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Internal and External Boundary Spanning in Outsourced IS Development Projects: Opening the Black Box

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ABSTRACT

This study applies the boundary spanning theoretical perspective to a client behavior during outsourced IS development projects. Previous research shows the importance of internal communication in an organization when it adopts an integrated IS. It also points to the importance of managing communication with outsourcing vendor. The proposed research makes a unique contribution to the literature by investigating the connection between these two types of communication. The two main questions of the study are how a boundary spanning culture in an organization affects internal and external boundary spanning during an outsourced project, and if a client's boundary spanning contributes to success of the outsourced project by improving the quality of relationship. Survey based data collection contributes to the methodology of boundary spanning research, which was previously based exclusively on qualitative analysis. Uncovering the implications of client boundary spanning capabilities for outsourcing relationship management will be of significant value for practitioners.

Keywords

Boundary spanning, outsourcing, IS development, internal and external communication in organizations

INTRODUCTION

Researchers and practitioners alike recognize the critical role of collaborative relationships in the success of outsourced information systems development (ISD) projects (Dibbern, Goles, Hirschheim and Jayatilaka, 2004; Heckman and King, 1994; Quinn, 1999; Sharma, Apoorva, Madireddy and Jain, 2008). The boundaries between organizations are perceived as the most significant barriers to collaboration in this kind of project (Levina, 2001). Commonly, the client organization designates an IT manager, or a whole group of IT professionals, to outsourced project management. These people are responsible for constant contact with the vendor, communication of requirements and control over the project's progress. This highly complex job requires a whole set of different talents and skills.

An integrated information system aims to serve the strategic needs of the company; at the same time, it should meet a variety of the everyday needs of different stakeholders. Project managers therefore should understand the business as a whole but also be aware of various needs of prospective users who come from a variety of backgrounds, experiences and professional settings. Only a person who has a powerful position in a company's hierarchy and benefits from executives support is able to accumulate the necessary information from such different user groups. Further, in order to effectively communicate requirements to the vendor, there is a need to establish a "common language" so that the information is interpreted similarly on both client and vendor sides.

Failure to either analyze the requirements or to adequately present them to the vendor compromises project quality, timeline and budget. Even if the system is eventually completed, it may be a bad fit with an organization's real needs. As a result, its adoption may pose a significant challenge, and the benefits of its use may be much lower than expected (Peled, 2001).

This study uses the boundary spanning theoretical perspective to analyze the activities that occur on the boundaries between diverse professional and organizational settings inside the client organization, as well as activities that occur on the organizational boundary between the client organization and the outsourcing vendor. Prior research acknowledges the unique role of integrated information systems and IT professionals in boundary spanning within an organization (Pawlowski and Robey, 2004), the importance of boundary spanning in outsourced projects (Levina and Vaast, 2005) and its effect on the quality of communication between client and vendor (Marchington, Vincent and Cooke, 2004). However, the distinct roles of different types of boundaries within the same organization and within the same project have not yet been investigated. *This*

study addresses this gap by looking at the relationship between the ways an organization manages the boundaries between its subunits and the ways it builds its outsourcing relationships.

There are several contributions this work can make to outsourcing scholarship and practice. First, it uncovers the implications of client boundary spanning capabilities in the outsourcing industry, estimated at about $35 billion in 2007 in cross-functional application development alone (Gopal and Gosain, 2008). Second, it provides additional empirical support for boundary spanning theoretical arguments. Third, practitioners who are considering or managing an ISD outsourcing project, benefit from understanding the role of boundary spanning in outsourcing relationship management.

This paper is structured as follows. First, I review the relevant outsourcing literature and the relevant research on boundary spanning. Then my research model is introduced and explained in detail. Discussion of the data collection method and the expected contribution conclude the paper.

BACKGROUND

The challenges of developing and introducing an integrated information system to an organization

Development, adoption and use of complex information systems give rise to a variety of problems and issues. Many organizations use a variety of applications; each supports a specific function but cannot be used for anything else. One organization had 58 systems to support order fulfillment alone (Strong and Volkoff, 2004). Not surprisingly, building a system which supports different functions and enables data flow across an organization may easily become a "Herculean task" (ibid.).

The end users of an integrated information system represent different organizational subunits and belong to different *communities of practice* - groups of people engaged in a joint enterprise and characterized by a shared repertoire of concepts, stories and tools (Wenger, 1998 cited by Levina, 2001). This shared context contributes to group identity and efficiency, at the same time creating a barrier between the group and the rest of the world. Carlile (2002) argues that this is a result of specialization, and these boundaries are not only natural but also vital.

Successful adoption of an IS requires an alignment between organizational processes and software functionality (Ciborra, 2000). Requirements definition is a critical part of system development (Sawyer, 2008), and it is important to involve various groups of future users in this process (Bødker, Ehn, Knudsen, Kyng and Madsen, 1988), along with technical experts and individuals with a strategic understanding of the business. Individuals with organizational knowledge and IT professionals also come from different communities of practice. They have different views on problems and on the ways to solve them (Volkoff, Strong and Elmes, 2002). To complicate the situation even more, IT services are commonly outsourced to an external vendor. This practice introduces additional boundaries between key participants of system development. Not surprisingly, the ability to coordinate diverse expertise was found to be a more important predictor of ISD project effectiveness than traditional factors such as administrative coordination or development methodologies (Faraj and Sproull, 2000).

The challenges of managing an IT outsourcing relationship

IT outsourcing research has existed almost as long as the practice itself. Over thirty years, rich empirical evidence has been accumulated. The dominant research paradigm has evolved from a mostly economic view to an assortment of theoretical lenses borrowed from various fields, with a strong emphasis on organizational learning, managing relationships and overcoming cultural differences (Hatonen and Eriksson, 2009).

The quality of the client-vendor relationship was found to directly affect the project's effectiveness (Kim, 2005) and overall success (Lee and Kim, 1999). Though earlier works proposed that well written contracts and tight control are keys to success, they proved to be insufficient for ensuring the desired outcomes. No contract can capture all possible situations. In particular, the requirements change over time and need to be re-negotiated (Gopal and Gosain, 2008). Overly tight control inhibits a vendor's innovativeness, resulting in "quick and tangible" solutions instead (Levina and Ross, 2003). On the other hand, vendor-client teamwork, balanced control and process agility in the relationship lead to better outcomes (Goles, 2001).

Client organizations recognize the importance of effective communication with a vendor. However, they often expect the vendor to do all the work (Goles, 2001; Leimeister and Krcmar, 2008). Nearly 70% of Dun and Bradstreet Barometer of Outsourcing respondents reported that their relationships with vendors failed because the vendor "did not understand what was required" (Felton, 2006).

Unfortunately, in many cases, the client organization itself does not understand what is required. Some managers hope that the vendor will take full care of the "troublesome" IT function (Lyytinen and Robey, 1999), and, as a result, completely lose control over it. Outsourcing research persistently emphasizes that a successful outsourced project is only possible with constant involvement of client management (Chen and Perry, 2003; Lacity and Willcocks, 1998; Quinn and Hilmer, 1994) and strong technical capabilities, either retained or developed anew (Lee, 2001; Lin, Pervan and McDermid, 2007; Mayer and Salomon, 2006; Willcocks and Kern, 1998).

Relatively few outsourcing studies focus on the internal processes in the client company. However, just like in any ISD project, understanding organization's business and its IS needs helps to develop requirements for better system fit and to set clear goals and reasonable expectations (Felton, 2006). Pinnington and Woolcock (1997) argue that internal processes are important for supporting the relationships, developing metrics, and setting expectations that the client and the vendor can agree on in advance. Communicating project goals and expectations to the larger end-user community improves understanding of processes and eliminates end user problems before they arise (Klepper, 1995).

Internal communication in an organization and in an outsourced ISD project

Communication inside organizations and cooperation across organizational borders are both popular and well developed subjects in managerial research literature. However, a review conducted by Hillebrand and Biemans (2003) reveals that these two types of communication are usually treated as completely different streams of research, and even works that address both often fail to build a connection between them. Only a few studies "provide some clues" (ibid.) about the nature of the relationship between internal and external communication in organizations. Some of these studies verify the existence of the relationship, while others are concerned with the "how" and the "why" questions (ibid.). A good representative of the first group is the work by Langerak et al (1997), in which the authors show that firms with well-developed internal and external cooperation perform better than firms with good internal cooperation but an underdeveloped external one. Effective external cooperation therefore requires effective internal cooperation (Hillebrand and Biemans, 2003). The "how" branch of research on internal and external cooperation is concerned with communication patterns, or, in other words, how the external communication is informed by the internal one. These works emphasize the importance of people who transfer information across internal boundaries between organizational groups or across the boundaries between organizations, and analyze different roles these people can play as boundary spanners (ibid.).

Existing research on boundary spanning (BS) does not compare or juxtapose internal and external collaboration patterns in organizations. Strictly speaking, it should not be included in Hillebrand and Biemans (2003) review of studies on the "relationship between internal and external cooperation." The possible reason for inclusion is that the boundary spanning paradigm does not distinguish between internal and external boundaries and allows applying the same concept to boundaries between organizational subunits (Carlile, 2002; Schwab, Ungson and Brown, 1985), between organizations (Ancona and Caldwell, 1988; Levina, 2005), or between subunits of different organizations (Levina and Vaast, 2005). Sometimes internal and external ("organizational") boundaries are even mentioned interchangeably within one concept definition (Pawlowski and Robey, 2004, p. 648).

This flexibility makes the boundary spanning paradigm a natural selection for research concerned with the influence of internal communication patterns on an organization's ability to communicate across its external boundaries. In the next section I review some of the previous theoretical developments and empirical findings of the boundary spanning paradigm.

Boundary spanning paradigm

The boundary spanning approach to information exchange is based on the open view of organizations and focuses on activities occurring on organizational boundaries ("boundary spanning"). The various conceptualizations of these activities range from "how group members interact with others outside the group" (Ancona and Caldwell, 1988, p.470) to the creation of new joint fields of practice on the boundary between two groups (Levina and Vaast, 2005). Boundaries between organizational subunits are viewed as natural and even vital for maintaining specialization (Carlile, 2002). However, spanning these boundaries is essential for information diffusion within an organization (Schwab et al, 1985), and should be viewed as a key organizational competence (Carlile, 2002; Grant, 1996).

Different situations, and also different stages and tasks within one project, may require different types of boundary spanning activities. There is no consensus, however, about participation of the same individuals in various boundary spanning activities. Friedman and Podolny (1992) believe that people may be engaged in different kinds of boundary spanning; at the same time, they show that spanning "task-oriented" and "socioemotional" boundaries is based on different and somewhat contradictory skills rarely found in the same person. Also, a cross-boundary field of expertise has its own boundaries; people who invested in creating this field may be interested in protecting these boundaries more than in spanning additional boundaries (Levina and Vaast, 2005).

Boundary spanning in organization should not be viewed as a set of information exchanges but rather as an ability to establish and maintain communication practices to support seamless information flow. These practices along with the capability of applying boundary spanning experience in new situations are further referred to as the boundary spanning culture of the organization. Previous empirical research suggests key components of boundary spanning culture: artifacts ("boundary objects"), people ("boundary spanners") and interaction between them ("boundary spanning in practice") (Carlile 2002; Gopal and Gosain, 2008; Levina, 2001; Star 1989).

Boundary object is an artifact used on both sides of a spanned boundary. While boundary objects may have different meanings in different communities of practice, they are, in the words of Star (1989), "plastic enough to adapt to local needs and constraints of the several parties employing them yet robust enough to maintain a common identity across sites." Boundary objects can be both abstract and concrete. They establish shared language and syntax, provide concrete meaning, help foster learning about differences and dependencies across boundaries, and facilitate the process of knowledge transfer (Carlile, 2002). A wide range of artifacts may serve as boundary objects in different situations. Some examples are repositories, standardized documentation, models (Star, 1989), outsourcing contracts (Gal, Lyytinen and Yoo, 2008), system prototypes (Bechky, 2003), systems themselves (Pawlowski and Robey, 2004), but also "terms, concepts and other forms of reification" (Wenger, 1998, quoted by Levina and Vaast, 2005).

Boundary spanners are individuals "responsible for ensuring that the required knowledge is able to flow across the boundaries" (Gopal and Gosein, 2008). Boundary spanners may be nominated to this role (such as an outsourcing manager) or emergent. Not every nominated spanner however becomes a spanner in practice. First, a potential boundary spanner in practice needs some initial capital - economic (e.g. financial), cultural (e.g. education and expertise), social (network) and symbolic (titles, awards) (Levina and Vaast, 2005). Then three other conditions need to be held: first, the individual should become a legitimate but peripheral participant in all fields s/he is spanning; second, s/he needs legitimacy not only as a participant but also as a negotiator. Finally, due to the inherent conflict of a boundary spanner's position (Friedman and Podolny, 1992; Volkoff et al, 2002), only people who have an inclination for this role (such as expected rewards) may become boundary spanners in practice (ibid.).

Levina (2001) and Levina and Vaast (2005) discuss *boundary spanning in practice*. They show how the boundary spanning process unfolds, how nominated boundary spanners become boundary spanners in practice, and how they reflect on boundary objects, adopt and promote them. Depending on various factors, other people may accept the proposed boundary objects and add them to their everyday practice, challenge them (e.g. alter the object to better fit user's needs) or simply ignore them (Levina, 2005). Only "challenged" objects can serve their communicative purpose and become real boundary objects (ibid.).

Information systems fit well with the definitions of boundary objects from the literature. Pawlowski and Robey (2004) argue that the unique role of IS in organizations gives exceptional boundary spanning opportunities to people who provide technical support to a variety of users. They describe an organization where IT professionals were the only accepted and even encouraged boundary spanners, while any other boundary crossing activity was met with suspicion. Moreover, simultaneous spanning of many boundaries, referred to as "knowledge brokering," provides IT professionals with the ability to identify IS implications on business decisions. It looks natural for IT professionals to continue their boundary spanning activity when the organization develops a new IS.

It is well recognized that boundary spanning is important in software development (e.g. Sawyer, Guinan and Cooprider, 2008) and in managing outsourcing relationships (e.g. Levina and Vaast, 2005). However, the boundaries to be spanned in these two situations are very different. IS development requires a good understanding of company needs, and therefore calls for spanning boundaries between an organization's departments. Outsourcing relationships are about spanning boundaries between two organizations with different goals, different strategies and sometimes even different ideologies (Vilvovsky, 2008). While existing studies address boundary spanning across both internal and external boundaries, there is a significant gap in comparing these two types of boundary spanning, conceptualizing the differences between them and the ways they may inform each other. A rare exception is the recent study by Gal et al (2008). They describe an organization which adopted a boundary object from an external vendor and used it for internal communication in a consequent project even though the new vendor refused to use it.

There is a significant gap in previous research in terms of understanding the connection between internal and external boundary spanning in organizations, specifically in the context of outsourced ISD projects. Bridging this gap provides new opportunities for conceptualization of outsourcing practice and new insights for outsourcing practitioners. In the next section I develop a theoretical model to test the connection between internal and external boundary spanning and its impact on the quality of relationships between client and vendor, which is an important predictor for the whole project's success (Lee, 2001).

ANALYTICAL FRAMEWORK AND HYPOTHESES

For the purpose of this study, I define the boundaries between the two parties signing an outsourcing contract (client and vendor) as external. Internal boundaries are those between different groups of potential users of the system and their representatives (such as project managers). Drawing on suggestions in previous literature (e.g. Pawlowski and Robey, 2004) that the role of IT professionals in an organization makes them natural candidates for boundary spanners, I restrict my attention to boundaries between IT professionals and various groups of system users. These groups, and even their number, are different for each particular project. Moreover, the spanned boundaries may be internal for the particular project but not internal in other situations. For example, when a group of organizations acts as one outsourcing client for development of an inter-organizational system, the boundaries between organizations are considered internal for the purposes of this project.
The proposed analytical framework (Figure 1) illustrates the underlying theoretical proposition, which is that internal boundary spanning capabilities of the client company have a positive effect on the quality of relationships between client and vendor in outsourced projects. The unit of analysis in this study is an outsourced project for integrated information system development (ISD).

I consider the internal boundary spanning activities in the client organization that occurred before the ISD project was started or even decided upon, and suggest that this experience creates boundary spanning organizational capabilities, or a *boundary spanning culture*. Indicators of established boundary spanning are boundary objects in use, boundary spanners in practice, and interaction between them (boundary objects' adoption, development and promotion by boundary spanners) (Levina and Vaast, 2005). I consider the boundary spanning culture to have higher extent when boundary spanning is used for more different purposes.

When new types of boundary spanning activities are needed, an organization with a developed boundary spanning culture can draw on its previous boundary spanning experience by using existing boundary objects, either in their initial form or as a basis for reflection and development of new ones and by nominating people to boundary spanning roles who are likely to become boundary spanners in practice. While a vendor typically has its own methodology for project management and provides the client with boundary objects, the spanning of a client-vendor boundary in practice requires active a client's participation.

I argue that a boundary spanning culture developed before the ISD project can be leveraged for more extensive boundary spanning in both internal communication needed for the project and external communication with the outsourcing vendor. I expect such clients to be more reflective about a vendor's boundary objects (challenge and alter them, come with alternatives) as opposed to clients who blindly adopt a vendor's project management methodology.

Hypothesis H1a. The extent of boundary spanning culture in an organization will have a positive effect on the extent of internal boundary spanning during outsourced ISD project.

Hypothesis H1b. The extent of boundary spanning culture in an organization will have a positive effect on the extent of external boundary spanning during outsourced ISD project.

Previous studies report a positive effect of knowledge exchange on the quality of outsourcing relationships (Lee, 2001). As spanning of the client-vendor boundary by the client facilitates communication and knowledge exchange, it can be expected to positively affect the relationship quality. Several previous studies successfully used satisfaction of project participants with various attributes of the relationship as a measurement of outsourcing relationship quality.

Hypothesis H2a. The extent of an organization's internal BS activity during an outsourced ISD project will have a positive effect on the perceived quality of outsourcing relationship.

Hypothesis H2b. The extent of an organization's external BS activity during an outsourced ISD project will have a positive effect on the perceived quality of an outsourcing relationship.

Previous studies found that the quality of relationships has a strong positive effect on the overall success of an outsourcing project (Lee and Kim, 1999). This causality is included in the model, but testing it is outside the scope of this study.

RESEARCH METHOD

The model includes four constructs. Three of them assess the extent of boundary spanning in organization. These are the *internal boundary spanning culture before the ISD project ("BSC"), internal boundary spanning during the ISD project ("IBS")* and *external boundary spanning during the ISD project ("EBS").* These constructs are formative, e.g. the measurement items describe and define the construct (Petter, Straub and Rai, 2007). The fourth construct, *quality of relationship*, is reflective, which means that measurement items are reflections of the construct (ibid.).

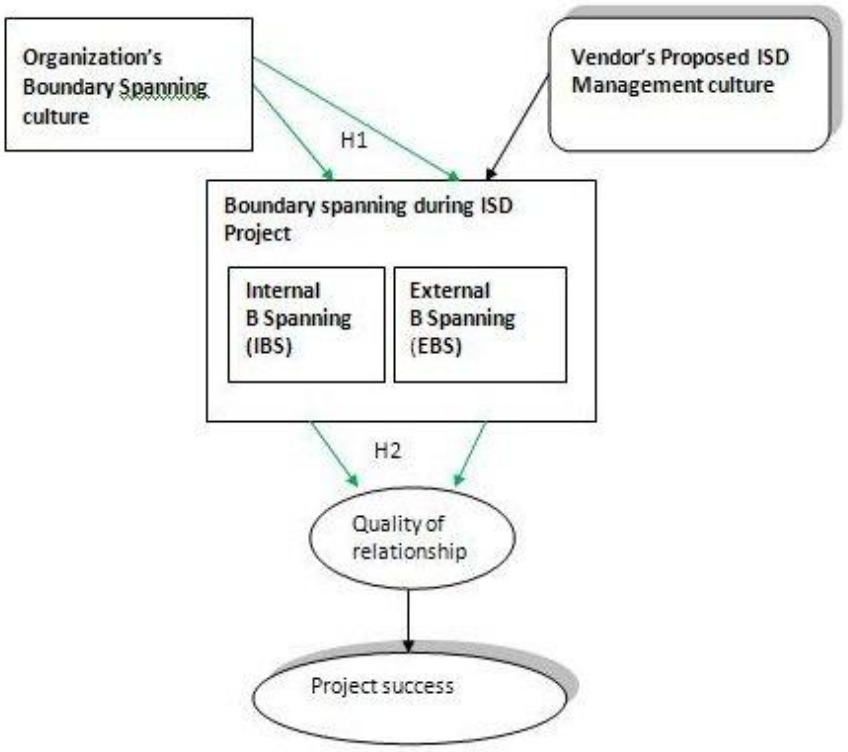

Figure 1. Research model.

Quality of relationships construct

Goles and Chin (2005) reviewed a number of previous works on outsourcing relationships, and noted that these works indicated various important factors affecting relationship quality but provided no coherent framework. Starting with a detailed conceptualization of previous scholarship, Goles and Chin developed their own model for outsourcing relationship factors and tested it using structural equation modeling. In their model, outsourcing relationship factors are grouped into attributes and processes. Attributes are the functional properties of the relationship, while the processes are means for relationship management.

In my study, I measure the quality of relationship as perceived by project participants, and utilize the measurement dimensions proposed by Goles and Chin (2005). Relationship attributes include *commitment*, *consensus*, *cultural compatibility*, *flexibility*, *interdependence* and *trust*; processes are *communication*, *conflict resolution*, *coordination*, *cooperation and integration*[1].

[1] See Goles and Chin (2005), for detailed explanation of each item and references.

Measuring boundary spanning

Three formative constructs in the model assess the extent of boundary spanning.
A higher extent of boundary spanning means that organization demonstrates boundary spanning for a wider range of different activities related to its everyday business (BSC), its internal communication during the ISD project (IBS) or its communication with the vendor (EBS). I draw on previous research to identify a set of activities relevant for each of the constructs. Also, I define a subset of boundaries I am interested in, and a way to assess the level of boundary spanning for each particular activity.

In a complex organization there are many functional boundaries and any of them can be spanned. Only some of these boundaries are relevant for ISD. Drawing on the unique role of IT professionals in an organization and in an ISD project (Pawlowski and Robey, 2004), I concentrate my attention on the boundaries between IT professionals and those organizational units that will use the newly developed system. Because of the importance of top executives' involvement in an outsourced project, widely recognized in outsourcing literature, I include the boundary spanning between company's management and IT department as well.

For each activity, I measure BS in terms of *boundary objects*, *boundary spanners*, and *their interaction*, and define the extent of boundary spanning as a combination of these three items. The items are measured as second order constructs which utilize criteria for boundary objects in use and boundary spanners in practice suggested by Levina and Vaast (2005).

An artifact is considered a boundary object if it meets one of three criteria defined by Carlile (2002): *establishes a shared language and syntax; provides concrete meaning and helps to learn about differences and dependencies across boundaries; or facilitates a process when individuals can jointly transfer their knowledge.* BOs in practice have additional characteristics: they should be locally useful (e.g. "to be incorporates into practices of diverse fields") and possess a shared identity across fields (Levina and Vaast, 2005). If a nominated boundary object is ignored by its intended users (Levina, 2001), it is not considered a BO for the purpose of this study. On the other side, objects that are used for more than one activity may be counted several times.

Indicators of *boundary spanner in practice* include *initial capital (economic, cultural, social or symbolic* – Levina and Vaast, 2005*); being allowed to several fields; representing the interests of these fields; participation in development of joint practices;* and finally, an *inclination to be a boundary spanner* (ibid.).

The *interaction* item of a boundary spanning construct considers activities such as reflection on existing or proposed objects, altering objects ("challenging" them – Levina, 2001) or developing new ones. These activities characterize a boundary spanning process in practice (Levina and Vaast, 2005).

Boundary spanning constructs

One of the ways to interpret the main proposition of this study is to say that the boundary spanning experience in an organization's usual business activity can be applied to new kinds of activities that emerge during the ISD project. The three boundary spanning constructs defined above measure boundary spanning applied to three different sets of activities.

Boundary spanning culture (BSC)

In a complex organization with many different communities of practice there is a lot of room for boundary spanning for different purposes. I concentrate my attention on boundary spanning in those dimensions that are likely to be important for successful management of an outsourcing relationship. For operationalizing the BSC construct, I therefore adopt a set of processes identified by Goles and Chin (2005) as important factors for a quality outsourcing relationship. Namely, the five processes are *communication, conflict resolution, coordination, cooperation* and *integration*.

Internal (IBS) and External (EBS) Boundary spanning during the outsourced ISD project

Boundary spanning involved in an outsourced ISD project is complex. It is comprised of activities requiring internal and external communication; moreover, some activities may involve both (not necessarily at the same level or supported by the same boundary objects) and therefore need to be included in both constructs.

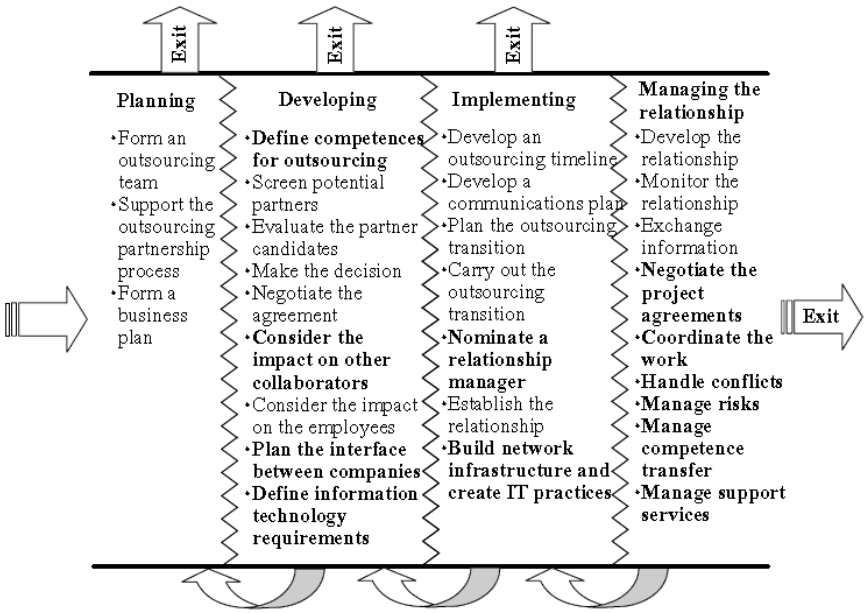

Figure 2. Stages and tasks in outsourcing project, Kinnula et al (2006)

To indicate the set of activities for IBS and EBS constructs, I utilize the model of outsourcing project lifecycle developed by Kinnula (2006). She draws on a number of previous works to build a detailed account of activities at each stage of the outsourcing lifecycle, and refines it (especially the part of relationship management) after conducting a case study. The resulting framework provides a breakdown of a typical outsourcing project to stages and tasks (Figure 2). It is targeted specifically at software R&D projects, which makes it a good starting point for operationalization of constructs in my model. However, since the focus of Kinnula's work is on the partnership between client and vendor, not all activities from her lists are relevant for my research. After reading explanations of each item and consulting outsourcing literature (e.g. Lacity and Willcocks, 2000; Levina and Ross, 2003), I dropped some items and added several new ones. Activities used in IBS and EBS constructs are represented in Table 1.

Internal	External	Internal/External
Decision to undertake the project Project management team formation Definition of needed competencies Identification of the impact on organization Requirements definition Nominating relationship manager (s)	Considering vendor candidates Vendor selection Planning interface between companies Planning communication Relationship monitoring Cultural adaptation Social and personal bonding	Selection criteria for vendor Project timeline development Developing IT practices Information exchange Negotiation of the project agreements Coordination Handling conflicts Risk management Competence transfer management Testing management Support management

Table 1. Outsourcing activities used in IBS and EBS constructs

The three boundary spanning constructs in my model are therefore measured by the same scheme. For each construct, a set of activities is indicated when boundary spanning would be desired. Each activity is "scored" for boundary objects, boundary spanners and boundary spanning processes involved in it. The extent of boundary spanning is higher when more different activities are covered and more components of boundary spanning are present. If one boundary object supports several activities (e.g. integrated IS), it is "counted" several times.

The extent of boundary spanning allows for testing the correlation between the initial boundary spanning culture in an organization and the extent of boundary spanning reached during the outsourced project. To test the causality between constructs, deeper analysis of the *interaction items* is needed. These items capture such activities as reflection on and transformation of existing practice, negotiation of boundary objects with a vendor or use of BSC objects as a basis for IBS or EBS objects.

DATA COLLECTION

While outsourcing scholarship offers numerous publications with survey instruments and quantitative models (e.g. Kim 2005; Lee, 2001; Sawyer et al., 2008), the research on boundary spanning is predominantly qualitative. I was able to find only one study where boundary spanning is operationalized as a construct in a quantitative model (Gopal and Gosain, 2008). Therefore, my operationalization of boundary spanning constructs is built on theoretical works and findings from qualitative studies.

I plan to conduct a pilot case study before finalizing the research instrument. When ready, the survey will be offered to various stakeholders[2] in organizations outsourcing the development of a complex integrated IS. I expect the survey instrument to need slight adjustments for different industries and different kinds of projects. A set of control variables will include company size, industry, past outsourcing experience, the history of relationship with a specific vendor, and the size and complexity of the project.

IMPLICATIONS

This work will contribute to the IS literature by determining the relationship between internal and external boundary spanning, and demonstrating the importance of internal boundary spanning for an outsourcing organization. A number of boundary spanning concepts used in the study are theoretical developments with little or no empirical support. The existing empirical data are predominantly qualitative and come from single case studies. Some accounts – such as the propensity of successful boundary spanners to pick on new boundary spanning opportunities – are controversial. The findings of this study will provide quantitative support to the theory. Moreover, even if the initial hypotheses are rejected, this may help to resolve some of the existing controversies and make a valuable contribution to the theory.

The outsourcing research includes discussions on the desired outsourcing client's organization capabilities. These discussions examine such capabilities as relationship building and contract monitoring but do not connect the management of outsourcing projects to an organization's capability of effective internal communication. This study will provide an important insight onto the impact of a client organization's internal communication culture on the capability to manage outsourced project. Even if the main hypotheses of the study are rejected, the relative importance of the different components of an internal organizational culture may be still important contribution to outsourcing research.

Finally, the study will offer new insights for practitioners who consider an IS outsourcing project and wish to build quality relationships with a vendor. They may find it useful to analyze existing internal boundary spanning practices and boundary objects currently in use and utilized them to spanning external boundaries with the outsourcing vendor. Alternatively, practitioners who consider an IS outsourcing project may identify a lack of internal boundary spanning in their organizations, and invest in building effective internal communication prior to or along with developing the outsourcing relationships.

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[2] Lacity and Willcocks (2004, book) provide an account of IT outsourcing stakeholders which will be used as starting point.

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