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Applying Importance-Performance Analysis To IT Outsourcing: A Survey Among Financial Institutions

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APPLYING IMPORTANCE-PERFORMANCE ANALYSIS TO IT OUTSOURCING: A SURVEY AMONG FINANCIAL INSTITUTIONS

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Abstract

What is the importance of specific control and contractual mechanisms for IT outsourcing relationship quality and outsourcing success? Employing a survey among financial institutions and applying Importance-Performance Analysis (IPA) known from marketing research, we analyse the relative importance of Service Level Agreements, control and contractual mechanisms for relationship quality and outsourcing success. Results show that, consistent with prior research, IT outsourcing relationship quality is positively related to outsourcing success. Extending prior research we show that outsourcing contract quality in general is most important for relationship quality, followed by control mechanisms and the characteristics of Service Level Agreements.

We contribute to theory by revealing the differential importance of specific control and contractual factors for relationship quality and outsourcing success. Furthermore, we contribute to outsourcing practice by demonstrating the importance of specific measures in an IT outsourcing context and thus deliver direction for outsourcing management.

Keywords: IT outsourcing, relationship quality, control types, contractual mechanisms, importance-performance analysis.

1   INTRODUCTION

IT outsourcing is defined as "the handing over to a third party the management of IT/IS assets, resources, and/or activities for required results" (Willcocks & Kern 1998), and often involves outsourcing of IT activities that are not regarded as their core competencies (Feeny & Willcocks 1998). Billions of dollars have been spent for outsourcing contracts and great expectations such as cost reductions, e.g., due to lower labour costs, service improvements and access to specialized technology know-how have been involved with outsourcing (Dibbern et al. 2008). However, outsourcing success is not guaranteed and firms produce mixed results, namely in the area of cost reductions.

Consequently, literature is engaged in determining factors influencing outsourcing success. Among those is literature scrutinizing outsourcing relationships (e.g. Dibbern et al. 2008; Han et al. 2008; Lee 2001). Although the literature on IT outsourcing relationships as important influencing factor for outsourcing success has come up with numerous insights on important aspects in such relationships, including hard (contractual) and soft (relational) factors, many firms still struggle to effectively manage their IT outsourcing relationships. While in the past years it has become increasingly clear that besides a good contract it is also imperative to develop and sustain a high-quality relationship between the collaborating parties for achieving outsourcing success, concrete guidelines showing actions to be taken in order to leverage relationship quality are rare. The problem is, at least, twofold: First, it is not fully clear what relationship quality actually is and how it should be measured. Second, there is no framework of managerial actions to foster relationship quality in its various dimensions.

Our research will contribute to existing literature in following ways: First, we analyse the effect of different control types as well as contractual issues (characteristics in terms of service level agreements, and general contract quality) on the outsourcing relationship quality. Second, we examine the effects (and actual performance in our sample) of single indicators on the relationship quality dimensions and outsourcing success.

The guiding research question of this paper thus is:

What is the importance of specific control and contractual mechanisms on IT outsourcing relationship quality and outsourcing success?

In order to investigate and answer our research question, we use data from an empirical survey among the 1,000 large financial institutions with a particular focus on the relationship to the IT service provider who is in charge of the application system for granting and managing loans.

Our findings, consistent with prior research, show that IT outsourcing relationship quality is positively related to outsourcing success. Extending prior research we show that outsourcing contract quality in general is most important for relationship quality, followed by control mechanisms and the characteristics of Service Level Agreements.

The remainder of the paper is structured as follows: In section 2, a literature overview on IT outsourcing relationship management is presented, with a focus on relationship quality, modes and mechanisms of control, and contractual governance. In section 3, we develop our research model, explain the used constructs, and justify the hypotheses. Section 4 addresses the survey approach, including a description of the data collection and the measurement of the model constructs. In section 5, we first analyse the validity of the measurement model, followed by the structural model test and importance-performance analyses. In section 6, the findings are discussed and some relevant limitations are outlined, before the main results of this paper are summarized in section 7.

2   RELATED LITERATURE

This section introduces outsourcing relationship quality, followed by a discussion of control types, and finally contractual governance is depicted.

2.1 Outsourcing Relationship Quality

IT outsourcing relationships have been shown to be complex and to be engaged in extensive knowledge exchange between the two parties regarding business requirements and user needs (Dibbern et al. 2008), and thus to form the basis for inter-organisational knowledge integration involving the business and the IT domain that is necessary for successful outsourcing (Dibbern et al. 2008; Tiwana 2003).

In this vein, relationship quality has been shown to be an important factor for outsourcing success. Outsourcing partnerships based on, e.g., trust and cooperation were demonstrated to exert a strong influence on outsourcing success (Grover et al. 1996). Thus, these so called cognitive relationships between outsourcers (or clients) and providers (or vendors) prove to be an important component of relation quality.

In their paper titled "The Developmental Process of Cooperative Interorganizational Relationships", Ring and Van de Ven (1994) discuss psychological contracts. Psychological contracts encompass "largely nonverbalized sets of congruent expectations and assumptions held by transacting parties about each other's prerogatives and obligations" (Ring & Van de Ven 1994, p. 100). These contracts are said to partly "substitute for formal contractual safeguards as reliance on trust among parties increases over time" (Ring & Van de Ven 1994, p. 105).

Trust between outsourcer (the client) and provider (the vendor) has been argued to reduce opportunistic behaviour, in particular, if "the client invests in cooperation-enhancing activities, such as team building and socializing between client and vendor personnel" (Dibbern et al. 2008, p. 340). With this cooperation-enhancing activities the goal is to foster shared values and beliefs to reinforce appropriate behaviour (Das & Teng 2001). Therefore "increases in trust between parties … increase the likelihood that parties may be willing to make more significant and risky investments in future transactions" (Ring & Van de Ven 1994, p. 101).

2.2 Contractual Governance

Contractual governance involves "formal contractual means such as guarantees, insurance mechanisms, laws, and organizational hierarchy" (Ring & Van de Ven 1994, p. 93) that are typically employed in an outsourcing context.

First of all, during the negotiations outsourcers and providers define, e.g., the scope of the contract, the goals to be achieved, the services to be provided, how to deal with changes, and conditions of payment. This may lead to a fixed-price contract or in a time and material contract (Dibbern et al. 2008). Typically, the contract is designed to address remedies for foreseeable contingencies and includes clauses on how to deal with unforeseeable events.

Second, the services to be deployed by the provider are typically defined along with the expected quality levels, which are formulated through Service Level Agreements (SLA). An SLA is a formal agreement between outsourcer and provider and describes a specific service required by the outsourcer that shall be delivered at certain quality levels (Goo et al. 2009).

Third, contract and SLAs come along with outcome-oriented and/or behaviour-oriented control mechanisms (e.g. Cardinal 2001; Choudhury & Sabherwal 2003; Dibbern et al. 2008; Ezzamel & Willmott 1998; Lee et al. 2004). Such control processes are intended to support firms to achieve their goals (Kirsch 1997); and are designed to exert influence on a party to carry-on actions and decide in a way which are consistent with the goals and objectives of the organization (Das & Teng 1998; Eisenhardt 1985; Ouchi 1979). In this study we are interested in formal control, because it is well documented in contracts and in SLAs and thus easy to retrieve. As mentioned above there are two types of formal control: behavioural or process control (control of process execution and employee behaviour) and result or outcome control (reflecting traditional comparisons of to-be and as-is) (Das & Teng 2001).

3 MODEL DEVELOPMENT

In the following paragraphs we develop the model by deriving hypotheses.

3.1 Effect of relationship quality on outsourcing success

As discussed in the previous section the prerequisite of psychological contracts is the interaction between outsourcer and provider in an effective and efficient way to discuss e.g. user needs. Interaction procedures over time lead to a better fit between the needs of the outsourcer and the provider's service offerings. Furthermore, when people trust and rely on each other, they will likely be more responsive and perform in a better way, because they do not want to disappoint the other part in such well-established relationships (Ybarra-Young & Wiersema 1999). Furthermore, the flow of knowledge is facilitated by trusting relationships leading to service offerings that fits the outsourcer's needs (Galunic & Rodan 1998).

Thus the provider's knowledge about the outsourcer's business is enhanced by partnership quality as well as the responsiveness to requirements of the outsourcer leading to services that match with business needs. Therefore we hypothesize:

H1: Relationship quality is positively related to outsourcing success.

3.2 Effect of SLAs on relationship quality

SLAs define e.g. the level of detail, the definition of tasks and responsibilities, and the granularity of performance reports. Laying down these details helps adjusting mutual expectations and all involved persons will know what really needs to be delivered, which tasks to be conducted, what the priorities of the outsourcer's business are, and so on. Adjusted mutual expectations reduce uncertainty regarding the behaviour of the involved parties. Prior research revealed that "in many interorganizational relationships, contracts primarily serve to define the tone and the nature of the relationship … and contracts or direct control are necessary to serve as a safety net" (Goo et al. 2004, p. 326). Thus the safeguard function of written SLAs supports relationships on the one hand by unambiguously defining the services to be delivered but also the measurements for service levels as well as the regulation of what happens if service levels are not achieved (penalty regulation), or sometimes also if the service exceeds the agreed upon service levels (bonus regulation). Therefore "the SLA elements that form foundation and governance characteristics may shape relational norms more effectively …" (Goo et al. 2004, p. 335). However, although SLAs support the development of relationships, having good SLAs does not necessarily man that relationship quality is high. Nevertheless, based on above reasoning we expect a positive effect of SLAs on relationship quality and we thus formulate our second hypothesis:

H2: SLAs are positively related to relationship quality.

3.3 Effect of controls on relationship quality

Control mechanisms encompass user satisfaction surveys that indicate the quality level of the delivered services, performance reports by the vendor which show the true service level, and the client's possibility to directly assess the provider's performance measurement tools. Controls cater for transparency on both sides. The outsourcer is readily informed about the quality of the service and the provider is aware of this transparency and is not able to hide possible failures. This reduces effects of moral hazard and fosters responsiveness and efforts of the provider to improve or maintain a good relationship. Although controls do not render service failures impossible they increase visibility of the quality of service delivery and also of the efforts to repair services in case of failure. Thus, controls can foster both high responsiveness of the provider and proof to the outsourcer that the provider is truly engaged in guaranteeing or re-installing high service quality. Therefore, similar to the argumentation regarding SLAs, controls function as safeguards supporting and complementing relationships. Thus, analogous to SLAs, we state the following hypothesis:

H3: Controls are positively related to relationship quality.

3.4   Effect of contract quality on relationship quality

Contract quality deals with accuracy of process descriptions, standards, guidelines, terms and conditions. Similar to SLAs a high level of contract quality helps adjusting mutual expectations by clarifying deliverables, tasks, roles and responsibilities, rights and liabilities. This also serves as safeguard for both involved parties. Consequently, formal contracts serve as complements and support relationships (Poppo & Zenger 2002). "Thus partner relationship attributes can be built through contractual means" (Goo et al. 2004, p. 326). Thus, analogous to SLAs we hypothesize:

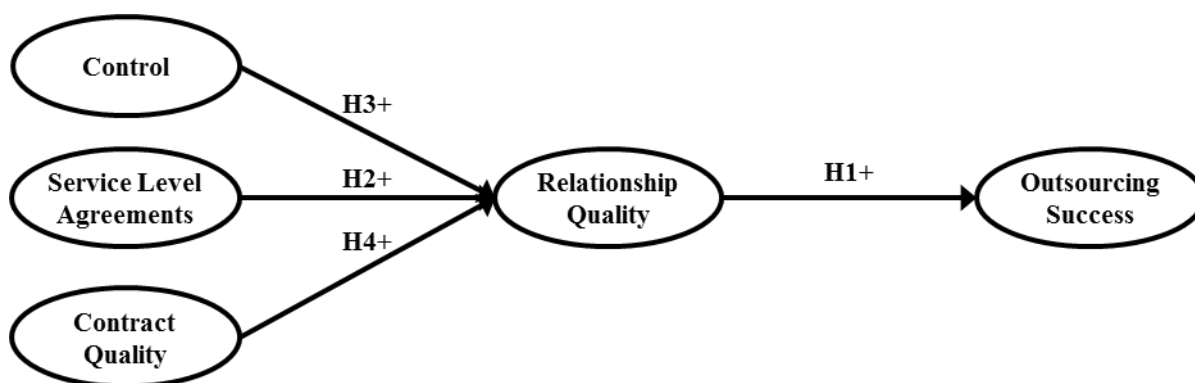H4: Contract quality is positively related to relationship quality.

Figure 1.   Research Model.

4   METHODOLOGY

4.1   Data Collection

The underlying unit of analysis in this study is the operations of the main loans system, thus concentrating on the cooperation between the bank and the external provider responsible for running and maintaining the loans systems. In our research, we particular focus on the relationship between the client and vendor firm, and how this relationship is affected by different types of control and contractual issues. Our study focused on the IT service provider which is in charge of the IS for managing private construction loans. In regard to this IS, we analyzed which of the following services are provided by the provider: operations, maintenance, 1st level support, 2nd level support, and development (in most cases, the provider provided all services). Almost half of the surveyed banks had the loans system in place for a maximum of three years, a little bit more than a third had it in place for four to ten years. More than half of the banks have been in the relationship to the respective provider for more than ten years already. Total assets ranged from approx. 300 million Euro up to more than 100 billion Euro, with our sample being representative for the overall population.

The data was collected by sending questionnaires to the IT provider manager or another executive, who was in charge of managing the arrangement with the respective IT service provider, of the 1,000 largest banks in Germany according to total assets in 2007. We solely contacted the corporate office of each bank (not several branches of a single bank) leading to the overall population being free of duplicates. In order to ensure that the correct person in charge will receive the questionnaire, each bank was called to identify the IT provider manager, to describe the survey basics, and to ask for participation. Those managers who agreed then received the questionnaire by their favoured channel (e-mail, mail, or fax). Four weeks after the initial mailing, a paper-based reminder was sent to those persons who had not answered yet. Another four to six weeks later the banks of which a response was still lacking were called again in order to assure they had received the questionnaire and to ask for the

reason why they had not completed it. In case of a positive signal indicating on-going willingness to take part in the survey, the questionnaire was sent again to the IT provider manager. Overall, 171 mainly completed and analysable questionnaire were returned, leading to a response rate of 17.1%. Thus, it is in the range of other studies among managers, e.g. 13% (Kearns & Lederer 2004), 17% (Bhatt & Grover 2005), 11% (Bergeron et al. 2004).

The received data then were entered into a survey application system and verified by a second person using the original questionnaires, before analysis started. For analysing the data and testing our model, we used the Partial Least Squares approach and applied the free software package SmartPLS (Ringle et al. 2005). The reason for using PLS is that some of our variables are non-normally distributed which, as opposed to covariance-based Structural Equation Methods, can be handled by PLS, because it does not require a specific distribution. After deleting all cases containing missing values regarding at least one of the used items (cf. below), a final data set consisting of 151 cases resulted.

In a second step, and based on the PLS analysis, we performed an Importance-Performance Analysis (IPA), sometimes also referred to as priority map. Originally, IPA was developed by Martilla and James (1977) in marketing research (see also Bacon 2003). IPA allows for a combined assessment of both importance and performance of constructs or single items in order to identify the impact level of distinct factors on others while simultaneously considering the actual performance level. Thus, the results of IPA can help to develop guidelines in terms of focus areas which should be addressed more, while others can stay behind. The basic idea is to use the data from IPA to group each construct or item into one of four quadrants in an importance-performance matrix. Each axis then consists of two levels (high vs. low importance and high vs. low performance), leading to the four quadrants. While those constructs or items in the high importance quadrants, and in particular in the high importance/low performance quadrant need more management attention, those in the low importance quadrants should be prioritized lower. In particular, the low importance/high performance quadrant indicates insignificant strengths and can serve as an opportunity to shift resources to other areas.

4.2 Measurement

The following Table 1 shows how the different constructs have been operationalized.

ID	Item	Scale	References (examples)
Outsourcing Satisfaction (OS)			
OS1	We are comfortable with the relationship to our service provider.	5-point Likert (fully disagree … fully agree)	(Goo & Nam 2007)
OS2	We would recommend our service provider.		(Goo & Nam 2007)
OS3	We would retain our service provider.		(Goo & Nam 2007)
OS4	Our outsourcing relation is financially advantageous.		(Goo & Nam 2007)
Relationship Quality (RQ)			
RQ1	We use the same IT vocabulary as the service provider.	7-point Likert (fully disagree … fully agree)	Own case studies
RQ2	Both parties in the relationship communicate well with each other.		(Goles & Chin 2005)
RQ3	Both parties effectively exchange information with each other.		(Goles & Chin 2005)
RQ4	Both parties in the relationship can be trusted to behave fairly.		(Goles & Chin 2005)
RQ5	Both parties in the relationship can be trusted not to take advantage of the other.		(Goles & Chin 2005)
RQ6	We and the provider are able to reach agreement on most matters.		(Goles & Chin 2005)
RQ7	Problems are commonly solved so there is no negative impact on the overall relationship.		(Goles & Chin 2005)
RQ8	Both parties are willing to compromise.		Own case studies

Control (CTL)			
CTL1	We regularly conduct service satisfaction surveys among users.	5-point Likert (fully disagree … fully agree)	(Choudhury & Sabherwal 2003)
CTL2	The granularity of the service reports meets our demands.		(Kern & Willcocks 2000)
CTL3	The provider's service reports offer a true picture of the provider's services.		(Kern & Willcocks 2000)
CTL4	The service provider regularly shows IT training results of their employees.		(Kern & Willcocks 2000)
Service Level Agreements (SLA)			
SLA1	The service provider has been given detailed Service Level Agreements (SLAs).	5-point Likert (fully disagree … fully agree)	(Lacity & Willcocks 2003)
SLA2	It is straightforward to change SLAs or the contract.		(Lacity & Willcocks 2003)
SLA3	My employees exactly know what service levels (SLAs) the service provider has to provide.		(Lacity & Willcocks 2003)
Contract Quality (CQ)			
CQ1	The outsourcing contract (including SLAs) meets all our requirements and expectations.	5-point Likert (fully disagree … fully agree)	Own case studies
CQ2	The outsourcing contract (including SLAs) completely controls tasks and responsibilities of the partners.		Own case studies
CQ3	The outsourcing contract (including SLAs) does not leave room for discretionary interpretations.		Own case studies

Table 1.   Indicator Overview.

5   RESULTS

5.1   Measurement Model

This subsection starts with a discussion of non-response bias and common method bias. Next, the reliability and validity of the PLS measurement model are examined by the means of content, construct, and discriminant validity, as well as indicator reliability.

5.1.1   Non-response bias and common method bias

To ensure that non-response bias cannot be assumed, we compared the early with the late respondents (Armstrong & Overton 1977). This extrapolation method is based on the assumption that late respondents share similarities with non-respondents. We treated the late respondents, who returned the questionnaire after a second reminder, as non-respondents (Kearns & Lederer 2004). Comparing the questionnaires from the early respondents (N = 98) with these non-respondents (N = 53) using the Mann-Whitney test showed no significant differences for any of the used items.

Common method bias describes the problem that the variance depends on the measurement method rather than on the constructs represented by the measures (Podsakoff et al. 2003). This may happen if the predictor as well as the criterion variables are taken from only one source (Podsakoff et al. 2003). Thus, Podsakoff et al. (2003) suggest procedural and statistical remedies in order to avoid common method bias. Procedural remedies aim at the design of the study in order to reduce the potential influences of common method variance, whereas statistical remedies are tests to control for common method bias. We addressed procedural remedies due to eliminating complex and ambiguous items from the survey by using pre-tests; acquiescence effects were countered due to reverse-coded items; and social desirability effects were offset due to assuring anonymity of respondents. In order to address statistical remedies we applied Harman's one-factor test (Podsakoff & Organ 1986) which did not extract a single factor accounting for the majority of variance of all used items.

5.1.2   PLS Measurement Model

We tested our model partly based on reflective measures. Therefore, the PLS measurement model was analysed with respect to content validity, indicator reliability, and construct validity. *Content validity* examines the degree to which the supposed meaning of a construct is reflected by its measures (Boudreau et al. 2001). Content validity was ensured by developing questions for indicators from preceding research as well as by performing pre-tests to check for ambiguities. The findings from the pre-tests were incorporated into the questionnaire through adaptation or elimination of single questions.

Indicator reliability is about the links between an indicator and its corresponding construct. Loadings should be above the suggested threshold of 0.707 and must not be below 0.5 (Hulland 1999). For testing on significance, we applied the PLS bootstrap resampling with 500 samples (Chin 1998). Both the loadings and the t-values for determining their significance are given by Table 2. All loadings of the indicators with their respective construct are above the recommended 0.707 parameter value, with RQ1 (.667) and RQ8 (.686) as the only exceptions (see Table 2) and significant at the 0.001 level, revealing indicator reliability of the tested model. For the formatively measured constructs (control and service level agreements), outer weights instead of loadings are shown.

Construct	Indicator	Loading / Weight	T-Value
Outsourcing Satisfaction	OS1	0.866	40.933
	OS2	0.905	57.352
	OS3	0.842	23.984
	OS4	0.708	11.553
Relationship Quality	RQ1	0.667	9.572
	RQ2	0.831	25.565
	RQ3	0.771	17.292
	RQ4	0.703	11.256
	RQ5	0.763	16.715
	RQ6	0.743	15.315
	RQ7	0.728	13.354
	RQ8	0.686	15.721
Control (formative)	CTL1	0.391	2.453
	CTL2	0.390	2.025
	CTL3	0.401	1.781
	CTL4	0.237	1.601
Service level agreements (formative)	SLA1	0.165	0.646
	SLA2	0.762	4.266
	SLA3	0.276	1.063
Outsourcing Contract	CQ1	0.880	32.797
	CQ2	0.889	19.158
	CQ3	0.800	13.351

Table 2.   Measurement Model Parameters.

Construct validity refers to the extent to which measurement items describe the constructs. We can distinguish between convergent and discriminant validity (Straub 1989; Straub et al. 2004). *Convergent validity* deals with the internal consistency if multiple measures are used for a single construct (Hulland 1999), analysed by calculation of the composite reliability and the Average Variance Extracted (AVE). An AVE above 0.5 (Chin 1998) and a composite reliability above 0.7 (Nunnally 1978) is recommended. All constructs of our model fulfil this requirement (Table 3).

Construct	Composite Reliability	AVE	Cronbach´s Alpha	R Square
Outsourcing success	0.900	0.695	0.851	0.349
Relationship quality	0.905	0.545	0.880	0.278
Contract quality	0.893	0.735	0.829	

Table 3.   Quality Measures for Latent Variables.

Discriminant validity represents the extent to which the items of a latent variable differ from items of other latent variables in the same model (Hulland 1999). We analyse the discriminant validity in two steps. First, all inter-correlations between the latent variables are lower than the square root of the AVE (shown in the shaded cells in Table 4). This demonstrates a good fit between the latent variables and their measurement items (Gefen et al. 2000).

	Outsourcing success	Relationship quality	Contract quality
Outsourcing success	0.834		
Relationship quality	0.591	0.738	
Contract quality	0.380	0.466	0.000

Table 4.   Correlations of Latent Variables and AVE Square Root (shaded cells).

In a second step, we further analysed the cross-loadings between indicators and the other constructs. If each indicator correlates weakly with all other latent variables except for the one to which it is theoretically associated (shaded cells in Table 5) discriminate validity can be assumed (Gefen & Straub 2005; Gefen et al. 2000). As shown in Table 5, our model possesses the demanded loadings of indicators for their associated constructs, while having low loadings for the other constructs.

Indicator	Outsourcing success	Relationship quality	Contract quality
OS1	0.866	0.523	0.323
OS2	0.905	0.543	0.331
OS3	0.842	0.481	0.293
OS4	0.708	0.411	0.324
RQ1	0.360	0.667	0.360
RQ2	0.544	0.831	0.334
RQ3	0.424	0.771	0.233
RQ4	0.395	0.703	0.374
RQ5	0.504	0.763	0.451
RQ6	0.466	0.743	0.370
RQ7	0.346	0.728	0.288
RQ8	0.407	0.686	0.309
CQ1	0.453	0.496	0.880
CQ2	0.292	0.384	0.889
CQ3	0.139	0.251	0.800

Table 5.   Cross Loadings of Manifest Variables.

After testing our measurement model for indicator reliability and construct validity, the next section focuses on the PLS structural model which is the PLS method for analysing causal relationships.

5.2   Structural Model

The results of our PLS analysis are presented in Figure 2. All four hypotheses are supported and, thus, could be accepted. As expected and hypothesized, relationship quality has a strong and highly significant effect on outsourcing success (H1). Also, the effects of both contract quality (H4) and control (H3) on relationship quality are highly significant, indicating that well-designed contracts and effective and constructive control mechanisms help to develop and sustain a good IT outsourcing

relationship. Furthermore, effective SLAs also drive relationship quality (H2). However, this correlation shows a lower level of significance in our sample than the other hypotheses.
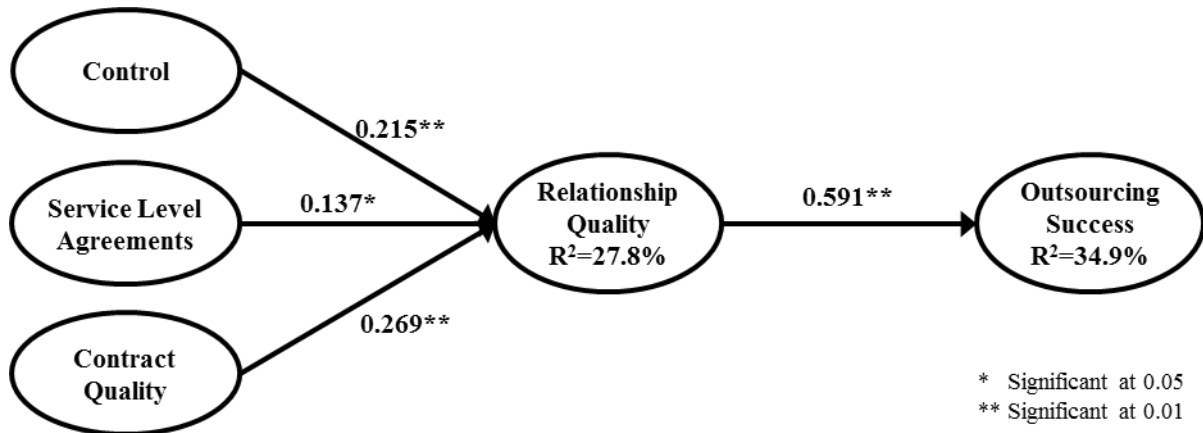

Figure 2.   PLS Results.

Based on the PLS calculation results, we next conduct the importance-performance analyses.

5.3   Importance-performance analyses

In a first step, importance-performance analysis is done in regard to the impact and performance of the independent constructs on the dependent ones.
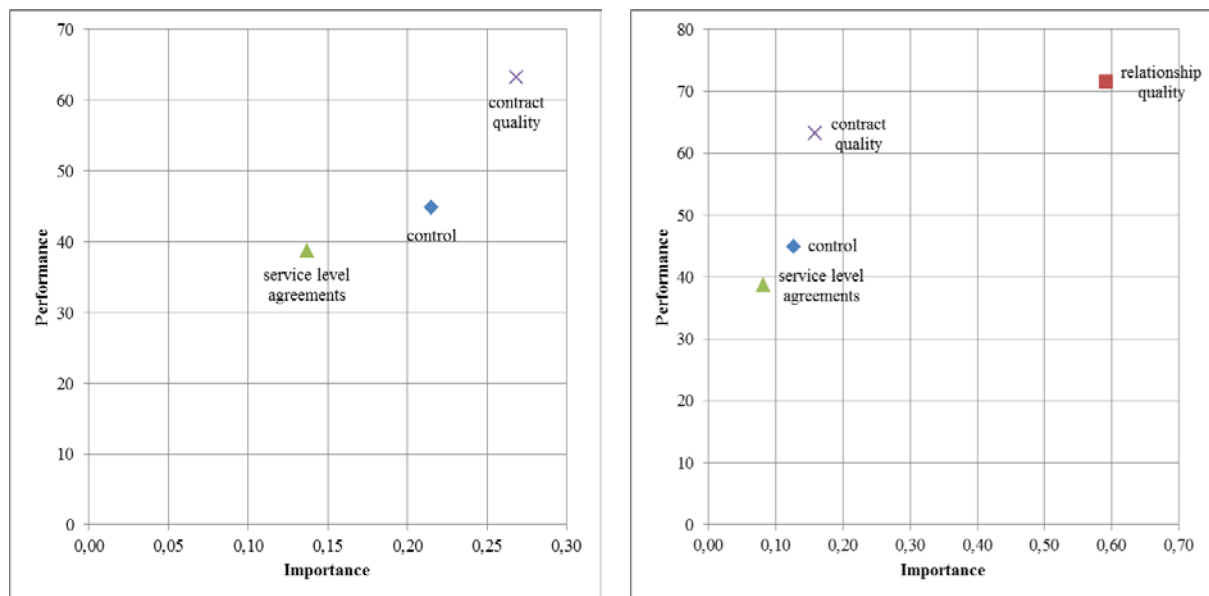

Figure 3.   Importance-performance matrix of variables in regard to "relationship quality" (left) and "outsourcing success" (right).

Figure 3 shows both the impact and the performance of control, service level agreements, contract quality (left and right), and relationship quality (right). Considering the relationship quality construct (left) contract quality has the highest impact (0.269) and, in our sample, has also the highest performance, meaning that on average, the surveyed firms have rather good contracts (63 points on a scale ranging from 0-100). Control is the second-most important construct (0.215) with a performance of 45. The least important factor is service level agreements (0.137) with a performance of 39. Generally, most firms achieve the best performance in the factor with the highest impact on relationship quality. Regarding the overall dependent variable outsourcing success (right), relationship

quality has a very high impact of 0.591 while also having a good performance level of 72, meaning that many firms in our sample report a comparatively good status in regard to relationship quality. While this evaluation is rather similar to what can be seen from the structural model (besides additionally having the performance levels included in the matrices), we extend this analysis to each of the formative indicators of our independent variables in order to come up with managerial guidelines on which actions are the most effective ones for achieving high relationship quality and outsourcing success. Consequently, we look at and compare the impact and performance of the indicators on relationship quality and outsourcing success.

The importance-performance analysis at indicator level provides interesting results which are presented in Figure 4.
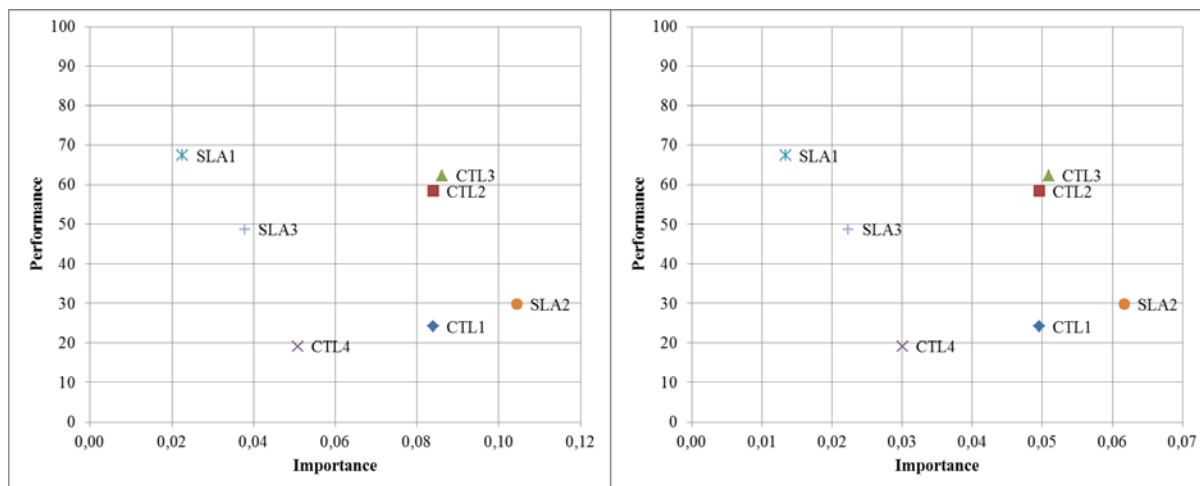

Figure 4.   *Importance-performance analysis of formative indicators related to relationship quality (left) and outsourcing success (right).*

Considering the impact on relationship quality, scores range from 0.02 (SLA1) to 0.10 (SLA2), with actual performance levels between 19 (CTL4) and 67 (SLA1). Ideally, the average performance levels would be very high for those indicators with a high impact level while more moderate for those indicators with a lower impact level. The four indicators in the high impact area (CTL1-3 and SLA2) reveal mixed results. Performance for CTL2 (granularity of service reports) and CTL3 (vendor providing true reports) is at least at a medium level (both around 60). CTL1 (client firm regularly conducts user surveys) and SLA2 (changes to SLAs/contract can easily be carried-out) show rather low levels. The latter indicates potential for mechanisms to be (better) implemented in order to leverage relationship quality and finally outsourcing success. Contrasting, the average performance level for SLA1 (provider has been given detailed SLAs) is comparatively high, although the impact of this mechanism on relationship quality is very low. Hence, this could be an aspect to decrease resources in favour of facilitating those mechanisms in the high importance area with a low performance level. The other two mechanisms in the low importance area are SLA3 (the client's employees exactly know the SLAs) and CTL4 (vendor regularly shows IT training results to the client). CTL4 has a very low average performance level (19) indicating that such reports are not very common in the collaboration between client and vendor in our sample. However, since the importance of this indicator is not very high, improvements should first be considered for the mechanisms mentioned above. SLA3 with an average performance level of 49 represents an acceptable score when set into relationship to the rather low impact factor. Having described the main results of our PLS calculation and the importance-performance analysis on top of it, we provide a discussion of our findings in the following section.

6 DISCUSSION

6.1 Limitations

Like in any survey-based research, there are some limitations that need to be considered when discussing and interpreting the findings. Typical limitations like common method bias (CMB), subjectivity of answers, and generalizability could have an effect on our results. We addressed CMB by using two different versions of the questionnaire (varying item order) and by applying procedural and statistical remedies (e.g., Harman single-factor test) which did not reveal any serious problems in regard to CMB. Another aspect arises from the key informant approach. We did only ask one person (the provider manager) on the client side, thus not capturing insights from the respective vendor in order to validate the given assessments. However, since the provider manager is expected to have a good overview on the overall relationship, we think that the given data are acceptably reliable. Next, generalizability is also always an issue in empirical works. In our study, we focused on a specific IT outsourcing relationship concerning a distinct business process in financial institutions. While this inhibits a broad application of the findings, it helps to come up with more concrete evidence for the investigated context, which is, considering the large number of financial institutions and their high dependence on IT systems, worth to deepen our understanding of how effective IT outsourcing relationships can be developed and maintained through control and contractual mechanisms.

Furthermore, there are other limitations which are more closely related to the content of our research. Several works have examined outsourcing relationship quality in different contexts. While this construct generally is multi-faceted and multi-dimensional, we have modelled relationship quality as one construct. The reason is that we wanted to focus on the single control and contractual mechanisms that can improve relationship quality. Consequently, we see this as a first step towards a better understanding of how specific mechanisms work and influence relationship quality, and our findings support the relevance of such investigations. Nevertheless, future analyses should incorporate a relationship quality construct that is more detailed to better reflect the true nature of this concept. Finally, the operationalization of our formatively measured constructs is debatable since the number of indicators is limited, respectively. For both the control and the contractual/SLA mechanisms, several other aspects could be integrated. However, as the PLS calculation as well as the importance-performance analysis show, impact and performance level of our set of items are quite divers, indicating that such examinations can have considerable descriptive and prescriptive power. So we will extend our model for future evaluations in order to draw a more complete picture of the set of control and contractual managerial actions which can be taken, and their impact on relationship quality.

6.2 Discussion

Consistent with prior research, our model supports the hypothesis that IT outsourcing relationship quality positively influences outsourcing success (hypothesis 1). We could furthermore show that the quality of the outsourcing contract in general (hypothesis 4), and specific control (hypothesis 3) and contractual (in terms of SLA-related) mechanisms (hypothesis 2) have varying but positive effect on relationship quality, and thus on outsourcing success. Of the eight detailed investigated mechanisms, SLAs that can easily be changed and modified (SLA2) show the highest impact on relationship quality. Such flexibility in the collaboration between the two parties can then yield into a more trustful relationship and a higher level of consensus instead of more conflicts due to inflexible SLAs which are expected to pollute the relationship. A little less but also very important are the following three control mechanisms: satisfaction surveys conducted by the client among the users of the respective IT system (CTL1); service reports provided by the vendor which meet the granularity demands of the client (CTL2); and accurate service reports from the vendor.

Our research question was: *What is the importance of specific control and contractual mechanisms on IT outsourcing relationship quality and outsourcing success?*

The answer is that contract quality is highly important for both relationship quality and in turn outsourcing success. In addition, control and contractual mechanisms (SLAs) are other important factors.

As to the control mechanisms we found that they are all very closely related to establishing and maintaining a good relationship between client and vendor. When the provider generates sufficiently granular service reports which are moreover correct this will have a direct positive effect on the relationship quality. However, when looking at SLA2 and CTL1, the performance levels in our sample are quite low, meaning that SLAs often cannot be changed easily, thus leading to conflict potential in the relationship. A reason for the low performance level of client-internal controls (user satisfaction surveys) could be found in the fact that the provider-based control mechanisms (CTL2, CTL3) are evaluated rather well. Client firms may then save their resources and forbear from doing own control activities, since they are satisfied with what the provider delivers to them.

Looking at those control and contractual mechanism with a low(er) impact on relationship quality, detail SLAs given to the provider (SLA1) show the highest of all performance levels. This phenomenon can be attributed to the fact that the formulation of SLAs is more or less a singular action taken at the very beginning of an outsourcing arrangement. Often, SLAs are not even re-evaluated due to high workload of the respective managers or other reasons. Thus, high efforts are invested at the beginning, leading to very detailed agreements, which are then hard to overview, manage, and change (compare SLA2). Regarding high relationship quality, regular and on-going Service Level Management appears to be more promising than much ex ante efforts resulting in very detailed SLAs, followed by problems in adapting them to changing situations.

In general, the importance-performance analysis, which is very prominent, e.g., in marketing research, but rare in IS research, allows us to not only investigate the impact of various control and contractual mechanisms for IT outsourcing relationship quality, but also to derive guidelines in regard to which mechanisms should be prioritized higher compared to others. Although the performance levels are only representative for our survey context, for which it can serve as a benchmark, this analysis can easily be applied to other contexts as well and help to identify areas of improvement for both outsourcing relationship quality and outsourcing success in general, and for single firms or arrangements.

7 CONCLUSION

In this paper, building on existing literature of IT outsourcing arrangements, and using data from a quantitative survey among 1,000 large financial institutions, we analyse the role of control and contractual mechanisms for IT outsourcing relationship quality and outsourcing success (in terms of satisfaction). The results show that contract quality, SLA characteristics, and control (both client and vendor based) significantly influence the level of relationship quality. Applying importance-performance analysis we could specifically show the impact of single control mechanisms (like satisfaction surveys, service reports, etc.) and SLA characteristics (adaptability, level of detail, etc.) on relationship quality. While this already can help to develop guidelines for practice, the explanatory power further increases by also incorporating the actual performance levels of each item. In doing so, we could reveal some discrepancy, since some mechanisms like, e.g., SLA adaptability and end user satisfaction surveys by the client have a high impact, but are non-existent or poorly implemented. On the other hand, factors with rather low impact (e.g., detailed SLAs) show a high performance level, indicating failures in resource allocation. Consequently, more detailed analyses are necessary and future investigations should incorporate a broader set of control and contractual mechanisms to better identify and understand the impacts of those mechanisms on IT outsourcing relationship quality and outsourcing success.

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