The Stability of Offshore Outsourcing Relationships: The Role of Relation Specificity and Client Control

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Abstract

Offshore outsourcing of administrative and technical services has become a mainstream business practice. Increasing commoditization of business services and growing client experience with outsourcing have created a range of competitive service delivery options for client firms. Yet, data from the Offshoring Research Network (ORN) suggests that, despite increasing market options and growing client quality and cost efficiency expectations, clients typically renew provider contracts and develop longer-term relationships with providers. Based on ORN data, this paper explores drivers of this phenomenon. The findings suggest that providers promote contract renewal by making client specific investments in software, IT infrastructure and training, and by involving clients in outsourcing operations, thereby increasing relation specific joint equity and creating opportunities for client monitoring and control. Interestingly, these strategies apply to routine rather than knowledge-intensive tasks, and are more likely to be applied by large rather than small providers. Surprisingly, high degree of contract specification makes contract renewal less likely. The paper contributes to the growing literature on strategic outsourcing of business services and the importance of governance mechanisms addressing 'hidden costs' as well as 'hidden benefits' of offshore outsourcing relationships.

Keywords: Offshore Outsourcing, Strategic Outsourcing, Agency Theory, Service Contracting, Hidden Costs, Governance Mechanisms

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Introduction

Offshore outsourcing of administrative and technical tasks has become a mainstream business practice (e.g. Doh 2005; Bunyaratavej et al. 2010). Offshore outsourcing means that client companies choose to source functions and processes supporting domestic and global operations from outside their home countries, using third-party service providers. Research shows that cost savings are a primary initial reason for companies to outsource business functions in general (e.g. Murray and Kotabe 1999; Walker and Weber 1984), and to outsource offshore in particular (Farrell 2005; Levy 2005; Lewin and Couto 2007; Lewin and Peeters 2006). In recent years, however, as companies learn the reality that "labor arbitrage" is a short term benefit they increasingly outsource offshore for more strategic reasons, such as to increase organizational flexibility, and to access talent and specialized capabilities (Lewin et al. 2009a; Manning et al. 2008; Kenney et al. 2009). In other words, firms do not only try to cut costs, but also create value through global outsourcing – a phenomenon some refer to as strategic outsourcing (e.g. Holcomb and Hitt 2007; Quinn 1999).

Reflecting this increasing demand, global outsourcing has expanded rapidly in recent years, offering client firms the opportunity to select from a range of full-service and specialized providers for specific needs (e.g. Couto et al. 2008). As outsourcing services, such as administrative services (IT, finance and accounting, and human resources), as well as more knowledge-intensive services (product design, engineering, analytical services) have become increasingly commoditized, the global business services market has expanded rapidly and become more competitive in recent years. Client companies, in turn, have become more experienced in selecting vendors, assessing service quality and generating cost savings. Surprisingly, despite increasing cost and quality expectations of clients and the growing

availability of alternative providers (Lewin and Couto 2007), recent data collected by the Offshoring Research Network (ORN) shows that client firms rarely switch providers. This is even more surprising as clients become increasingly aware of potential service quality flaws and other 'hidden costs' (e.g. Dibbern et al. 2008) – likewise, service providers report meeting clients' as key challenges (Couto et al. 2008, Lewin et al 2009b). Yet, we observe that service provider contracts are often renewed. In this study, we seek to better understand what drives the durability of offshore-outsourcing relationships.

Prior literature gives multiple reasons for why supplier relationships tend to last. Most prominently transaction cost economics (*c.f.* Williamson 1985) suggests that choosing alternative providers may incur switching costs, in particular if specific investments are needed that prevent clients from terminating existing relationships. In addition, the relational view (Dyer and Singh 1998) suggests that clients and providers may build up relation-specific resources and capabilities (see also Svejenova et al. 2006); personal relationships that promote interpersonal attachments (Levinthal and Fichman 1988); and loyalty and trust (Gulati 1995; Chiles and McMackin 1996; Larson 1992; Das and Teng 1998) that favor longer-term relationships. In our study, we test the effect of generating asset and relation specificity on the likelihood of deal renewal. In addition, we account for a number of factors that have been neglected in previous research. In particular, given increasing client concerns about 'hidden costs' of offshoring (Dibbern et al. 2008; Stringfellow et al. 2008), we account for the importance for clients to maintain managerial control within offshore outsourcing relationships. In particular, we examine how contracts and other control mechanisms may impact longevity of client provider relationships. We also consider the role of task knowledge intensity and provider characteristics such as provider size, experience and location of provider, on deal renewal.

Next, we consider in more detail recent trends and challenges of offshore outsourcing, both from the client and service provider perspective, using ORN data. Based on these findings, we develop two related theoretical perspectives to explain longevity of offshore outsourcing relationships: The first, considers how relation specific factors may impact the longevity of relationships. The second, considers how control mechanisms related to the problem of agency costs may impact the likelihood of deal renewal. In addition, we consider the role of task knowledge intensity on longevity of relationships. Finally we empirically test our hypotheses involving renewal or dissolution of outsourcing relationships. The discussion section considers the implications of our findings for the growing literature on strategic outsourcing in general (e.g. Holcomb and Hitt 2007; Quinn 1999; Henley 2006), and for strategies and governance mechanisms needed to manage the challenge of 'hidden costs' in offshore outsourcing, e.g. service quality, in particular (e.g. Aron and Singh 2005; Dibbern et al. 2008; Stringfellow et al. 2008).

Offshore outsourcing: Recent trends and challenges

In recent years, more and more Western multinational corporations (MNCs) have begun to source not only administrative and technical services from abroad, but also to use specialized external providers offshore to deliver services for domestic and global operations (Couto et al. 2008). Recent data from the Offshoring Research Network (ORN) supports this trend. The ORN is an international research initiative launched at Duke University, which involves partner universities in Europe and Asia. Since 2004, it has studied major offshoring drivers; risks; location choices; delivery model choices; performance indicators; and future plans, based on annual client and service provider surveys (see e.g. Lewin and Couto 2007; Couto et al. 2008; Heijmen et al. 2009). The ORN database includes 1,454 U.S. and European client

firms and 514 service providers from all over the world. We utilize ORN data throughout this study to discuss recent offshore outsourcing trends and challenges and to explore the drivers underlying the stability of client-vendor relationships as indicated by deal renewal.

According to ORN data, offshore outsourcing, using external suppliers, rather than captive offshoring, using wholly owned units, has become the dominant governance model in recent years; across business functions (see Figure 1). The range of reasons include the increasing availability of service providers offering not only standardized administrative services, but also more specific and knowledge-intensive product development and analytical services (see Figure 2 for the cumulative percentage of providers offering specific services over time). However, as business services are becoming more commoditized, more providers are able to offer services at low costs which decreases incentives for client firms to internalize the delivery of these services, and which also decreases costs of switching providers. Figure 3 displays the trend of perceived commoditization of services, from the perspective of service providers: the horizontal axis measures degree of commoditization today, the vertical axis measures predicted commoditization in the future. In addition, client firms have become increasingly experienced with offshoring tasks in general, and with offshore outsourcing in particular. Recent studies indicate that prior outsourcing experience has increased the likelihood of selecting third party outsourcing providers over a captive solution (e.g. Lewin et al. 2010). This is partly because companies recognize that managing outsourcing activities is not their core competence and that providers can provide the advantages of economies of scale and scope (see also Langlois and Robertson 1992).

INSERT FIGURE 1, 2, 3, 4 HERE

Despite the increase in commoditization of services and the growing trend towards selecting third party providers, clients continue to report major managerial challenges in implementing offshore outsourcing projects. Figure 4 lists by level of importance major challenges perceived by clients. Among them, loss of service quality stands out as the most important risk. Other major risks include employee turnover offshore, operational efficiency, data security, and loss of managerial control. Most of these risks are related to the principal-agent problem, i.e. the challenge of, and the costs involved in, controlling and monitoring the performance of subsidiary units and external suppliers under conditions of asymmetric information (Jensen and Meckling 1976). In the context of offshore outsourcing, these managerial challenges have often been referred to as 'hidden costs' which may lessen or even diminish the very cost savings driving many outsourcing decisions (Aron and Singh 2005; Dibbern et al. 2008; Stringfellow et al. 2008). Interestingly, service providers similarly perceive achieving expected service quality as their major managerial challenge and as a major reason for termination of contracts (Couto et al. 2008). Because of the practical relevance of these challenges, we consider the role of control mechanisms as a potential key dimension in managing and sustaining vendor relationships.

Despite the importance of these risks ORN data suggests that client-vendor relations are not terminated very often. According to the ORN service provider survey, on average 70 percent of all outsourcing deals are renewed at expiration (This finding is also supported by propriety data from TPI which tacks total contract value of every signed and terminated deal above $25M). In other words, termination of provider contracts happens less frequently than one would expect given that clients continue to report problems with quality of service, data security, and other issues, while at the same time offshore services become more commoditized and more providers enter the market which, in principle, reduces cost of contracting for services as well as simplifies and lowers switching costs.

Why Offshore Outsourcing Relationships Sustain

Previous research has examined a number of reasons why client-vendor relationships sustain. For example, transaction cost economics (*c.f.* Williamson 1985) emphasizes the role of task-specific investments, and related switching and other transaction costs in preventing clients from terminating existing relationships (Williamson 1971; Barthélemy and Quélin 2006). Yet, the above mentioned trend towards greater standardization of services suggests that additional factors are likely to contribute to the longevity of client-vendor relationships. A number of scholars have argued that beside task properties the very relationship between client and provider itself may develop a certain 'specificity' promoting the development of mutual trust and collaborative capabilities driving stability (Dyer and Singh 1998; Gulati 1995). We discuss in particular the role of 'relation specificity' in greater detail below. In addition, we have argued above that client concerns with service quality, managerial control and other issues may impact outsourcing decisions and performance. We therefore discuss the role of monitoring and control mechanisms in sustaining client-vendor relationships. Finally, we investigate to what extent the nature of tasks itself may impact longevity. In particular, previous studies indicate that knowledge intensity of tasks may impact outsourcing decisions and transaction costs (e.g. Mudambi 2008; Brusoni 2005), and, hence, also affect the likelihood of relationships to sustain. Our hypotheses are summarized in Figure 5.

INSERT FIGURE 5 HERE

Asset and Relation Specificity

From an economic perspective, obstacles to switching transaction partners may arise from different types of costs: search costs involved in finding a new partner; contracting costs

involved in negotiating a new contract (Dyer 1998); and costs involved in transferring specific assets (Barthélemy and Quélin 2006). As more providers offer a variety of services (see above), and as client firms have at the same time developed contracting capabilities facilitating outsourcing decisions (Argyres and Mayer 2007), client firms today can be expected to be less concerned with finding providers or with setting up contracts. However, selecting and contracting with a new provider is still a major effort of time and expense; in addition, 'transferring specific assets' to new providers, including process or product-specific knowledge, can be very costly in terms of time and managerial resources.

Building on that idea, Barthélemy and Quélin (2006) distinguish two types of switching costs: core-related specificity and adapting human assets. *Core-related specificity* refers to "the extent to which the resources that underlie an outsourced activity contribute to a firm's competitive advantage". In particular, if the underlying resources, e.g. particular process knowledge, are highly specific to a relationship, firms are reluctant to switch service providers partly because of creating joint equity in the relationship (Svejenova et al. 2006). Service providers play an important role here because they may gain and develop knowledge which is valuable to the client. Thereby, the client takes the risk of 'losing' process knowledge and of becoming dependent on the provider. However, the client may also benefit from the provider's ability to perform client-specific tasks. While a client can be uncertain about knowledge protection, core-related specificity may therefore promote mutually beneficial long-term relationships. *Adapting human assets* "refers to the extent to which specific assets have been developed to deal with a particular vendor as opposed to the activity's execution in-house" (*ibid*). This complex process relates to another dimension of specificity: the specificity of the relationship itself, independent from particular tasks (Dyer and Singh 1998; Zaheer and Venkatraman 1995).

The latter in particular – which can be called 'relation specificity' as opposed to task-related 'asset specificity' – has been subject of a number of studies on business relationships. For example, using an event-history analysis, Levinthal and Fichman (1988) find that auditor-client relationships are rarely terminated, and that the likelihood of termination decreases the longer a particular relationship is sustained. One main reason for this is that clients and auditors see a value in sustaining a relationship once it reaches a certain point of stability. For example, over time business partners may develop joint routines, resources and capabilities and thereby leverage on the stability of their relationships (Dyer and Singh 1998; for a combined perspective *c.f.* Williamson 1999). Using structural equation modeling based on data from 157 organizations, Gainey and Klaas (2003) further find relational trust to mediate the reselection of vendors (see also Gulati 1995; Uzzi 1997; Beckman et al. 2004). Results suggest not only that mutual trust may develop over time and make partner reselection more likely, but that clients often *seek* to develop trustful long-term business relationships.

One key mechanism that promotes asset and relation specificity and hence increases switching costs are client-specific investments that the provider undertakes to make in order to customize the delivery of the service, i.e. to develop specific capabilities and routines (Dyer and Singh 1998; Larson 1992), to generate trust and reciprocity (Granovetter 1985; Uzzi 1997; Gulati 1995), and to promote interdependencies (Gulati and Gargiulo 1999) that commit business partners to an existing relationship. Therefore, we hypothesize:

Hypothesis 1: Client-specific investments by the provider are positively related to the likelihood of deal renewal.

Monitoring and Control Mechanisms

While asset and relation specificity are important elements of deal renewal, we further propose that the client's ability to manage the perceived problem of agency costs further promotes enduring outsourcing relationships. Agency costs are typically discussed for situations where ownership and control are separated. They include costs involved in overseeing and monitoring provider activities and measuring provider performance (Jensen and Meckling 1976). While this notion has been largely developed by (financial) economists (*c.f.* Fama and Jensen 1983), it is a major subject of discussion in the international business literature, involving the relationship between headquarters and subsidiaries (Roth and O'Donnell 1996). In such situations, agency costs arise because of conflicts of interest between subsidiary and HQ-based managers in the organization.

Within offshore outsourcing relationships, agency costs may arise for two related reasons. Selecting the outsourcing solution for service delivery generally involves a trade-off between the benefits of a lower-cost external solution, and the perceived loss of managerial control over the process. Loss of managerial control matters when it is associated with loss of process knowledge and when outsourcing performance is not directly measurable. In addition, client firms and providers typically have different interests. While clients' interest may be to secure the delivery of services at a high quality, while saving costs, the provider may want to fulfill its task as efficiently as possible and maximize gross margins. Aron and Singh (2005) conclude that tasks whose outcomes are not directly measurable should not be outsourced to third-party service providers. This, however, ignores the empirical reality that clients have been increasing scale and scope of tasks and processes being outsourced despite the risks involved (see above), and that clients – as well as providers – have over time developed and internalized organizational capabilities to manage the uncertainties of client-provider relationships.

Prior research suggests that clients apply certain strategies to reduce risks related to agency costs (Eisenhardt 1989). Björkman et al. (2004), for example, point out that clients often attempt to align interests with providers to reduce the potential for opportunism, e.g. by creating incentives for longer-term relationships. Client-specific investments, as discussed above, are, in fact, one important means to create such incentives since they help generate client-specific resources and capabilities which cannot be easily applied to other clients. However, not every transaction or service delivery may require or benefit from client-specific investments. In those situations, in particular, clients rely on certain monitoring and control mechanisms to manage the perceived problem of conflicting interests and the limited measurability of performance. Next, we discuss contracting and client involvement as two major control mechanisms.

From a client perspective, contracting can be an important element of safeguarding vendor relationships. Transaction cost and institutional economics suggest that effective market transactions depend, among other things, on proper contracts (Coase 1937; North 1990). Contracting is a means to guarantee the fulfillment of the obligations of each party. Among other things, contracts may force transaction partners to make different service-related aspects measurable. In turn, the effectiveness of contracts may depend on the ability of partners to measure the quality and quantity of services (Jensen and Meckling 1995). Aksin et al. (2008), for example, show that call center contracts can be based on call volume and capacity referring to different ways of quantifying service delivery and performance. Based on the principle of measurability, contracts can be more or less detailed. Basic contracts typically describe the services provided and their quantity, and location of litigation. More elaborate contracts specify number and experience of employees involved, gain sharing, cap on wage increases, client specific investments, and training of employees etc. Setting up such detailed contracts can be an important capability (Argyres and Mayer 2007;

Hansen 2007). Following the assumption that including more aspects in contracts may safeguard operations and make deviance from expectations less likely we hypothesize the following:

Hypothesis 2: The number of items covered in the offshore outsourcing contract is positively related to the likelihood of deal renewal.

In addition to detailed contracts, clients may engage in monitoring service providers to secure service delivery and to reduce typical risks, such as deteriorating service quality (Lewin and Couto 2007). Within MNCs, monitoring can range from direct supervision by expatriates (Eisenhardt 1985) to indirect monitoring, e.g. through bureaucratic rules (O'Donnell 2000). In third-party offshoring, however, monitoring through expatriates and reporting is more difficult to implement than in captive models. Service providers are often not willing to let clients have much influence on operational issues of the service delivery. But even within firms, O'Donnell (2000) finds that possibilities for direct monitoring decrease as subsidiary autonomy increases. Therefore, conventional monitoring practices are expected to play a subordinate role in offshore outsourcing. Instead, we suggest that client involvement and frequent interaction, e.g. through boundary spanners, can be an effective 'control strategy'. For example, involvement of clients in service operations may promote the sharing of tacit knowledge in a 'controlled way' which allows providers to build up client-specific expertise, but also gives the client the opportunity to 'oversee' this process to some extent.

However, active involvement seems to be effective only if the client has sufficient knowledge about the outsourced process (Martinsons 1993). This was an important issue in the context of IT outsourcing in the 1990s. At that time, companies often lacked in-house knowledge about particular IT operations, so that they depended on external expertise. We

assume however that if the client interacts frequently with the provider and gets involved in service operations this also generates knowledge to evaluate performance. If performance can be evaluated by the client, control can be better exerted and clients are less likely to feel the need to terminate contracts. In a similar fashion, Takeishi (2001) found that client involvement is important as a moderator of outsourcing success. In their point of view, client involvement embraces problem-solving processes with the client, frequent face-to-face communication, as well as a sufficient level of knowledge transfer. The benefits of client participation in outsourcing operations are also observed by Malek (2000) who shows that the involvement of senior management has a positive effect on R&D outsourcing in the pharmaceutical industry. We therefore predict that client involvement may increase the likelihood of deals being renewed. We hypothesize:

Hypothesis 3: The involvement of the client in service operations increases the likelihood of deal renewal.

Knowledge intensity of services

Above, we have primarily discussed organizational practices affecting deal renewal and the longevity of outsourcing relationships. We acknowledge, however, that in addition to client-specific investments, contracting, and client involvement, some properties of the service itself may influence the likelihood of deal renewal. Previous research suggests that in particular the knowledge intensity of tasks may influence outsourcing decisions. Knowledge intensity refers to the degree to which the delivery of tasks requires specialized skills and tacit knowledge – related to particular products and/or the client. Typically, scholars categorize software and product development, including product design, engineering and R&D, as well as knowledge and analytical services as highly knowledge intensive (e.g. Mudambi 2008;

Lewin et al. 2009a; Kenney et al. 2009), whereas administrative services, including call center operations, finance and accounting, and HR, are considered to be more commoditized and less knowledge intensive (see also above).

Because higher-skilled knowledge services are often client-specific and partially tacit by nature, many scholars have suggested that they are less likely to be outsourced in the first place (e.g. Mudambi 2008). However, recent ORN data suggests that for example knowledge process outsourcing (KPO) is a rapidly growing practice and that the number of KPO service providers has been increasing exponentially (Couto et al. 2008). In turn, more and more clients make use of external providers when sourcing knowledge services from abroad (see above). However, because of the high level of tacit knowledge involved in delivering these services, specifying tasks, qualifying the provider to perform these tasks, and managing exchanges between client and provider can be highly problematic (e.g. Brusoni 2005; Mudambi and Tallman 2010). In other words, the delivery of knowledge-intensive services may require both client- and product specific investments, involving the commitment of client resources to training. Also, performing knowledge-intensive services efficiently may take time and depend on learning curve effects. From a transaction cost economics (TCE) view, this suggests that both the client and the provider will engage in knowledge-intensive service agreements only if there are prospects of developing what Mudambi and Tallman (2010) call an "institutional alliance" involving complex governance structures and allowing for deal renewal to generate returns on investment. We can therefore hypothesize:

Hypothesis 4: Knowledge intensity of services is positively related to deal renewal.

However, whereas from a TCE perspective deal renewal will be more likely, an operational process perspective suggests otherwise. Many knowledge-intensive services, in particular

analytic services, software and product development, are performed on a temporary and sometimes one-off project basis (Hobday 2000). Unlike more routine-like business relationships, project-based relationships are likely to be discontinuous (Hadjikhani 1996). Even if they provide future opportunities for collaboration, projects are typically followed by latent time periods (Starkey et al. 2000; Manning and Sydow Forthcoming). Therefore, although business partners in project-based relationships might have an interest in sustaining these relationships in order to exploit accumulated joint equity based learning and expertise, collaborative projects rarely follow each other on a regular basis. Sometimes, even successful project collaborations are never followed up on – maybe because the client initiates very different projects over time requiring different expertise and qualifications only available from specialized providers. In addition, the interest of clients to protect intellectual property related to knowledge-intensive tasks may prevent more extensive knowledge transfer and hence make renewal less likely. Following these operational process arguments, we can formulate a competing hypothesis:

Hypothesis 5: Knowledge intensity of services is negatively related to deal renewal.

Data and Methodology

We use data from the ORN service provider survey to test our hypotheses. The service provider survey annually collects a range of firm- and service-specific data through an online data entry system from service providers in the U.S., Western and Eastern Europe, India, China, Latin America and other regions. Data on the firm level include e.g. range of services provided, headquarter location, number of employees, types of clients served, risks perceived, and future plans. On the service level, the survey informs about features of services provided (e.g. degree of commoditization, complexity, degree of client-specific investment, client

involvement etc.), locations from which services are provided, and performance of service delivery (e.g. savings achieved, time to reach targeted service levels). Services include IT services, finance and accounting, HR, legal services, call centers, procurement, marketing and sales, knowledge and analytical services, and product development. Measures include numerical values (e.g. years of experience), percentages (e.g. savings), and 5-point Likert scales, in particular for more qualitative variables (e.g. perceived task features). Particularly interesting for our study are service-level data on deal renewal rates, client-specific investments needed, client involvement in operations, and task features. Importantly, most service providers in the survey offer a variety of services, but give specific responses about every particular service they offer. Unlike many surveys which collect data merely at the firm level, this survey allows us to use more fine-grained service-level information. Table 1 lists the variables used for our analysis along with respective survey questions.

INSERT TABLE 1 HERE

In total, 514 service providers have taken part in the survey since it was first launched in 2007. Survey respondents are recruited through a number of channels, e.g. the International Association of Outsourcing Professionals (IAOP), LinkedIn.com, XING.com, and business promotion agencies in different countries. Survey respondents include all major international service providers, e.g. Wipro, Infosys, Accenture, as well as many small and mid-size, more or less specialized providers from across the world. Overall, 25% of providers are large (> 10,000 employees), 32% are midsize (500-10,000 employees), and 43% are small (<500 employees). Since the survey is taken online, some respondents reach the survey website through external links or email invitations, whereas others randomly open the website and register for the survey. Once registered and approved by the ORN survey team, respondents

are added to the database. Typically, however, not every respondent completes the survey right away. At regular intervals, registered users are reminded to complete the survey. For data analysis, all those survey responses are used that cover a sufficient number of questions. For this study, the questions listed in Table 1 were particularly important.

For the analysis we use a two-sided truncated Tobit model. Tobit models are used to describe the relationship between a non-negative dependent variable and an independent variable (Greene 2003). Since our dependent variable – deal renewal (see below) – is a percentage number that cannot be negative and that cannot be more than 100 percent, we use the two-sided truncated Tobit model with a lower limit of 0 and an upper limit of 100. Similar to the Probit model, the Tobit model uses a latent variable y^* assuming a constant relationship between the dependent and the independent variable. The latent variable is linearly depending on a vector β which is determining the relationship between the independent and the latent variable. For the regression, we were able to utilize 508 service-specific observations, including 16% Administrative Services, 10% Call Centers, 21% IT, 18% Product Development, 15% Software Development, 5% Analytical Services, 15% Other Services, with complete data for all dependent and independent variables, based on responses from 176 firms (13% large, 30% midsize, 57% small). Each firm provided detailed information on the delivery of different types of services (e.g. IT, Call Centers and Product Development). Large firms account for 19% of service data points, midsize firms for 31%, small firms for 50%. We used Stata as a statistical software to run the regressions. Next, we discuss the operationalization of variables (see Table 2).

INSERT TABLE 2 HERE

Dependent Variable: Deal Renewal

To identify drivers affecting the stability of offshore outsourcing relationships we use the rate of deal renewal as a dependent variable (see Tables 1, 2). Deal renewal captures the percentage of deals that are renewed rather than terminated at expiration. Deal renewal is service-specific. In other words, for each class of services provided, providers are asked to give the percentage of deals renewed at expiration (see Table 1). We also looked at alternative measures for relationship stability. For example, a number of studies focus on the longevity of the overall business relationship rather than particular types of transactions or service operations (e.g. Levinthal and Fichman 1988; Larson 1992; Gulati 1995). However, one key problem with using longevity of client relationships as a dependent variable is that longevity will correlate with the age of the provider as well as size. As for the former, young providers are only starting to build up longer-term client relationships, whereas more established providers can build on a history of transactions with the same client. As for the latter, larger providers typically provide multiple services to the same client which makes it more difficult to investigate reasons for longevity or termination of relationships. Therefore, we decided to focus on explaining the renewal of particular deals, thereby controlling for both experience and size of the provider in the regression.

Client-specific Investments

We identified client-specific investments as the main independent variable measuring the degree to which specificity is generated in a client-provider relationship (H1, Figure 5). The ORN service provider survey contains data about the perceived importance of making client-specific investments in infrastructure, software, and training at the service level, based on a 5-point Likert Scale (see description on Table 1). Data indicates that there is a high correlation

between these variables, which allows to cluster them into a single variable. The variable included in the model is the sum of the measured importance of client-specific investments in the three categories. Unfortunately, we were not able to include data about the dollar value of client-specific investments made. Instead, we rely on a qualitative measure, from the perspective of service providers.

Contract Specification

To test the impact of client control on deal renewal, we identified contract specification as one of the independent variables (H2, Figure 5). Contract specification can be measured in different ways. Poppo and Zenger (2002) for example measure it using a Likert scale. In contrast, we identified, through expert interviews, the most important specifications that may appear in a contract. Specifications may range from quality attributes, quantification of services and costs, wage development and FTE specifications to gain sharing and arbitration location. We identified 12 attributes to be included in the survey. Respondents are asked to check whether or not a particular item is included in client contracts. We then measured the degree of contract specification as the number of items checked by a particular service provider. In order to make sure that the number of attributes regulated in the contract reflects the overall level of specification of contracts, attributes were selected in a mutually exclusive, collectively exhaustive manner. Unlike the other independent variables, data for contract specification is collected at the firm rather than the service level. Unfortunately, we were unable to use a service-specific measure for contract specification.

Client Involvement

Beside contract specification, we identified client involvement in provider operations as a way to measure the degree of client control in outsourcing relationships (H3, Figure 5). The survey measures client involvement as the degree to which clients are involved in performing a particular task. In addition, the survey captures the degree of interdependency with processes in client organizations, as well as the frequency of interaction with clients. Due to the high correlation of these three Likert-scale variables, they were summed up and jointly considered in the model. The corresponding question was "for each service that your company provides, how would you rate the following characteristic to describe the work involved: (1) involvement of the client in performing the task; (2) interdependence with the client organization; (3) frequency of interaction with client".

Knowledge Intensity of Services

In addition to relation specificity and client control, we formulated two competing predictions involving the effect of knowledge intensity of services on the likelihood of deal renewal. For our analysis, we use a dummy differentiating services into highly knowledge-intensive services – software development, product design, engineering, R&D, and analytical services – and less knowledge-intensive services – e.g. finance & accounting, IT infrastructure, call centers, HR, marketing & sales. Since we lack information about the level of knowledge intensity of each particular service, we use this dummy as a proxy, thereby following a distinction made in several other studies (e.g. Lewin et al. 2009a; Manning et al. 2010; Kenney et al. 2009). However, we recognize that as a result of the fine-slicing and gradual disaggregation of value-adding processes in many firms today such distinctions may not

capture the changing level of knowledge intensity of tasks (Contractor et al. 2010). We discuss this as a limitation of our study later on.

Control Variables: Size, Experience, and Location

We also include a number of control variables, in particular size, experience, and headquarter location of the provider. As discussed earlier, we have reason to believe that the size of the provider – measured here as the log of number of employees – may affect the rate of deal renewal. Similarly, experience – measured here as the number of years providing a particular service – is controlled for in the regression. Importantly, our emphasis is on service-specific experience rather than overall years in business. Previous research suggests that many service providers only recently started to provide particular services (see e.g. Couto et al. 2008; see also Figure 2). Independent of their total number of years in existence as a company, this makes them more or less experienced with delivering particular services. Finally, we control for the headquarter location of the provider. Prior research suggests that the location of service delivery may affect the perception of client risks, e.g. loss of intellectual property (e.g. Doh et al. 2009). In the regression, we use regional dummies to measure location effects. We included US, India, China, Other Asia, Eastern Europe and Latin America. Western Europe served as a reference category, since providers from this region are closest to the average in terms of rate of deal renewal. Because of missing data, no providers from other regions, e.g. Africa, were included.

Results

Table 3 depicts the results of the regression models. Six models are presented with rate of deal renewal as the dependent variable: Model 1 includes only the control variables (provider

size, experience, and location dummies). Models 2-5 include controls plus one of the independent variables (client-specific investments, contract specification, client involvement, knowledge-intensive services). Model 6 contains all control and independent variables. Table 4 lists all variables and their pair-wise correlations, as well as average value, standard deviations, minimum and maximum. Significance levels for regressions and correlations are explained below the tables.

Regressions support H1, H3 and H5, whereas H2 and H4 are rejected. First, our findings confirm that client-specific investments in software, infrastructure and training have a highly significant positive effect on rate of deal renewal (H1). In both Models 2 and 6, client-specific investments show a positive coefficient at the highest significance level. We have argued that client-specific investments promote the development of relation specificity between client and provider. Based on the results we can conclude that relation specificity is an important factor promoting durable client-vendor relationships. Second, our models confirm that client involvement in provider operations in combination with high frequency of client interaction and high degree of interdependence with the client organization are positively related to rate of deal renewal (H3). In both Models 4 and 6, our client involvement measure shows a positive coefficient, yet at a lower level of significance ($p<0.1$) than client-specific investments ($p<0.01$). Since client involvement promotes the client's ability to monitor and control the process of service delivery, we conclude that this form of control can promote stability of the relationship. Finally, our analysis shows that knowledge intensity of services – measured by a dummy combining software and product development, and knowledge/analytical services – has a highly significant negative effect on rate of deal renewal (H5). This is most likely due to the temporary project nature of many contracts related to knowledge-intensive services. In other words, the project character of knowledge-intensive work makes immediate renewal of such outsourcing relationships less likely.

This, in turn, means that H4 which hypothesized that knowledge intensity of services should have a positive effect on deal renewal is rejected. We made this proposition as a counter hypothesis to H5 based on the argument that highly knowledge-intensive services may require particular client- and product-specific skill sets that can only be developed and utilized over time. Our findings indicate however that despite this potential requirement (and mutual investment) clients are less likely to renew such contracts on a regular basis. However, because of data limitations we do not know whether or not particular joint knowledge intensive projects are renewed at a later time, thereby bridging latent time periods. We discuss this possibility as a limitation of this study and a potential future area of research. In addition to H4, H2 is also rejected. We hypothesized that a high(er) degree of contract specification will increase the rate of deal renewal. However, our results suggest otherwise. In fact, Model 2 even shows that degree of contract specification is *negatively* related to deal renewal, not taking into account other explanatory variables. In the overall Model 6, this variable still shows a negative coefficient, yet becomes insignificant. Yet, this counter-intuitive finding asks for a more detailed explanation. For example, it may suggest that clients (and providers) may opt for more market-type transactions by specifying contracts *or* for more open, less regulated, potentially longer-term relationships with mutual learning potential, supported by informal monitoring. Alternatively, this result may suggest that providers who are less restricted by contracts see this as an opportunity for hold-up and for building client dependency, facilitated by asymmetric information. We discuss these different interpretations in more detail later.

In addition, our analysis shows some interesting effects of our control variables provider size, experience, and location. As for *size*, all models show a highly significant positive effect of log(number of employees) on rate of deal renewal with clients. This means that large providers are more likely than smaller providers to be able to sustain relationships

with clients at the service level. As we suggested earlier, large providers are more likely to have multiple service contracts with clients which may promote deal renewal for each particular service. Also, contract size may be larger making it costlier to switch. Although we cannot test this in the context of this study, large providers may be also more motivated to protect their market reputation by making sure that contracts get renewed, while being able to support deal renewal through client-specific investments and the building of relation specificity *across* and *beyond* particular services. As for *experience*, we do not find a significant effect in our model: number of years of providing a particular service does not explain any variation of deal renewal. This finding is somewhat surprising as it suggests that providers do not 'learn' over time how to better promote deal renewal with clients. Further research is needed to better understand why this might be the case. As for *location*, we get different effects which may stimulate future research. According to our models, being a provider from India or Latin America positively affects rate of deal renewal, whereas being a provider from China has a significant negative effect. As for India, the positive effect might relate to the overall capabilities and maturity level of Indian providers in attracting clients and developing longer-term relationships, as well as to size of contracts (e.g. according to TPI data executed value of contracts in India is far higher than in China). In addition, clients might perceive that China represents a fairly risky environment for developing longer-term service relationships.

Discussion

Offshore outsourcing of business services has become an established business practice in recent years, driven by the opportunity to fine-slice and disaggregate value-adding processes (Contractor et al. 2010), and to save costs and utilize specialized talent and expertise around the globe (Lewin et al. 2009b; Doh 2005; Bunyaratavej et al. Forthcoming). Over time, most

business services have become highly commoditized resulting in a growing and increasingly competitive service provider market (Couto et al. 2008). At the same time, client companies have become more experienced with offshoring in general and offshore outsourcing in particular, while they continue to be concerned with service quality and other performance issues. Interestingly, however, despite potentially decreasing switching costs, our findings suggest that the rate of deals being renewed at expiration is quite high, and that client relationships tend to endure over time. How can this phenomenon be explained? And what are the implications for understanding offshore outsourcing and outsourcing governance?

We focused on two interrelated factors potentially affecting the rate of deal renewal: relation specificity and client control. Based on data from the Offshoring Research Network (ORN), we measured the former by regressing deal renewal on the extent to which providers make client-specific investments in training, software and infrastructure; we measured the latter by regressing deal renewal on the level of contract specification and client involvement as independent variables. In addition, we hypothesized that knowledge intensity of services will have a significant effect on the rate of deal renewal. We find that client-specific investments and client involvement have a significant positive effect on deal renewal, whereas degree of contract specification and knowledge intensity of services have a negative effect. Findings suggest that if providers make investments into client-specific assets, while also allowing the client to get involved in operations, this may promote longer-term client relationships. This implies that *both* relation specificity *and* client control – in terms of the ability of clients to monitor processes and safeguard knowledge sharing – are important ingredients of stability in offshore outsourcing relationships. Interestingly, however, deal renewal is negatively affected by highly specific contracts. While contract specificity may be an important control mechanism, it does not promote longevity – on the contrary, it makes deal termination more likely. Finally, our analysis suggests that deal renewal is less likely if

services are highly knowledge-intensive, that is if they are related to software or product development, or knowledge/analytical services.

These findings have important implications for our understanding of offshore outsourcing relationships in general (e.g. Holcomb and Hitt 2007; Quinn 1999; Henley 2006), and governance of these relationships in particular (e.g. Aron and Singh 2005; Dibbern et al. 2008; Stringfellow et al. 2008). In general, our findings suggest that despite increasing commoditization of services, outsourcing deals are far from becoming spot market contracts. In fact, the rather high renewal rate and the role of relation specificity in sustaining client-provider relationships suggest that clients and providers conceive of their relationships as strategically important, value-adding and potentially longer-term (see in general Holcomb and Hitt 2007). However, relation specificity does not seem to result from the value-adding nature of services themselves. For example, we have shown that deals involving highly knowledge-intensive services are *less* likely to be renewed. Rather, specificity seems to stem from search costs involved with finding new partners and specific investments needed to customize service delivery. In other words, whereas services themselves might become more commoditized, the delivery of these services can be rather customized in terms of interactions with clients; staff training; and software and infrastructure used to provide and orchestrate them with client systems. The strong positive effect of size of provider on rate of deal renewal further suggests that large providers might be benefitting from scale and scope of services they provide by generating synergies from making client-specific investments across types of services. Further research is needed to better understand these parallel trends – the effect of growing commoditization of services, and the semi-customization and resulting specificity of service delivery and client relationships.

Moreover, whereas our study confirms the role of relation specificity in accounting for longer-term outsourcing relationships (see also Dyer and Singh 1998), our study also

points to the importance of safeguarding mechanisms as an important but often neglected variable that supports the exchange of specific knowledge while controlling for managerial risks inherently associated with engaging external partners in service delivery. Earlier in this paper, we mentioned the increasing awareness of scholars and practitioners of 'hidden costs' of offshoring in general and offshore outsourcing in particular (Dibbern et al. 2008; Stringfellow et al. 2008). Among other factors, clients often struggle with the potential loss of service quality, the loss of process knowledge, protection of intellectual property, and employee turnover and related additional training costs and other challenges (e.g. Lewin and Couto 2007; Heijmen et al. 2009). Our study indicates that providers may promote clients' trust in the ability of providers to continuously deliver services reliably and efficiently by having clients participate in the processes of executing tasks and by engaging them in frequent interaction. This further highlights how the co-evolution of relation specificity and client control emerge from the underlying complementarity of client-specific investments needed by both clients and providers for realizing value from working together more closely, which, in turn, promotes specificity and makes switching to other partners less likely. More longitudinal studies of outsourcing relationships are needed to better understand the interrelation between growing relation specificity and safeguarding mechanisms.

Interestingly, however, other control mechanisms do not seem to have the same effect. Whereas client involvement in operations promotes deal renewal, high contract specification has the opposite effect. This surprising finding invites future research exploring in greater depth the role of contracts in client-provider relationships. Earlier we suggested that clients are potentially challenged by the lack of metrics for measuring service performance (Jensen and Meckling 1995), and, hence, the difficulty of setting up effective contracts (Argyes and Mayer 2007). Our findings might therefore indicate that in order to ensure satisfactory service delivery and to promote longer-term relationships, clients may prefer to get involved in

monitoring the process and in interacting with providers on a day-to-day basis instead of setting up detailed contracts which create unnecessary burdens for both the service providers and the clients. Another explanation of this effect could be that providers take advantage of underspecified contracts by meeting, for example, cost savings expectations while relaxing other criteria, such as skill level of employees, when they are not explicitly regulated in the contract. At the same time, underspecified contracts may give providers greater flexibility in managing contracts to exceed client expectations (Hansen 2007) and to help them benefit from deal renewal. Further research is needed to better understand mechanisms behind this interesting phenomenon.

Finally, our study suggests that durability of offshore outsourcing relationships is also affected by type of service delivered, size and location of the service provider. The delivery of knowledge-intensive services, including software and product development, is often organized in different ways than large-scale, more standardized administrative services. The project-based nature of much knowledge-intensive work suggests that service relationships involving this type of service are potentially temporary or bridge time periods of latency between projects (see e.g. Hadjikhani 1996; Manning and Sydow Forthcoming). Also, conversations with practitioners suggest that, in order to protect intellectual property, many clients refrain from sharing critical knowledge and instead prefer to outsource particular work packages on an adhoc basis. This seems in particular relevant for small providers who specialize in providing software and product development services. Future research needs to better address governance issues in this segment of the outsourcing space. In addition, more than has been done in this study, ongoing shifts and changes in the fine-slicing and gradual disaggregation of knowledge-intensive services need to be better understood. Not only do fine-slicing processes alter perceptions of 'core' vs. 'non-core' activities, but they also affect the 'location' of knowledge intensity within and across processes (Contractor et al. 2010). In

other words, how does the ongoing commoditization of services affect their degree of knowledge intensity, and how does that, in turn, affect the governance of outsourcing relationships? Future research needs to better address these questions.

Also, more insight is needed to understand how size and location matters in sustaining offshore outsourcing relationships. Findings indicate that large providers show significantly higher renewal rates. Their intimate knowledge of especially larger clients, and their ability to create synergy effects and relation specificity by engaging in multiple service relationships with these clients may promote deal renewal and longevity of relationships. At the same time, practitioners often point to the importance of reputation in particular for large providers who do everything in their power to satisfy clients and to ensure deal renewal. Finally, and maybe related to this, our findings indicate that providers from the very competitive Indian market show very high renewal rates, reflecting their client expertise and concern about reputation, whereas for example providers from China seem less able to renew deals, maybe because of lack of intellectual property protection and other legal uncertainties. Quite interestingly, providers from Latin America report fairly high deal renewal rates which may reflect their ability to customize services as has been shown in other studies (e.g. Manning et al. 2010). All these location-specific findings add to the debate on location factors in offshore outsourcing decisions, in particular the role of institutional contexts (e.g. Doh et al. 2009) and provider capabilities (e.g. Ethiraj et al. 2005) which may facilitate or constrain contracting, knowledge sharing, talent sourcing etc.

Finally, this study has some empirical limitations which need to be addressed in future research. In particular, all data used in the regression has been collected from providers rather than clients. Because of reputation issues mentioned earlier, providers may for example show a tendency of exaggerating deal renewal rates. At the same time, we lack data on client satisfaction with outsourcing particular services. We do however know from the ORN client

survey that clients continue to perceive service quality, loss of managerial control and loss of process knowledge as key challenges in offshoring decisions. This has motivated us to look at potential mechanisms of client control. Yet, future research needs to better address the client perspective on outsourcing service delivery. Also, the provider sample used is not strictly representative of the total population. Although it does include providers of all sizes and services of different types, it also excludes particular sectors, such as drug clinical trials, for which data has not been made available yet. Also, despite increasing coverage of world regions, the provider database may over-represent providers from India, U.S. and Western Europe, while under-representing the provider space in e.g. Russia, Middle East and Latin America. As the ORN database continues to grow, more fine-grained studies on provider profiles, strategies and relationships with clients will be possible.

In terms of explanatory factors, future studies may also go beyond the two major perspectives discussed in this paper – relation specificity and client control. For example, Levinthal and Fichman (1988) emphasize in their study the importance of personal ties in sustaining auditor-client relationships. Similarly, termination of offshore outsourcing deals might relate to key managers leaving the firm. In addition, a better understanding is needed of potential shifts in strategy on the client side affecting outsourcing relationships. Also, we are only just beginning to understand how offshore outsourcing relationships can be organized in different ways. Ethiraj et al. (2005) for example discuss the emergence of collaborative capabilities in the outsourcing field involving different arrangements of client participation, combinations of onsite and offshore teams, and different ways of using/hiring staff. These arrangements affect the degree of managerial control and may also help or hinder the continuation of contracts. The study presented here should therefore be a starting point of a stream of research examining drivers of stable offshore outsourcing relationships.

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Figure and Tables

Fig. 1: Percent of Captive vs. Outsourced Service Projects Across Time

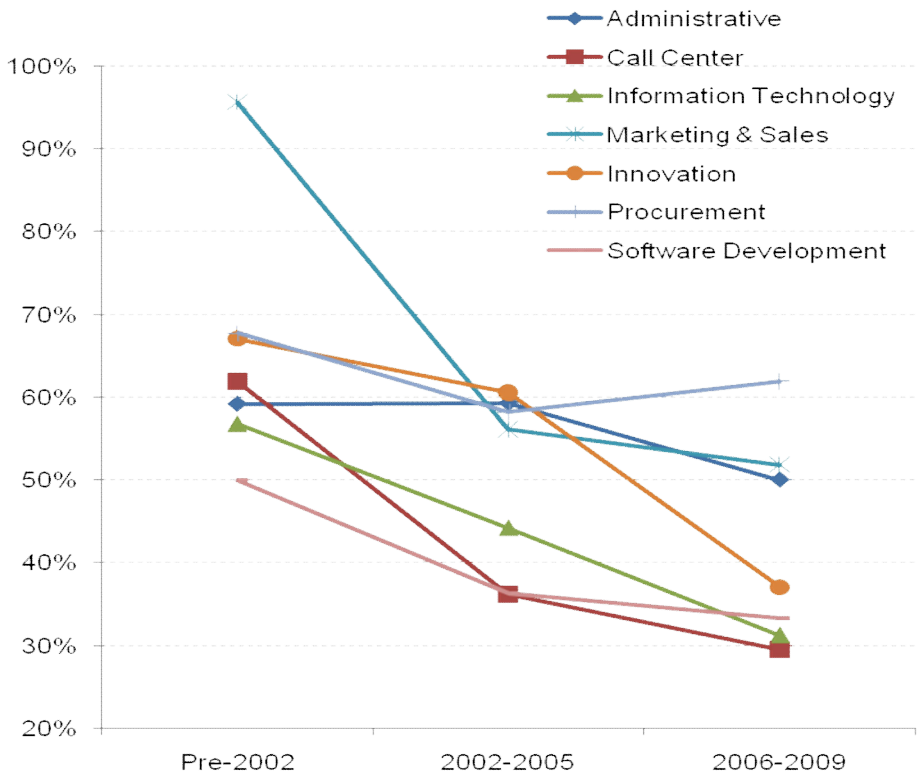

Fig. 2: Cumulative Percent of Providers Offering Particular Services

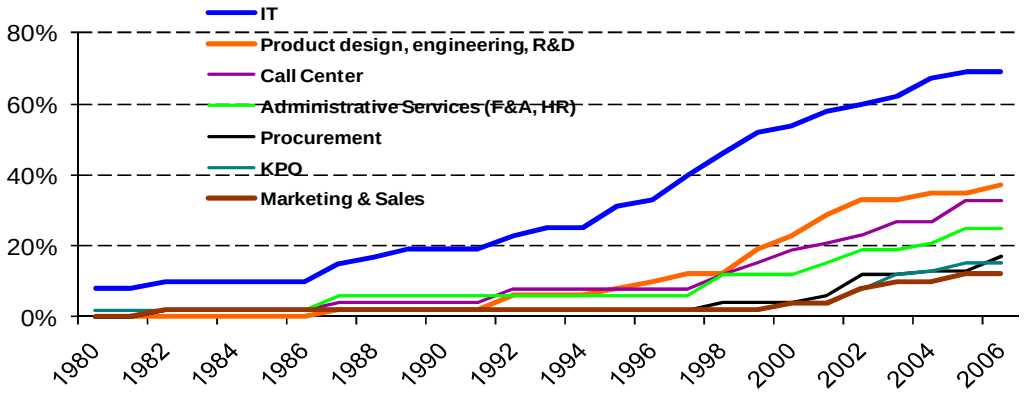

Fig. 3: Degree of Commoditization of Business Services

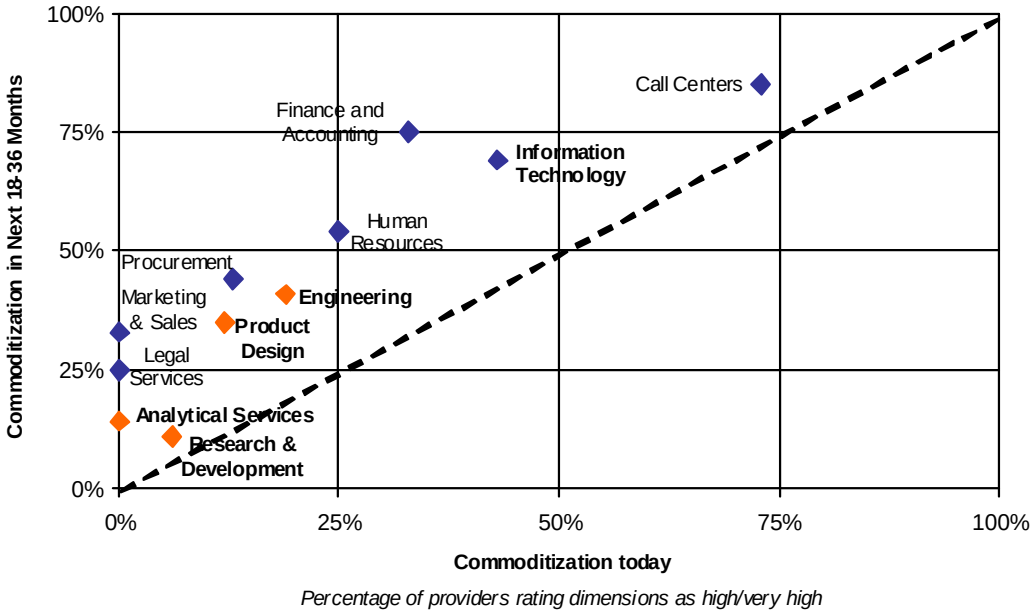

Fig. 4: Perceived Client Risks of Offshoring and Outsourcing

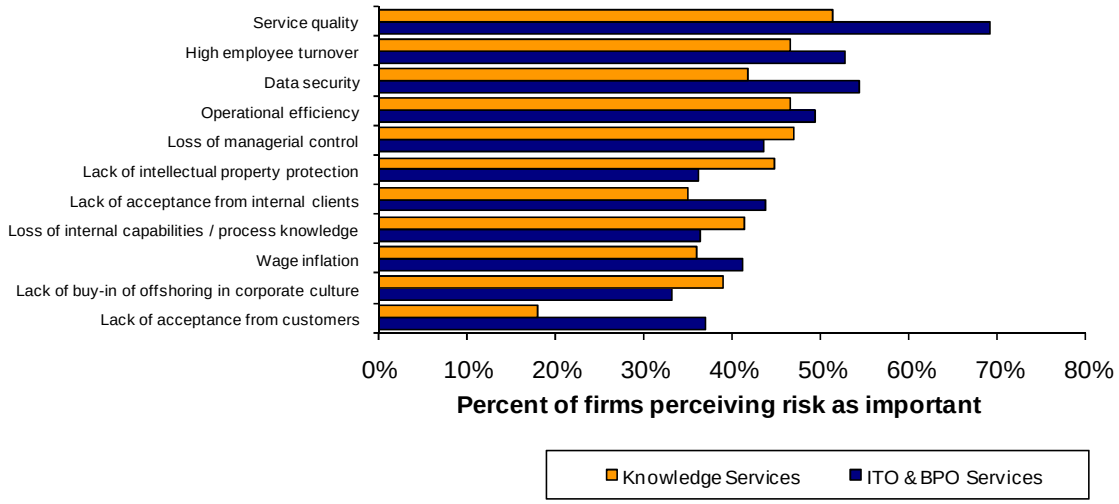

Fig. 5: Hypotheses

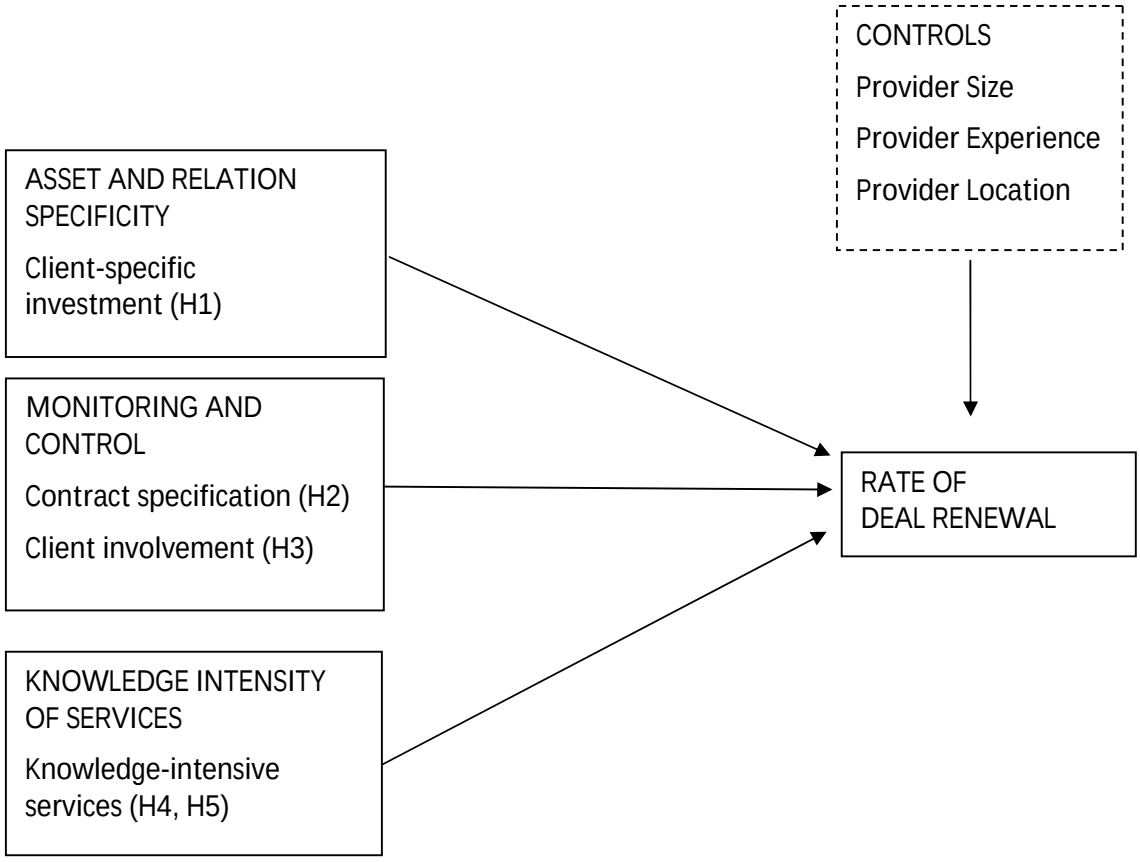

Table 1: Survey Questions

Item	Survey Question
Deal Renewal	"For each class of services that your company provides, looking solely at the first contract with each client, please indicate: […] Percentage of deals that are renewed at expiration of the first contract."
Client-specific Investment	"For each class of services that your company provides, to what extent does your company have to make client-specific investments that cannot be used for other clients?" Investments in software, Investments in infrastructure, Investments in training (Likert : 1 very minor – 5 very extensive)
Contract Specification	"Which of the following details are specified in your company's contracts?" (please check all that apply) (e.g. quality of service, cost savings for client, gain sharing, average wage increases, …)
Client Involvement	"For each class of services that your company provides, how would you rate the following characteristics to describe the work involved? […] Involvement of client in tasks, frequency of client interaction, inter-dependency with client organization." (Likert 1 very low - 5 very high)
Knowledge-intensive Service	"Which of the following classes of services does your company provide?" (Respondents select from list, including IT, BPO, Call Centers, Software Development, Product Development, Analytical Services)

Table 2: Construction of Variables

Variables	Construction
<u>Dependent</u>	
RENEWAL – Deal renewal	Percentage of deals that are renewed at expiration [%]
<u>Independent</u>	
INVEST – Client-specific investment	Importance of investments (in Infrastructure, Software and Training) measured on the 5 point Likert scale (collected at the service level) [Sum of three Likert-scale measures]
CONTSPEC – Contract Specification	Number of issues (from a default list) covered in the contract (data collected at the firm level) [Number of items]
INVOLVE – Client Involvement	Client involvement in task, client interaction, interdependency with client organization [Sum of three Likert-scale measures]
KNOWINT – Knowledge-intensive service	Service provided relates to product development, software development or knowledge/analytical services [Dummy]
<u>Controls</u>	
SIZE – Size of Provider	Number of employees at the provider [log(number)]
EXPERIENCE – Service Experience of Provider	Number of years a company is providing a particular service [Number of years]
LOCATION – HQ Location of Provider	Country or region (aggregate of small sample countries) in which headquarter of service provider is located [Dummy]

Table 3**:** Regression Model

Model: Two-sided truncated Tobit model (Dependent variable: Likelihood of Deal Renewal)						
	1 (Controls)	2 (H1)	3 (H2)	4 (H3)	5 (H4,5)	6 (Total)
H1: Client-specific investment (INVEST)		1.288*** (0.004)				1.446*** (0.002)
H2: Contract Specification (CONTSPEC)			-1.686** (0.015)			-1.089 (0.117)
H3: Client involvement (INVOLVE)				1.072* (0.036)		0.868* (0.097)
H4, H5: Knowledge intensity of services (KNOWINT)					-6.310** (0.019)	-8.375*** (0.002)
Control: Size of Provider (SIZE)	1.770*** (0.001)	1.652*** (0.003)	2.278*** (0.000)	1.807*** (0.001)	1.557*** (0.005)	1.668*** (0.004)
Control: Experience (EXPERIENCE)	-0.175 (0.342)	-0.121 (0.508)	-0.144 (0.433)	-0.069 (0.705)	-0.142 (0.439)	0.031 (0.863)
Control: USA (LOCATION)	2.553 (0.509)	2.547 (0.506)	3.638 (0.355)	1.894 (0.621)	2.991 (0.438)	3.934 (0.309)
Control: India (LOCATION)	9.059* (0.068)	8.958* (0.068)	8.358* (0.095)	9.313* (0.057)	9.748** (0.049)	10.000** (0.040)
Control: China (LOCATION)	-11.157* (0.033)	-11.601** (0.026)	-10.177* (0.053)	-10.510** (0.041)	-10.044* (0.055)	-8.861* (0.086)
Control: Other Asia (LOCATION)	7.965 (0.233)	8.073 (0.220)	7.514 (0.262)	7.835 (0.232)	7.562 (0.256)	7.443 (0.252)
Control: East. Europe (LOCATION)	-5.597 (0.324)	-6.576 (0.241)	-5.648 (0.320)	-5.112 (0.359)	-3.898 (0.493)	-3.872 (0.487)
Control: Lat. Amer. (LOCATION)	10.589* (0.076)	11.032* (0.061)	11.158* (0.062)	9.753* (0.097)	10.280* (0.083)	10.662* (0.067)
Constant	61.731*** (4.370)	50.789*** (5.668)	66.537 (4.846)	48.589*** (7.052)	64.764*** (4.538)	45.946*** (7.848)
N	524	517	521	514	524	508
LR χ^2	38.33***	46.32***	44.21***	42.38***	43.89***	62.23***

Significance levels: *p<0.1 **p<0.05 ***p<0.01

Table 4: Correlation Table

Variable	Average	Std. Dev.	Minimum	Maximum	RENEWAL	INVEST	CONTSPEC	INVOLVE	KNOW
RENEWAL	71.368	25.520	0	100	1.000				
INVEST	8.799	2.824	3	15	0.130***				
					(0.003)	1.000			
CONTSPEC	5.311	2.024	1	12	0.015	0.010			
					(0.733)	(0.830)	1.000		
INVOLVE	11.002	2.474	3	15	0.101*	0.208***	-0.066		
					(0.023)	(0.000)	(0.140)	1.000	
KNOWINT	0.374	0.484	0	1	-0.137***	0.111**	-0.085*	0.115***	
					(0.002)	(0.012)	(0.056)	(0.010)	1.000
SIZE	6.579	2.577	1.099	11.374	0.188***	0.076*	0.387***	-0.009	-0.149*
					(0.000)	(0.089)	(0.000)	(0.845)	(0.00
EXPERIENCE	8.567	7.189	1	60	0.031	-0.038	0.100**	0.014	0.049
					(0.482)	(0.395)	(0.024)	(0.750)	(0.274
USA	0.409	0.492	0	1	0.038	-0.030	0.252***	-0.006	-0.03
					(0.398)	(0.498)	(0.000)	(0.887)	(0.480
INDIA	0.144	0.351	0	1	0.127***	0.035	-0.085*	-0.008	-0.01
					(0.005)	(0.430)	(0.055)	(0.852)	(0.734
CHINA	0.100	0.301	0	1	-0.138***	0.054	0.049	-0.028	0.051
					(0.001)	(0.225)	(0.303)	(0.528)	(0.232
OTHER ASIA	0.049	0.217	0	1	0.041	-0.061	-0.085*	0.031	-0.06
					(0.361)	(0.718)	(0.057)	(0.484)	(0.156
EAST. EUR.	0.073	0.260	0	1	-0.092**	0.041	-0.126***	-0.048	0.159*
					(0.038)	(0.351)	(0.005)	(0.283)	(0.000
LAT. AMER.	0.065	0.247	0	1	0.081*	-0.041	-0.021	0.092**	-0.055
					(0.069)	(0.360)	(0.640)	(0.038)	(0.214

Significance levels: *p<0.1 **p<0.05 ***p<0.01
N = 508 (Variables included in Regression Model 6)