SUBSTITUTES OR COMPLEMENTS?
A FRAMEWORK FOR INVESTIGATING THE
DYNAMIC INTERPLAY OF IS
OUTSOURCING GOVERNANCE

Research-in-Progress

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Abstract

Studies investigating the question whether contractual and relational governance are substitutes or complements have been based on contradictory conceptualizations and have produced conflicting research results. This caused a controversial debate in the field of IS outsourcing concerning the relationship of governance mechanisms. Thus, the goal of this study is to clarify these inconsistencies. For this purpose we revisit the relationship between contractual and relational governance using a refined conceptual framework, which breaks down contractual and relational governance along two dimensions: foundation and action. Based on our framework, we conducted 21 semi-structured interviews at a global bank for a post-hoc analysis of governance mechanisms within five IS outsourcing projects. Our preliminary results reveal the existence of dynamic patterns of interaction between the foundation dimension (contract, trust) and the corresponding action dimension (formal control, informal control) of contractual and relational governance. In contrast to previous research, they explain complementarity and substitution as the outcome of dynamic interactions between the two governance dimensions of our framework.

Keywords: IS Outsourcing, Governance, Relational Governance, Contractual Governance, Substitution, Complementarity, Dynamic Perspective
Introduction

With the growing trend towards outsourcing, IS management increasingly faces the challenge of appropriately governing the relationship with external vendors (Dibbern et al. 2008). In search for theoretical guidance on outsourcing governance we consulted literature on IS outsourcing as well as general management. There is an ongoing debate regarding the relationship between contractual and relational governance (cf., Lacity et al. 2009; Poppo et al. 2002). More specifically, two conflicting views have arisen: the substitutional and the complementary view. The substitutional view holds that a complete contract reduces the need for relational governance (and vice versa), instead, the complementary view argues that the combined power of contractual and relational governance leads to a higher probability of IS outsourcing success (Poppo et al. 2002). While a number of studies have substantiated the substitutional view (Gulati 1995; Larson 1992; Ring et al. 1994), recent empirical results have supported the complementary view (Poppo et al. 2002). Other authors have found contractual and relational governance to be both - substitutes and complements (Klein-Woolthuis 2005; Tiwana 2010).

Besides these contradictory results, there is also inconsistency in the underlying conceptualizations of contractual and relational governance. The expressions are used in three different ways: First, as actual actions taken to govern a relationship (i.e., exercise of formal and informal control), second, as the foundations of a relationship (i.e., trust and contract), and finally as a mixture of action and foundation.

The objective of this paper is twofold: First, we seek to develop a framework that integrates and refines former conceptualizations. For this purpose, we propose a framework that essentially breaks down relational and contractual governance along two dimensions: foundation and action. Second, applying our integrated framework in a multiple case study we seek to improve our understanding of the formation of substitutional or complementary relationships between contractual and relational governance.

Our study contributes to the existing literature in IS outsourcing governance in three ways. First, the framework we propose allows for a more fine-grained investigation of the relationship between contractual and relational governance. Second, our findings substantiate the view that this relationship is no static phenomenon (Fischer et al. 2011; Huber et al. 2011; Klein-Woolthuis 2005). Rather, complementarity and substitution are the outcome of certain recurring dynamic interaction patterns between the two dimensions of our integrated framework. In this sense, the dynamic interaction patterns serve as building blocks for complementarity and substitution. Third, our findings help to reconcile some of the formerly contradictory findings on IS outsourcing governance.

Theoretical Background

Contractual governance may be defined as “the use of a formalized, legally-binding agreement or a contract to govern the interfirm partnership” (Lee et al. 2006, p. 898). While this definition highlights the actions taken as defined in a contract (Lee et al. 2006), in other cases it is the foundation of formal action, i.e. the contract itself with its key attributes, such as its level of detail, or its size that is emphasized (e.g., Goo et al. 2009; Lacity et al. 2009). Moreover, sometimes both dimensions are mixed (e.g., Tiwana 2010). In order to keep both concepts separated, we will refer to formal control as the action derived from the contract, and foundation to refer to the contract itself (see Figure 1).

“Relational governance covers the softer issues of managing client-supplier relationships, including trust, norms, open communication, open sharing of information, mutual dependency, and cooperation” (Lacity et al. 2009, p. 137). Again, while in some cases relational governance is mainly described by its foundational characteristics such as “mutual trust, commitment, and relational capital” (Lee et al. 2006, p. 898), in other cases the governance actions taken, such as active participation in meetings or attempts to understand the project team’s goals, are in the focus (Kirsch et al. 2002; Tiwana et al. 2009). Moreover, often both dimensions are mixed, like in the definition presented here, by conceptualizing relational governance as consisting of both, foundational characteristics (e.g., trust and norms) and enacted governance actions (e.g. harmonious conflict resolution and open communication) (Goo et al. 2009; Lacity et al. 2009). In the following, we refer to informal control as the action derived from a trusted relationship, and foundation to refer to trust itself (see Figure 1).

As contractual and relational governance are often used in combination in IS outsourcing projects (Poppo et al. 2002; Sabherwal et al. 2006), their relationship gained center stage in research. Regarding this
relationship, two conflicting views have arisen - the substitutional and the complementary view. The substitutional view holds that contractual governance is detrimental for relational governance, while relational governance reduces the need for contractual regulations (Bachmann 2001). A number of studies substantiated this view (Larson 1992; Lee et al. 2006; Ring et al. 1994). Complementarity may be defined as the outcome of a reciprocal, mutual reinforcing relationship between contractual and relational governance (Pettigrew et al. 2001). Hence, the complementary view holds that the combined power of contractual and relational governance leads to a higher probability of IS outsourcing success (Goo et al. 2009; Poppo et al. 2002).

While a number of studies empirically substantiated the substitutional view (Larson 1992; Ring et al. 1994), recent empirical results in the IS field challenged these findings and in turn substantiated the complementary view: Poppo and Zenger (2002) found empirical evidence that the level of contract customization is positively related with the level of relational governance and vice versa. In a study of 156 IS outsourcing relationships Beimborn et al. (2009) strengthen this view by demonstrating that trust and a number of control mechanisms are positively related. Balaji and Brown (2010) investigate the impact of contractual and relational governance mechanisms on different dimensions of IS outsourcing success and find both contractual and relational governance mechanisms to have a positive impact on some of these dimensions. However, the authors did not investigate interaction effects between contractual and relational governance and therefore gave rather indirect support for the complementary view (Balaji et al. 2010). Latest studies in the IS field on the relationship between contractual and relational governance draw an even more complex picture by suggesting that contractual and relational governance can be both complements and substitutes: Goo et al. (2009) found empirical evidence that some elements of contractual and relational governance act as complements, while other elements act as substitutes. These findings were replicated in a recent study of 120 outsourced system development projects, that demonstrated that formal behavior control and informal control act as complements on systems development ambidexterity, while formal outcome control and informal control act as substitutes (Tiwana 2010).

How can these contradictory results be explained? Our supposition is that this problem is closely linked to the underlying conceptualization: More specifically, for the debate on complements and substitutes the mentioned contradictions in the conceptualization may be highly problematic, as they might have an impact on the measured effect. As an example, Sydow and Windeler provide conceptual reasons that formal control (action) may have a positive influence on trust, i.e. on the foundation of relational governance (Sydow et al. 2003). This positive relationship between formal control (action) and trust (foundation) indicates a complementary relationship. However, as a consequence of increasing trust (foundation), informal control (action) can develop which may subsequently substitute for formal control (action). As shown in this example, the underlying contract remains untouched. Hence, it can be concluded that complementarity on the foundation level (trust and contract) might induce substitution on the action level. Thus, the distinction between foundation and action is important for the investigation of the relationship of contractual and relational governance.

This paper revisits the relationship between contractual and relational governance with a new framework. The framework breaks down contractual and relational governance along two dimensions: foundation and action. Foundation refers to the basis of governance mechanisms, i.e. contract for contractual governance, and trust for relational governance1. We will use informal control to refer to the action based on trust (e.g., open communication) and formal control for the action derived from the contract2 (see Figure 1a). Complementarity and substitution are reflected in the connections between the four governance parameters (trust, contract, formal and informal control) of the framework. On the one hand, a substitutional relationship is characterized by at least one negative connection between relational and contractual governance. On the other hand, complementarity is the outcome of reciprocal relationships

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1 We choose trust as foundation, because it is seen as a precondition for any social life (Luhmann 2000), and more specifically trust can be “viewed as a necessary condition for relational governance” (Goo et al. 2009).

2 We use the terms formal and informal control mechanisms to refer to their position on a formality continuum, whereas formal means “officially sanctioned”(Cardinal et al. 2010).
Pettigrew et al. 2001) and therefore it manifests in two successive positive connections between the contractual and relational dimension (see Figure 1b, c and d).

(a) The Research Framework

(b) Substitution Pattern

(c) Substitution Pattern

(d) Complementarity Pattern

Figure 1. Conceptual Framework, Substitution and Complementarity Patterns

Method

A case study approach was chosen, as it is particularly appropriate for studies investigating “why” and “how” questions (Miles et al. 1994) and for the investigation of contemporary phenomena which defy control by the researcher (Yin 2003). Clearly these criteria apply to the relationship of governance mechanisms in IS outsourcing.

Striving for generalization, we followed (literal) replication logic (Yin 2003) and selected five similar IS outsourcing cases at a leading German bank (“BANK”). Projects were chosen based on a purposeful sampling strategy (Eisenhardt 1989; Patton 2002). All selected projects had to be similar in size of vendor and project. Moreover, a minimum project duration of six month was decided on, to assure that trust can develop (Larson 1992). In order to reduce potentially confounding effects of organization (Hofstede 1991), we selected cases from the same department - the HR department. BANK has recently outsourced a number of IS-intensive business processes in the area of recruiting and payment. The vendor companies are responsible for software development, application service provisioning (ASP) or IS supported business processes (see Table 1).

As our intention was to gain an in-depth understanding of the relationship of governance mechanisms in IS outsourcing the data was gathered through 21 semi-structured interviews with key client and vendor personnel. Data analysis followed a three step approach. Using our refined framework as an analytical lens we first identified dynamic patterns of interaction between the four governance parameters of our framework (trust, contract, formal control, informal control). In a second step, each interaction pattern was classified as either a building block for complementarity or substitution, based on unidirectional positive or negative connections between contractual and relational governance. Finally, we revisited the data to identify sequences of the dynamic patterns of interaction that together constitute complementarity (positive connections in opposite directions).
Table 1: The Analyzed IS Outsourcing Cases

<table>
<thead>
<tr>
<th>Case Name</th>
<th>Project Description</th>
<th>No. of Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>TALENT</td>
<td>ALPHA delivers an online application for managing employee’s talent and performance.</td>
<td>3</td>
</tr>
<tr>
<td>GRAD-RECRUIT</td>
<td>BETA delivers an online application for managing the graduate recruiting process.</td>
<td>4</td>
</tr>
<tr>
<td>RECRUIT</td>
<td>GAMMA delivers an online workflow management application for the entire recruitment process.</td>
<td>4</td>
</tr>
<tr>
<td>PAYROLL</td>
<td>DELTA processes the payroll for BANK's Indian operations.</td>
<td>6</td>
</tr>
<tr>
<td>HR-OPS</td>
<td>EPSILON delivers HR back-office processes for BANK’s Indian operations.</td>
<td>4</td>
</tr>
</tbody>
</table>

Preliminary Results

The analysis of the dynamic interplay between contractual and relational governance has revealed four patterns of interaction (Fischer et al. 2011). By applying the new framework on this dynamic interplay of contractual and relational governance, we were able to disentangle the complex interplay on different levels (action / foundation) and dimensions (contractual / relational).

The first dynamic pattern of interaction and the related interplay of foundation and action are illustrated by the following example (see Figure 2): The contract (foundation), which was agreed between the BANK and one of its vendors contained schedules for specific regular governance meetings. Hence, attending these governance meetings is a formal action. Within these meetings, social interaction took place and consequently client and vendor employees started to trust each other. The development of trust promoted informal control, when after a while a “continuous communication flow”, i.e. informal communication in addition to formal communication unfolded. As this pattern of interaction shows a unidirectional positive impact of contractual on relational governance, we classify it as building block for complementarity.

![Figure 2. First Pattern of Interaction](image)

A second dynamic pattern of interaction is illustrated with the following example (see Figure 3). In one of the investigated cases the vendor was responsible to deliver defined software functionalities via web interface for BANK. Over time the parties had developed a trustful relationship (foundation). When BANK’s employees asked for further functionalities, which where “not part of the contract” this trusted relationship allowed the parties to elicit the software requirement informally (action) “on the phone”. This informal interaction gave access to knowledge which would otherwise be hard to get (knowledge about requirements, i.e. the knowledge “what they [the client personnel] want”) and it was subsequently used to refine the contract when the agreed outcomes were described in a written specification that became an “addendum to the contract” (foundation). Subsequently, the vendor delivered as agreed by providing these additional software functionalities for BANK (action). Hence, in this case the dynamic pattern of interaction shows a positive impact of relational governance on contractual governance and therefore we classify it as a building block for complementarity. Although both the first and the second pattern can be
seen as building blocks of complementarity, there is an important difference between them - the direction of causality. The first pattern describes how elements of the contractual dimension (meetings are agreed on and subsequently held) exert a positive influence on the relational dimension (trust develops and enables informal communication), while in the second pattern it is the other way around, i.e. the relational dimension (trusted relationship enables informal knowledge exchange) exerts a positive influence on the contractual dimension (contract is refined and software subsequently delivered).

A third dynamic pattern of interaction was particularly visible in cases, where on the one hand the role of the contract was mentioned as very important but on the other hand the employees had only very limited knowledge of the specific clauses. As an example, we introduce the operational level agreement (OLA), which was used as an operational instance of the contract, in one of our IS outsourcing cases. The OLA contains information on procedures which are important for the day-to-day business (foundation). However, in this case, these formal control mechanisms were not enacted, instead cooperation between client and vendor was characterized by open communication and information exchange (action). Hence, it is the awareness of the contract which reduces the perceived risk of misconduct. This is illustrated by the following quote:

“As long as collaboration based on partnership via phone and email works, it is a nice thing and if it does not work that well, it is something what acts supporting, as something to rely on.”

As described by the interviewee, the contract backs up for cases of trouble. As a consequence client and vendor employees dared to rely on informal control (action) (“collaboration based on partnership via phone and email”) (cp. Figure 4). In line with previous literature (Inkpen et al. 2004) this informal interaction between client and vendor, subsequently fostered the development of trust (foundation).

Again, this dynamic pattern of interaction which illustrates a positive impact of contractual governance on relational governance can be classified as a building block for complementarity.

Finally, the fourth observed dynamic pattern of interaction describes a substitutional relationship between informal control (action) and the contract (foundation).

One of the cases was a captive offshoring project. To handle this kind of projects, BANK has approved a “Captive Offshoring Methodology (COM)”. COM comprises five consecutive phases and the completion of each phase can be seen as a movement towards a higher degree of contractual completeness. In one case client and vendor knew each other from a successful precursor project and had established a trustful relationship (foundation), which manifested itself by frequent social interaction with high levels of informal information exchange (action). Interestingly, some of the prescribed phases of the COM methodology were omitted consciously (“in this case ... we didn’t need to do” all phases). This intended
skipping of phases can be interpreted as a move towards a lower degree of contractual completeness (foundation). Nevertheless, the resulting wiggle room was not perceived as risky but as contractual flexibility “now it is much quicker to produce [an addendum to the contract]”.

Still, the smaller amount of documentation was legally binding and as a result, formal control developed (action). The main distinguishing mark, compared to the three preceding patterns of interaction is the negative influence of contractual governance on relational governance and therefore we classify this dynamic interaction pattern as substitution (cp. Figure 5).

Figure 5. Fourth Pattern of Interaction

As complementarity is the outcome of a reciprocal or mutual reinforcing relationship between governance mechanisms, the identified building blocks and the one-way relationship they describe are only indicators for complementarity. However, sequences of the building blocks can be interpreted as complementarity. Therefore, we scanned our data for such sequences of different interaction patterns (Huber et al. 2011). The next section will give an illustrative example for one of the sequences we examined by applying our framework (also cp. Figure 6).

An example from our data showed that in one case BANK had contractually defined a few initial meetings with its vendor to become acquainted with the vendor personnel. The meetings took place (1Æ2 in Figure 6a) and after a while, people started to trust each other (2Æ3 in Figure 6a). As a result of this good rapport, the employees agreed informally to regularly keep in touch with each other by ad-hoc and regular conference calls (3Æ4 Figure 6a and b). Later on, the regularly calls were anchored in the contract (4Æ5 in Figure 6b). From this point in time the regular conference calls may be classified as formal action (5Æ6 in Figure 6b). Summarizing this interplay of dynamic interaction patterns over time leads to the combined diagram in Figure 6c, which contains the first two patterns of interaction. This illustration shows the mutual reinforcing relationship of contractual and relational governance over time, i.e. complementarity.

However, this complementary relationship draws attention to an interesting phenomenon - the joint occurrence of complementarity and substitution (Figure 6d). When irregular ad-hoc calls (informal action) are replaced by regular contractually prescribed calls (formal action), then there is a substitutitional relationship on action level, while at the same time, the complementary relationship on foundation level remains. This is not a marginal issue, as investigating the same phenomenon without distinguishing between action and foundation would have revealed different relationships. As an example, if contractual and relational governance would have been conceptualized solely as the actions taken, the same phenomenon would have been understood as substitution.
Discussion

The purpose of this study was to revisit the relationship between contractual and relational governance with a refined framework. Applying the framework revealed some basic patterns of interaction, which describe positive or negative unidirectional impacts between the two governance mechanisms. The negative pattern explains a substitutional relationship. The positive ones, if taken alone, do not qualify as complementarity, because complementarity is the outcome of reciprocal, mutually reinforcing relationships. However, we found that the dynamic patterns of interaction occur in sequences. As each pattern of interaction describes a positive unidirectional impact between governance mechanisms, the occurrence of the dynamic patterns of interaction in sequences can be interpreted as complementarity. In this sense the dynamic patterns of interaction are building blocks for complementarity over time. Summing up, the main contribution of our study is that it sketches the relationship between contractual and relational governance as much more complex than indicated by extant literature (e.g., Goo et al. 2009; Poppo et al. 2002). This higher degree of complexity manifests in two respects. First, the relationship between contractual and relational governance, i.e. substitution or complementarity, is changing over time. At one point in time contractual and relational governance act as substitutes at another point in time they act as complements. This is based on the finding that the dynamic patterns of interaction sometimes occur in sequences. This sheds light on the contradictory results of former research as it emphasizes that the role of time should not be neglected by analyzing the relationship of governance mechanisms. Second, the relationship between contractual and relational governance may vary for different governance dimensions. More specifically, complementarity on the foundation level may come along with or even cause substitution on action level and vice versa. Both findings give clear hints why former research has produced contradictory results:

First, when the relationship between contractual and relational governance changes over time, then the interval between cause and effect is not arbitrary (e.g., McGrath 1988; McGrath et al. 1986). This implies that the time interval between cause (e.g. a contract that prescribes social interaction) and effect (e.g. well-attuned relational governance which developed from this social interaction) is of major importance because in this case the observed relationship is dependent on the measuring point. Hence, contradictory findings in the complements vs. substitutes debate could be an artifact of the chosen or neglected interval.

Second, when the relationship between contractual and relational governance varies for different governance dimensions, then the prior conceptual blur (i.e., no explicit distinction between foundation and action) might have caused some of the contradictory results. This is an important issue as there are theoretical and empirical (cf., results section) reasons that suggest a causal link between complementarity on the foundation dimension and substitution on the action dimension: If the contract (Maitland et al. 1985) or distinct contractual clauses (Goo et al. 2009) really foster trust - which would indicate a complementary relationship - then the consequence of this increased trust might be that contractually...
prescribed rules are no more exercised, in favor of informal agreements between client and vendor (i.e., substitution on action level) (Das et al. 2001; Inkpen et al. 2004). It is important to note that in this case the very reason for substitution on the action level is the increased trust that was a consequence of prior complementarity on the foundation level. Hence, conceptualizing contractual and relational governance solely as the actions taken or solely in terms of foundational characteristics blocks the visibility of different effects on different levels. In contrast, our framework allows us to empirically substantiate the conjecture that complementarity on the foundation level (trust and contract) might induce substitution on the action level. However, although the preliminary results of this study point to this direction, this presumption has to be verified in future research.

Moreover, our framework spans a solution space for dynamic interaction patterns between the foundation of governance mechanisms (trust and contract) and their enactment as formal and informal control. The framework enables the deduction of additional dynamic interaction patterns that may occur in reality but that we have not found in our cases. The framework can guide future research by providing an interpretive lens through which dynamic interaction patterns can be analyzed and operationalized.

Though our research is not yet completed, we see our preliminary results as a first step towards a process theoretic approach (Mohr 1982) for investigating IS outsourcing governance. In this context, the dynamic patterns of interaction could be modeled as necessary conditions for complementarity, whose occurrence in a distinct chronological order could explain the phenomenon of complementarity. Moreover, when interaction patterns occur in sequences they might form paths towards governance success or failure. Therefore, they could take an important role in explaining the evolution of governance mechanisms in IS outsourcing projects.

**Limitations and Research Outlook**

We recognize that this study is subject to limitations, but some of them may be mitigated within our upcoming research. First, we use data from one client company. While this helps to control for heterogeneity, it otherwise limits generalizability. Thus, we aim for a replication study to compare our findings within at least one different firm environment (Leonard-Barton 1990). Second, we currently have relied on retrospective data instead of longitudinal data. Therefore, we are planning a second round of interviews with BANK and its vendors.

When contractual and relational governance can be both substitutes and complements, another important question for future research would be to investigate conditions that influence whether the relationship between contractual and relational governance switches from complementarity to substitution and vice versa. In this context a valuable direction could be to classify governance dynamics by their magnitude as either revolutionary or evolutionary change (Romanelli et al. 1994). Following Van de Ven and Poole (Van de Ven et al. 1995) evolutionary and revolutionary changes are driven by generative mechanisms (motors of change). On the one hand, decisions on governance mechanisms in revolutionary periods are driven by rational choices (Van de Ven et al. 1995) and therefore it follows that these decision might concern both contractual and relational governance mechanisms (i.e. the entire system of mechanisms). Consequently, more (or less) of one type of governance mechanism might go along with more (or less) of the other type (e.g. an increase in relational governance might be accompanied with an decrease in contractual governance). Or put another way, revolutionary changes might go along with substitution. On the other hand, decisions on governance mechanisms in evolutionary periods are rather characterized by constant adaptations of some mechanisms (Sitkin 1992) instead of questioning and re-planning the entire portfolio. Consequently, such a change might result in an adding of some type of governance mechanism without subtracting another. Hence, these periods might (over time) go along with a complementary relationship between contractual and relational governance. However, these theoretical suppositions remain to be tested in future research.
References


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