<td>7.873</td>
<td>0.006</td>
</tr>
<tr>
<td>Interaction effect:</td>
<td>Commitment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnership $\times$ Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: A Type III MANOVA was run because of the uneven number of observations in the manipulation cells (see Table 11.5). Means are based on the final set of six items for commitment (see Table 11.2).

and that the three subconstructs of the commitment construct are distinct. The alternate structural model PLS results are shown in Figure 11.5. As the figure shows, partnership quality significantly impacts affective commitment while power significantly impacts expectation of continuity, as hypothesized.

Further, both affective commitment and expectation of continuity are found to impact willingness to invest, which supports our conceptualization of the causal nature of the commitment construct discussed earlier. A modified alternate PLS model was also tested with paths to each commitment construct from both power and partnership quality constructs. The additional paths from the power and partnership quality constructs were not above the 0.20 coefficient threshold and were not significant. A $2 \times 2$ Type III MANOVA was also run using the actual manipulations as independent variables and the composite scores for the three commitment constructs, constructed by averaging the individual items for the three dimensions, as discussed in the manipulation checks section, as dependent variables. Results of this MANOVA analysis are given in Table 11.13. The main effects of partnership on each dimension of commitment were found to be significant. The main effect of power and the interaction effect of power and partnership were found to be significant only for the expectation of continuity construct. A discussion of all of the above results follows.

DISCUSSION

The goal of the research presented in this chapter was to perform a head-to-head comparison of the relative influence of a client’s power conceptualized as provider dependence on the client and the quality of the client–provider partnership on service provider commitment to the ASP outsourcing relationship. The results presented provide good empirical support for the theoretical propositions, with the main PLS model explaining a significant amount of the variance in the service provider’s commitment. Further, the coefficient for the path from power on commitment ($H_1$), while statistically significant, is rather low at 0.174 in the main model tested in this research with commitment as a second-order construct (see Figure 11.4). However, the coefficient for the path from power to expectation of continuity (which is one of the three dimensions of commitment) ($H_{4a}$) is greater at 0.231 and statistically significant in the alternate model in which the three dimensions of commitment are modeled as first-order constructs with an underlying causal structure. The coefficient for the path from the partnership quality construct to commitment ($H_2$) is quite high at 0.566 in
Figure 11.5  Alternate Model Partial Least Squares Results

Notes: TYP—student type; ITE—IT work experience; GME—general management experience; ITM—IT management experience
*p < 0.05
**p < 0.01

Table 11.13
Results of the 2 x 2 Type III MANOVA of Commitment Dimensions

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Type III sum of squares</th>
<th>F-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>Willingness to invest</td>
<td>2,317,321</td>
<td>1,569,317</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Expectation of continuity</td>
<td>2,046,225</td>
<td>1,399,549</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Affective commitment</td>
<td>1,775,237</td>
<td>1,001,069</td>
<td>0.000</td>
</tr>
<tr>
<td>Main effect:</td>
<td>Willingness to invest</td>
<td>13,756</td>
<td>9,316</td>
<td>0.003</td>
</tr>
<tr>
<td>Partnership manipulation</td>
<td>Expectation of continuity</td>
<td>24,058</td>
<td>16,455</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Affective commitment</td>
<td>173,901</td>
<td>98,064</td>
<td>0.000</td>
</tr>
<tr>
<td>Main effect:</td>
<td>Willingness to invest</td>
<td>2,852</td>
<td>1,923</td>
<td>0.168</td>
</tr>
<tr>
<td>Power manipulation</td>
<td>Expectation of continuity</td>
<td>13,179</td>
<td>9,014</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>Affective commitment</td>
<td>1,117</td>
<td>0,630</td>
<td>0.429</td>
</tr>
<tr>
<td>Interaction effect:</td>
<td>Willingness to invest</td>
<td>3,187</td>
<td>2,158</td>
<td>0.145</td>
</tr>
<tr>
<td>Partnership x Power</td>
<td>Expectation of continuity</td>
<td>17,101</td>
<td>11,696</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Affective commitment</td>
<td>5,371</td>
<td>3,029</td>
<td>0.085</td>
</tr>
</tbody>
</table>

Notes: A Type III MANOVA was run because of the uneven number of observations in the manipulation cells (see Figure 11.4).
Means are based on the final set of items for each commitment dimension (see Table 11.2).
the main model. Similarly, the coefficient for the path from the partnership quality construct to affective commitment ($H_{3a}$) is also quite high at 0.691 in the alternate model.

These results clearly indicate that partnership quality has a much greater impact on a service provider's commitment than does client's power over the provider. This is demonstrated in both the main model in which commitment is modeled as a second-order factor and in the alternate model in which the three dimensions of commitment are modeled as three independent constructs with an underlying causal structure. The finding that partnership plays a key role in influencing an IT service provider's commitment to the outsourcing relationship is consistent with findings about partnership quality in other IT outsourcing studies that have also found this construct to be positively related to various outsourcing success measures (Grover, Cheon, and Teng, 1996; Lee and Kim, 1999; Saunders, Gebelt, and Hu, 1997). While the impact of partnership on vendor commitment may not be surprising, it is interesting to note the size of the effect of partnership on vendor commitment given our definition of partnership, which did not include any reference to the economic incentives or benefit sharing that are typically found in traditional outsourcing partnerships.

Furthermore, based on transaction cost theory we would expect that a provider who is highly dependent on a client would continue to commit to the relationship (Heide and John, 1990; Rindfleisch and Heide, 1997). However, the client's power over the vendor in both the main and the alternate models had a significant but comparatively weaker relationship to commitment. While these results may indicate that client power emanating from provider dependence on the client may truly have a lower impact on provider commitment as compared with the influence of partnership quality on commitment, there another explanation for these results may be possible. The impact of client power on vendor commitment may in fact be a time-varying phenomenon with the impact of client power on provider commitment being much stronger in the earlier years of the outsourcing contract than in the later years. This may be because in the earlier years of the contract, the provider still has to recoup the specific investments it has made for the particular client (high provider dependence on client and thus high client power over the provider), and the provider may thus be more committed to the relationship. In contrast, in the later years of the contractual relationship, the provider has already recouped its client-specific investments and its commitment to the relationship may not be very high. In the experimental scenario used in this research, the provider is in the middle of a five-year contract, and, therefore, the lower degree of impact of the client's power on commitment may be an artifact of the experiment rather than a "true" effect. However, the reasoning about the moderation effect of the elapsed contractual duration on the relationship between vendor dependence (client power) and commitment is only intuitive and needs to be validated in future research.

**Research Limitations**

There are a few limitations associated with this study. First, as with any experiment, the variables under investigation were artificially manipulated so treatments could be adequately differentiated, and they represent only a limited set of the economic, social, and contractual factors involved in IT outsourcing relationships. Therefore, caution should be exercised in generalizing these results to real-world IT outsourcing situations. Second, the methodology involved using both graduate and undergraduate students as surrogates for actual managers in IT service firms, and, therefore, the results of this study should be interpreted with caution. However, as we mentioned before, the student selection process targeted only specific student groups (those who had completed or were enrolled in appropriate MIS courses and those with appropriate professional experience in
information technology, general management, and information technology management) to ensure that they had the necessary background to understand the outsourcing situation and to make appropriate and necessary recommendations. There is also a potential for systematically different responses from graduate and undergraduate students due to differences in education and experience levels but these factors were controlled for, as reported in the above discussion, and this difference was not found to be significant in any model. Third, the case provided to the students does not mention the profitability of the contract. It is quite possible that service providers may show more commitment when contracts are more profitable. Finally, the experimental scenario utilized only one kind of IT outsourcing model, that is, the ASP outsourcing model. While the newer ASP model of outsourcing is similar to the traditional forms of IT outsourcing in some ways, there are also several significant differences between the traditional and the ASP models of outsourcing, as discussed earlier. Future research with other forms of IT outsourcing should be conducted to validate the findings of this study.

Directions for Future Research

The intent of this research was to investigate how a client's power over a vendor and the partnership quality of their relationship impacts the service provider's level of commitment. While we believe this research has provided the theoretical groundwork and empirical support for the influence of unilateral and bilateral social controls (power and partnership) on vendor commitment, more work is needed to further develop this line of research. This research viewed power from the pluralist point of view; other views (e.g., rational or radical views) may be more appropriate in studying power in the context of IT outsourcing alliances or the working relationships between a client’s and service provider’s staff. An alternative view of power from the pluralist perspective was also taken. In this research, power was defined as a function of dependence; however, power may also be defined as a function of one’s power bases (rewards, coercion, expert, legitimate, and referent) (French and Raven, 1959). The use of these social power bases in the form of detailed contracts (legitimate power), penalty clauses (coercive power), incentives (reward power), and IT legal experts (expert power) has been suggested by researchers as a means of effectively managing outsourcing relationships (Lacity and Hirscheim, 1993b; Lacity and Willcocks, 1998; Lacity, Willcocks, and Feeny, 1995, 1996). Future research should take these alternative conceptualizations of power and study their impact on vendor commitment.

Past literature (Grover, Cheon, and Teng, 1996; Lee and Kim, 1999; Saunders, Gebelt, and Hu, 1997) has typically used a client’s strategic, technological, and economic benefits from outsourcing as success measures. However, as client firms engage in more selective outsourcing, split their IT functions among a greater number of IT service providers, and/or opt for more hybrid governance approaches (Kishore, Agarwal, and Rao, 2004–2005), intermediate variables become quite important as outsourcing and organizational success measures become further removed in the causal chain. Future IT outsourcing research may, therefore, wish to consider the use of vendor commitment as an important mediating construct in studies where the final outcome variables are organizational level success measures. In addition, commitment may be seen as a success measure from both a client and an IT service provider perspective, as opposed to the one-sided client view of success used in past research.

Future research may also look at how an outsourcing contract may be used as a mechanism for developing both partnership and power in the context of IT outsourcing relationships. Weitz and Jap (1995) state that elements of normative control and authoritative control are often contained in interorganizational contractual relations. The contract states each party’s obligations and re-
sponsibilities: research on how the contract influences the development of relational norms and power would be of great interest.

Finally, this research focused solely on the ASP outsourcing model. Though, there are certain similarities between the ASP and the traditional models of outsourcing, as discussed earlier, there are certain major differences between these two models, such as service customization, data location, asset ownership, and provider presence. Future research should investigate the relative influences of power and partnership in other outsourcing models, including the traditional outsourcing model as well.

Theoretical Contributions and Managerial Implications

This study makes three major contributions. This is the first study to examine the phenomenon of vendor commitment in an IT outsourcing context, considering two major determinants of this construct. As discussed earlier, there is a paucity of research from the vendor perspective in the IT outsourcing literature and, to our knowledge, there is no study in the IS literature that deals with the notion of vendor commitment. Second, there is no study in the IT outsourcing literature that has considered power and partnership in an integrated manner. This study takes the alternate theoretical perspectives approach and compares the two alternate influence sources—power and partnership—for vendor commitment in a single model to understand which influence source better explains vendor commitment to an outsourcing relationship, thereby furthering our understanding of these two constructs. Finally, while partnership has been examined in a traditional outsourcing context, this study examines whether the notion of partnership remains applicable in the more contractually oriented ASP form of outsourcing. We indeed find that partnership remains a strong and significant determinant of vendor commitment.

This study also has implications for today’s IT outsourcing managers. As was noted earlier, vendor commitment has been found to be a necessary prerequisite for successful outsourcing outcomes. While some researchers have advised practitioners to manage their IT service providers through the use of power (e.g., penalty clauses, short-term agreements, etc.) (Lacity and Hirschheim, 1993b; Lacity and Willcocks, 1998; Lacity, Willcocks, and Feeny, 1995, 1996), other researchers have advised practitioners to develop outsourcing relationships that are built less on contracts and more on trust (Lee and Kim, 1999; Sabherwal, 1999). This study finds that both power and partnership have a role to play in shaping vendor’s commitment to an outsourcing relationship. Client IT managers, cognizant of the need for vendor commitment, should seek a balance between the two levers—power and partnership—that they have under their control for managing their IT vendors more effectively to achieve outsourcing success.

However, we would like to urge caution in interpreting the results of our study. These results certainly support Macneil’s (1978a) proposition that contracts by their very nature are never complete and social mechanisms are therefore necessary to ensure the continuous commitment of the contracting parties to the relationship. However, our research in no way implies that social mechanisms are a replacement for contractual mechanisms in managing interorganizational relationships. A contract is necessary as the major mechanism for defining the structure and responsibilities of the parties in an interorganizational relationship. Therefore, client firms should apply due diligence in developing and enforcing contracts with their vendors and should not rely solely upon social mechanisms for managing relationships with their vendors.

Further, based on the results of the study, we recommend that clients consider developing flexible contracts that motivate their vendors’ future commitment through contractual clauses that promote communication, knowledge sharing, and innovation while maintaining vendors’ current
commitment through contractual clauses that define arbitration and enforcement mechanisms. We believe that the contract can be used as the foundation for establishing and developing both power and partnership in an IT outsourcing relationship.

Parties in an IT outsourcing relationship should also consider creating interdependence in their relationship. In relationships that have a greater degree of interdependence, both parties possess power and they work together to foster a relationship of cooperation (Gundlach and Cadotte, 1994). Therefore, a higher degree of interdependence may also generate both power and partnership in an IT outsourcing relationship. Vendor and client firms may therefore wish to make mutual credible investments in their relationships to induce a higher degree of interdependence in their relationship, which could in turn lead to power and partnership in their relationship.

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NOTE

1 As discussed in the procedures section, these treatments are: (1) strong partnership and high vendor dependence (i.e., high client power); (2) strong partnership and low vendor dependence (i.e., low client power); (3) weak partnership and high vendor dependence (i.e., high client power); and (4) weak partnership and low vendor dependence (i.e., low client power).

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APPENDIX 11.1 CASE INSTRUCTIONS

The scenario that follows is part of a research experiment that examines IT outsourcing decision-making. As part of this research experiment, you will be making an assessment of the amount of effort and resource that should be devoted to the relationship described in the IT outsourcing scenario. You will be asked to provide upper management with a series of recommendations on how to effectively manage this IT outsourcing relationship, including the amount of effort and resource that should be expended on the client’s needs. Please take a few minutes to read over the scenario and to answer the questions that follow. Please respond to the questions in the order in which they are presented. Keep in mind that there are no right or wrong answers.

YOUR JOB

Imagine yourself to be a client account manager for E-SOFT, an application service provider (ASP) headquartered in Dallas, Texas. E-SOFT offers a set of wireless and web-based intranet and internet business applications to customers ranging from small to large enterprises. Your job as a client account manager is to decide on how to best manage these IT outsourcing relationships to ensure delivery of IT services which fit the current and future needs of E-SOFT’s clients and E-SOFT’s business objectives. You currently manage five IT outsourcing relationships. One of these accounts is SouthBank, a regional bank with several branches in and around the state of Texas.

E-SOFT’S APPLICATION SERVICE CONTRACT WITH SOUTHBANK

E-SOFT provides a Web and cellular interface to SouthBank’s credit card payment and banking information system. The applications allow customers of SouthBank to access to their banking and credit card accounts through the Web or a cellular device. E-SOFT has just concluded its second year of a five-year IT outsourcing contract with SouthBank. This is an important time in the SouthBank and E-SOFT IT outsourcing relationship. SouthBank’s contract contains several service escalation clauses that take effect at the end of the third year of their contract. These clauses target the following application service guarantees in the service level agreement (SLA):

Current service guarantees
Servers will experience no more than 60 minutes unscheduled downtime per year
Applications will support 500 simultaneous users during peak hours.
90% of users will have a response time of 2 seconds or less during peak hours.
System restorations will take no more than 24 hours.

New service guarantees
Servers will experience no more than 30 minutes unscheduled downtime per year.
Applications will support 1,000 simultaneous users during peak hours.
95% of users will have a response time of 2 seconds or less during peak hours.
System restorations will take no more than 12 hours.

YOUR OPINION OF THE IT OUTSOURCING RELATIONSHIP WITH SOUTHBANK

A few weeks ago Steve Rice, the Vice President of Contract Management (your boss), asked you to describe the type of relationship E-SOFT has with SouthBank. You wrote the following memo:
Partnership: Strong

Steve,

"Regarding you query on the quality of our IT outsourcing relationship with SouthBank. I have many good things to say. Our working relationship with SouthBank has been a happy one. They effectively communicate their service needs and expectations. SouthBank’s IT staff has been very willing to cooperate with us in implementing services and solving problems. Both organizations have developed a clear understanding of each other’s behavior, policies and goals. SouthBank always tries to keep their promises and never tries to take advantage of us. I am happy to say, we have developed a very trusting relationship with SouthBank."

Partnership: Weak

Steve,

"Regarding your query on the quality of our IT outsourcing relationship with SouthBank. I do not have many good things to say. Our working relationship with SouthBank has not been a happy one. They do not effectively communicate their service needs and expectations. SouthBank’s IT staff has not been very willing to cooperate with us in implementing services and solving problems. Neither organization has developed a clear understanding of each other’s behavior, policies and goals. SouthBank never tries to keep their promises and always tries to take advantage of us. I regret to say, we have not developed a very trusting relationship with SouthBank."

How Important Is the IT Outsourcing Relationship With SouthBank to Your Company?

Information on the extent of your reliance on SouthBank, as a client, is presented below. You know that:

Power: High

- Currently, there are few companies in the market interested in outsourcing wireless and web-based intranet and internet business applications to ASPs.
- Services sold to SouthBank contribute to more than 50% of E-SOFT’s total profits.
- A large portion of E-SOFT’s manpower and equipment has been customized to fit SouthBank’s application service needs. It would be very difficult and costly to reallocate and reconfigure these resources to service other customers.
- Without incurring significant costs, it would be rather difficult for E-SOFT to terminate its relationship with SouthBank.
Power: Low

- Currently, there are many companies in the market interested in outsourcing wireless and web-based intranet and internet business applications to ASPs.
- Services sold to SouthBank contribute to less than 5% of E-SOFT's total profits.
- A small portion of E-SOFT's manpower and equipment has been customized to fit SouthBank's application service needs. It would be very easy and inexpensive to reallocate and reconfigure these resources to service other customers.
- Incurred only minimal costs, it would be rather easy for E-SOFT to terminate its relationship with SouthBank.

Situation

In two weeks, E-SOFT is having its biannual review and assessment meeting. During the meeting, executives of E-SOFT discuss and plan the financial, workforce and technological investments needed to service E-SOFT's current and future customers. Steve Rice has asked you to write a report describing how to manage the SouthBank relationship and to present your recommendations at the meeting. You have decided to take a couple of hours out of your day to begin drafting the report.