

Association for Information Systems AIS Electronic Library (AISeL)

AMCIS 2006 Proceedings

Americas Conference on Information Systems
(AMCIS)

December 2006

The Impact of Contract Design on Outsourcing Success: Case Studies on Risk Mitigation Measures

Cornelia Gellings

J.W. Goethe University- Frankfurt

Kim Wüllenweber

J.W. Goethe University- Frankfurt

Follow this and additional works at: <http://aisel.aisnet.org/amcis2006>

Recommended Citation

Gellings, Cornelia and Wüllenweber, Kim, "The Impact of Contract Design on Outsourcing Success: Case Studies on Risk Mitigation Measures" (2006). *AMCIS 2006 Proceedings*. 386.

<http://aisel.aisnet.org/amcis2006/386>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2006 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

The Impact of Contract Design on Outsourcing Success: Case Studies on Risk Mitigation Measures

Cornelia Gellings

E-Finance Lab

J.W. Goethe University, Frankfurt

gellings@wiwi.uni-frankfurt.de

Kim R. Wüllenweber

E-Finance Lab

J.W. Goethe University, Frankfurt

wuellenweber @wiwi.uni-frankfurt.de

ABSTRACT

From the outsourcer's perspective, the outsourcing literature emphasizes the importance of contracts and risk awareness for managing outsourcing ventures. However, there is a lack of theoretical foundation with regard to the importance of risk and contract design towards outsourcing success. By extending the risk model of Bahli and Rivard (2001) we aim at answering the following questions: (1) 'how does the design of the outsourcing contract impact on outsourcing risk?' and (2) 'how, in turn, does outsourcing risk affect outsourcing success?'. Based on multiple case studies of Business Process Outsourcing (BPO) arrangements, our results show that the 'complementarity' of contract clauses — Service Level Agreements, Penalty-Reward-Systems, and Pricing — is important to contractually implement risk mitigation. Furthermore, by synchronizing the objectives of the in- and outsourcer *ex ante* resulting in specific contract clauses which compensate for losses *ex post*, the existence of risk and its impact on outsourcing success can be limited.

Keywords

Business Process Outsourcing, Risk Mitigation, Outsourcing Contract

INTRODUCTION AND RESEARCH OBJECTIVE

The examination of outsourcing — the purchase of a good or service that was previously provided internally (Lacity and Hirschheim, 1993) — has been a domain of IS research for several years now. When considering the potential gains that can be achieved through outsourcing, most of the academic discussions have addressed the questions of "why", "what" and "how" to outsource (Dibbern, Goles, Hirschheim and Jayatilaka, 2004). This research focuses on "how to outsource", especially on an important prerequisite of a successful outsourcing deal: the design of the outsourcing contract. The complexity of outsourcing arrangements and the severity of potential damage is acknowledged within the outsourcing community (see e.g. Earl, 1996; Willcocks and Currie, 1997). Therefore, there is an increased concern with the management of an outsourcing venture, and in particular with the issue of risk mitigation. The outsourcing contract is regarded as the most prevailing instrument for mitigating outsourcing risks (Willcocks and Kern, 1998). A thorough understanding of the risk profile, risk causes and risk consequences seems to be an important prerequisite to set up an effective contract ensuring outsourcing success (Aubert, Dussault, Patry and Rivard, 1999). Based on the outsourcer's perspective, we therefore aim at answering the following research questions:

- How does the design of the outsourcing contract impact on outsourcing risk?
- How, in turn, does outsourcing risk affect outsourcing success?

To approach these research questions, we will first review the current literature on the role of contracts in outsourcing relationship management and the interplay between risk and contract design. Using these insights we will develop a causal model to illuminate causal relations between risk, contract design and outsourcing success as motivated in our research questions. Since the objective of our study is analytical generalization, we have followed Yin (2003) and used case studies for empirical validation. Our research objects are Business Process Outsourcing arrangements in the German banking area which are intensively analyzed within our case study analysis section. At last, we summarize the contributions and limitations of our research.

THEORETICAL FOUNDATIONS

In most relationships the parties involved do not have perfectly congruent goals, and therefore a contract is developed to detail their relationship (Banker and Kemerer, 1992; Eisenhardt, 1989a). The study of contractual mechanisms in IS outsourcing is still at an early stage (Aubert, Houde, Patry and Rivard, 2003). However, some research has been done in this field during the past two years (for example, see Proceedings of AMCIS 2004 and 2005). IS outsourcing studies dealing with contractual issues often incorporate a broader view by dealing with all aspects of relationship management. Our research specifically deals with two important aspects of relationship management: (1) the moderating effect of contracts on outsourcing risk, (2) and the subsequent effect on outsourcing success.

The general importance of a contract within an outsourcing arrangement has been stressed by several researchers (e.g. Kern 1997 and Kern and Willcocks 2001). However, so far research on IS outsourcing contracts has focused on the importance of single contract clauses in general (for example, Beulen and Ribbers, 2002 and Goo, Kishore and Rao, 2004 focus primarily on Service Level Agreements) but has not considered their interplay with each other to effectively mitigate risks. Our research aims at closing this gap by means of an in-depth analysis of selected contract clauses and their impact on each other to mitigate outsourcing risks.

The contract can be regarded as the pivotal point: it regulates the venture (Kern, 1997). If contract and negotiation processes are thoroughly defined, a company has the necessary protection for dealing with daily actions and results, for settling disputes or for terminating the relationship (Marcolin and McLellan, 1998). In particular, the contract is regarded as the most important instrument to mitigate outsourcing risk (Aubert and Patry, 2005). Outsourcing risks attract researchers (Dibbern et al., 2004) and practitioners (Gartner, 2004) alike. The primary objective of this interest is to analyze how risk might influence outsourcing success (Dibbern et al., 2004). However, this relationship has been addressed by very few articles. Instead, most contributions aim at exploring risk compositions (Bahli and Rivard, 2003b; Gewald and Hinz, 2004) and risk causes (e.g. Bahli and Rivard, 2003a). Aubert et al. (2005) relate outsourcing risk to outsourcing success by illuminating the importance of risk analysis and risk management for the prediction of outsourcing outcomes. Thus, there is a close relation between outsourcing risk and outsourcing success, which should be analyzed in more detail with regard to actual losses as suggested by Aubert et al. (2005).

There are different approaches to define outsourcing risks (see review in, e.g., Aubert, Patry and Rivard, 2002). We use a qualitative risk definition developed by Barki, Rivard and Talbot (1993) as well as Aubert, Patry and Rivard (1998): risk is a combination of **risk factors** and **undesirable outcomes**. The risk factors represent the probability of undesirable outcomes. Every risk factor causes a certain undesirable outcome. Thus, the extent of undesirable outcomes depends on the severity of the risk factors.

As shown by Bahli and Rivard (2003b) among others, these risk factors include:

- Moral hazard (the service provider acts to the detriment of the outsourcer)
- Imperfect commitment (the service provider delivers less than he promised)
- Uncertainty emerging from business (e.g. unsteady transaction volumes or regulatory requirements) and/or technological changes (e.g. security fixes)
- Process specificity
- Measurement problems

Other factors mentioned by Bahli and Rivard (2003b) include adverse selection, interdependence of sub-processes, small number of service providers and experience-related factors. As we aim at analyzing risks which can be mitigated by the contract, these factors have not been considered. Adverse selection takes place before the contract is negotiated. Interdependence depends on the percentage of outsourced sub-processes and is not controllable using contract clauses. The number of service providers and the experience level of internal and external staff cannot notably be affected by contract design.

As outlined by Bahli and Rivard (2003a), these risk factors entail possible negative outcomes in the dimensions of cost escalations or service debasements. They can appear in the following scenarios:

- Lock-in (being unable to switch service providers or to backsource)
- Costly contractual amendments
- Increased costs of services

- Service debasement
- Unexpected transition and management costs
- Disputes and litigation

These risk factors and undesirable outcomes have not been analyzed in the context of BPO. BPO is a relatively new phenomenon, but it is suggested that it will be one of the largest areas of growth in the outsourcing market (Gartner, 2004). For the scope of this paper, BPO is defined as the delegation of one or more entire business processes to third party providers, including the software and hardware that support those processes (Halvey and Melby, 2000). A business process is defined as a “set of logically related tasks performed to achieve a defined business outcome” (Davenport and Short, 1990, p. 12). Thus, BPO is the combination of application development/maintenance outsourcing, IT infrastructure outsourcing and the outsourcing of business activities which are not IT supported such as business process re-design.

RESEARCH MODEL AND HYPOTHESES

In this section we are developing our research model. First, the underlying causal model is introduced which takes up the aspects presented in the previous section. A description of how the constructs are operationalized is provided. A further overview of the constructs’ operationalization and respective references to IS literature can be found in Table 3. Second, the way in which the model’s underlying hypotheses have been derived is described. All hypotheses are summarized in Table 1.

Research Model

Figure 1 presents our research model as used within our case studies (arrows reflect hypotheses and ‘circles’ represent constructs).

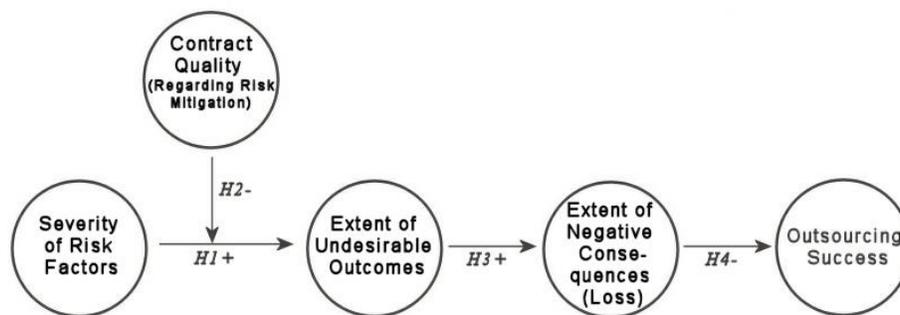


Figure 1. Research Model

Description of Research Model

We extend the model of Bahli and Rivard (2001; 2003a) by adding aspects of contract quality, outsourcing success, and extent of negative consequences: First, we analyze additional contractual risk mitigation instruments – such as Service Level Agreements (SLAs) or Penalty-Reward-Systems. Thereby, we aim at explicitly determining concrete risk mitigation contents of the outsourcing contract as recommended by Aubert et al. (2003). Second, we include outsourcing success as an endogenous variable to illuminate the importance of risk severity (and risk mitigation) in relation to the outsourcing arrangement. Finally, to relate the risk (i.e. risk factors and undesirable outcomes) to the outsourcing success, we insert the extent of negative consequences as proposed by Aubert and Patry (2005). Negative consequences illustrate the occurrence and intensity of undesirable outcomes. Thus, negative consequences can also be viewed as loss instances.

Operationalization of Constructs

During discussions with experts it turned out that SLAs, Pricing, Penalty-Reward-Systems, Liability Clauses, Benchmarking Clauses, Renegotiation Options and Price Caps are the contract clauses most suitable for risk mitigation purposes. Therefore, the existence and design of those clauses has been chosen to describe the construct **contract quality**. To analyze SLAs, we ask for the linkage of SLAs to a Penalty-Reward-System as suggested by Beulen and Ribbers (2002) and the set-up of controlling instruments to monitor the degree of SLA fulfilment (Harris, Giunipero and Hult, 1998). When examining Pricing Clauses, we aim at finding out whether variable or fixed pricing has been agreed upon (McFarlan and Nolan, 1995). Furthermore, the existence of Price Adjustment Clauses is determined (Harris et al., 1998). Liability Clauses are examined

with regard to their existence (Lacity and Willcocks, 2003) and whether or not they are related to deal size. To analyze Renegotiation Options, we ask for the existence of change request procedures and agreement on (early) termination (Harris et al., 1998). A contract consists of many other clauses which may to some extent also be suitable for risk mitigation purposes. For an overview of further contract clauses see Lacity and Hirschheim (1993) as well as Kern and Willcocks (2000). We are aware that a contract represents the results of bilateral negotiations. Our goal is to analyze the effect of (existing) outsourcing clauses concerning their ability to mitigate risks on outsourcing success. We take the existence of a certain contract clause as an indicator that this contract clause has been considered/negotiated to mitigate a certain risk.

To measure the **severity of risk factors** and the **extent of undesirable outcomes**, we use the risk factors and undesirable outcomes as described in section "Theoretical Foundations". For **negative consequences**, we ask for real losses instead of potential losses in the dimensions of cost escalation and service debasement. Furthermore, we measure **outsourcing success** as the achievement of outsourcing objectives (Kern, 1997) and the realization of economic or technological benefits (Grover, Cheon and Teng, 1996). We are aware that also other factors and aspects contribute to outsourcing success (for example 'partnership quality', see Lee and Kim, 1999). However, as our goal is to analyze the impact of outsourcing contract design on outsourcing risk, these aspects have been somewhat disregarded within this research.

Derivation of Hypotheses

We propose that the quality of the contract moderates the relationship between a risk factor and an undesirable outcome. For example, the goal of a BPO project is to improve quality. Within a risk analysis, the risk factor 'moral hazard' has been identified as a potential threat. The severity of this risk factor can be partially mitigated by a contract including SLAs combined with a penalty system. Thereby, the extent of the undesirable outcome (i.e. service debasement such as a delay in the execution of a securities' transaction) can be limited. This implies that the extent of this risk and the respective negative consequences are smaller than without the combination of SLAs and a penalty system. Thus, the goal of quality improvements is less affected.

The causes and effects of our research model are reflected in our hypotheses as shown in the following table.

No.	Hypothesis
H1	The severity of risk factors are positively associated with the extent of undesirable outcomes (Bahli et al. 2003a).
H2	The impact of risk factors on undesirable outcomes is moderated by the contract quality (Bahli et al. 2001).
H3	Undesirable outcomes positively impact the extent of negative consequences (loss) (Bahli et al. 2001).
H4	Negative consequences negatively contribute to the achievement of outsourcing objectives (Earl 1996; Willcocks et al. 1997).

Table 1. Hypotheses

The hypotheses are based upon literature reviews and expert interviews. Since all references deal with IT outsourcing arrangements, we aim at analyzing contract related hypotheses in BPO settings. In addition, we concentrate on contract related cause-effect-relationships, which leads to a different construct measurement as outlined in Table 3.

CASE STUDIES

Case Study Environment

Our research analyzes BPO within the German banking industry. Due to its IT-intensive business processes, the potential for BPO appears to be particularly high in the banking industry. The consideration of the German banking industry has been twofold: first, the financial services sector is the second largest buyer of outsourcing services (Gartner, 2004); second, the German regulations on outsourcing are particularly strict and detailed (§25a of the German Banking Act) making contractually tied control rights especially desirable.

Methodology

Since the interplay of outsourcing risk, contract, loss, and success has not been researched in a BPO context before, analytical generalization based on case study research is projected. To achieve the necessary rigor, it is important during design and preparation to explicitly define the research question, propositions, and the unit of analysis. The research questions employed for our case studies have been introduced in the introduction section and contain 'How' questions which are considered appropriate for case studies (Yin, 2003). The propositions used in our cases are theoretically grounded (see section 2). As a unit of analysis we chose risk mitigation approaches within BPO arrangements and focus on outsourcing contracts as the most important risk management tool (Aubert and Patry, 2005).

Our interview partners are project managers, managers of the retained organization and banks' risk managers. From the project managers we want to learn more about the original outsourcing goals. In addition, project managers usually initiated the risk analysis for contract negotiations and therefore know the intention behind each contract clause. Risk managers and managers of the retained organization should provide us with details on how the contract is actually 'working' and whether the implemented risk mitigation strategies are suitable.

As suggested by Eisenhardt (1989b) and Yin (2003) our questions for construct operationalization are mainly derived from literature. We use both, previously applied and thereby validated questions, and general conclusions that are derived from common outsourcing literature. The pre-structured interviews lasted about three to four hours and were conducted by two researchers. The interview partners provided us with additional documentation (including outsourcing contracts) afterwards. The answers given together with the respective additional documents were elaborated, analyzed and refined based on Eisenhardt (1989b) and Yin (2003). The interviewees reviewed and validated the collected case study data and reports as recommended by Eisenhardt (1989b) and Yin (2003).

Case Study Description

Our cases reflect the outsourcing arrangement of securities settlement processes. These processes have been chosen due to their high degree of automation and IT dependency. The next table provides a brief overview of the general settings of each BPO deal analyzed.

	Bank 1	Bank 2	Bank 3
Outsourced Service	Settlement of Securities	Settlement of Securities	Settlement of Securities
Number of Transactions (per year)	> 500,000	< 100,000	< 100,000
Deal Volume (in bn Euros)	5-10	1-5	10-20
Percentage of Outsourced Sub-Processes Compared to the Overall Process	70%	50%	70%
Outsourcing Objectives	1. Cost Savings 2. Quality Improvements	1. Cost Savings 2. Quality Improvements	1. Cost Savings 2. Quality Improvements

Table 2. Overview – Case Studies

Results

The following Table 3 provides an overview of our constructs, their operationalization, and the respective empirical results. We will analyze these findings in further detail in the next section "Case Study Analysis".

Construct	Operationalization	Bank 1	Bank 2	Bank 3
Severity of Risk Factors (Bahli and Rivard, 2003b)	1. The service provider acts on the detriment of the bank, i.e. pricing new services exceptionally high (=> Moral hazard) (Aubert et al., 1998) 2. The service provider delivers less than promised (=> Imperfect commitment) (Aubert et al., 1998) 3. Uncertainty emerging from business and/or technological changes (Earl, 1996) 4. Process specificity (Bahli and Rivard, 2003b) 5. Measurement problems (Bahli and Rivard, 2003b)	1.: No moral hazard present 2.: Imperfect commitment not present 3.: No significant uncertainty 4.: No process specificity 5.: No measurement problems	1.: Moral hazard not present 2.: Imperfect commitment not present 3.: High uncertainty due to frequent business and regulatory changes 4.: No process specificity 5.: Intensive measurement problems: measurements criteria are defined but measurements almost impossible to conduct	1.: Moral hazard present 2.: No imperfect commitment 3.: High uncertainty because of new products and new regulatory requirements 4.: High process specificity due to individual customer requirements 5.: Intensive measurement problems: no measurement criteria defined
Contract Quality with regard to risk mitigation (Kern, 1997; Saunders, Gebelt and Hu 1997; Kern and Wilcocks, 2001)	SLA Clauses (Lacity and Wilcocks 2003) 1. Existence of detailed SLAs for all services comprehending the outsourcing deal (Domberger, Fernandez and Fiebig, 2000) 2. Satisfaction with SLA-Framework (Lacity and Wilcocks, 2003) 3. Controlling/Monitoring of SLAs (Lacity and Wilcocks, 2003)	1.: Yes 2.: High 3.: SLAs are controlled twice a year. This is done in cooperation with the service provider	1.: Yes 2.: Bank 2 is averagly satisfied with SLA-Framework 3.: So far, SLAs are not monitored. This is going to change within the next months	1.: Yes 2.: Bank 3 is averagly satisfied with SLA-Framework 3.: No, as due to the capital involvement of the corporation with the service provider (subsidiary) the reporting of a negative status would have had no consequences
	Penalty-Reward-System (Beulen and Ribbers, 2002) 1. Definition of penalties for not meeting the service (Beulen and Ribbers, 2002) 2. Relatedness of SLAs to pricing (Harris, Giunipero and Hult, 1998)	1. & 2.: Bank 1 has set-up a penalty-reward system for the most important SLAs	1.: No penalties defined 2.: SLAs are not related to pricing	1.: No penalties defined 2.: SLAs are not related to pricing
	Liability Clauses (Lacity and Wilcocks, 2003) 1. Existence of liability clauses (Lacity and Wilcocks, 2003) 2. Differentiation between willful misconduct, gross and ordinary negligence 3. Relatedness of limits/amounts to the deal size	1.: Yes 2.: Yes, differentiation between different causes 3.: Yes, liability limit is a percentage-ratio	1.: Yes 2.: Yes, differentiation between different causes 3.: Yes, liability limit is a percentage-ratio	1.: Yes 2.: Yes, differentiation between different causes 3.: Yes, liability limit is a percentage-ratio
	Pricing Clauses (Lacity and Wilcocks, 2003) 1. Application of fix or variable pricing (McFarlan and Nolan, 1995) 2. Existence of price adjustment clauses (Harris et al., 1998)	1.: Service is based on unit costs 2.: The contract comprehends price adjustment clauses as a consequence of benchmarking	1.: Service is based on unit costs 2.: No price adjustment clauses exist	1.: Service was based on a headcount basis 2.: No price adjustment clauses exist
	Benchmarking (Cross, 1995) 1. Benchmarking comprehends right to compare the actual prices of the service provider with other vendors	1.: Yes, benchmarking clause exists. Bank 1 undertakes a benchmarking once a year	1. No benchmarking clause existst	1. No benchmarking clause existst

Construct	Operationalization	Bank 1	Bank 2	Bank 3
Contract Quality (cont'd) with regard to risk mitigation (Kern, 1997; Saunders, Gebelt and	Renegotiation Clauses (Lacity and Willcocks, 2003) 1. Existence of renegotiation options (Elitzur and Wensley, 1997) 2. Existence of contract flexibility in the type, the level and the quantity of service (Beulen and Ribbers, 2002) 3. Possibility of early termination (Harris et al., 1998) Price Caps 1. Existence of minimum or maximum fee (Elitzur and Wensley, 1997); based on such a fee prices can be renegotiated due to volume fluctuations	1.: Yes, renegotiations can be based on the results of benchmarking 2.: Yes 3.: Yes	1.: No 2.: Yes 3.: No, not necessary as contract can always be terminated with a one-year period of notice.	1.: No 2.: Yes 3.: No early termination possible
Extend of Undesirable Outcomes (Bahli and Rivard, 2003a)	1. Increased costs of services 2. Unexpected transition and management costs 3. Costly contractual amendments 4. Service debasement 5. Lock-in 6. Disputes and litigation	1.: No increased cost 2.: No unexpected transition and management cost 3.: No costly contractual amendments 4.: No service debasement 5.: Yes, the transition would cost more than 3.000 FTE's 6.: No significant disputes and litigations	1.: Intensively increased cost escalation 2.: No unexpected transition and management costs 3.: No costly contractual amendments 4.: Extensive service debasement 5.: It is almost impossible to switch service providers 6.: Frequent disputes, no litigations	1.: Extensive costs of services - internal workforce have to perform work-arounds due to massive errors by the service provider 2.: Extensive management costs due to the workarounds 3.: No costly contractual amendments 4.: Extensive service debasement due to process errors caused by the service provider 5.: Moderate significance of "lock-in" 6.: Very frequent disputes, no litigation
Extend of Loss (Bahli and Rivard, 2003a)	1. Cost escalation 2. Service debasement	1.: No cost escalation 2.: No service debasement	1.: Expected cost savings have fairly not been reached 2.: Moderate losses from service debasement	1.: Cost for service provision and internal workforce higher than costs for internal delivery 2.: Severe service debasements
Success (Kern, 1997)	1. Achievement of expectations within the outsourcing decision (Kern, 1997; Lee and Kim, 1999) 2. Realization of economic and technological benefits (Grover, Cheon and Teng, 1996)	1.: Expectations achieved 2.: Technoligical and economic benefits realized	1.: Expectations partially achieved 2.: Technoligical and economic benefits partially realized	1.: Expectations not achieved, process backsourceed 2.: Technoligical and economic benefits not realized; process backsourceed

Table 3. Constructs, Operationalization and Case Study Results

Case Study Analysis

In order to analyze our hypotheses, we take a look at the extent of different outsourcing risks. We identify the moral hazard as a driver of service debasement. Furthermore, we will show that service debasement causes cost escalation. Literature on IS Outsourcing Risk has not recognized these linkages yet (Aubert et al., 2003; Aubert et al., 1998). In addition, our research provides evidence that when designing contracts, the 'complementarity' of single clauses should be considered to implement risk mitigation strategies. So far, research on IS outsourcing contracts has focused on the importance of the contract in general or on single contract clauses only (e.g. Alborz, Seddon and Scheepers, 2004; Beulen and Ribbers, 2002; Domberger et al., 2000; Goo et al., 2004).

From a risk perspective, it becomes evident that moral hazard drives service debasement. The combination of Service Level Agreements with a Penalty-Reward-System can minimize the risk of such debasements: Bank 1 has negotiated a detailed SLA framework that is in line with the measures suggested by Domberger et al. (2000). This framework is linked to a Penalty-Reward-System meaning that the non-fulfillment of a service leads to the payment of a reduced fee by the outsourcer. An over-fulfillment of services results in the payment of a bonus. SLAs are controlled and discussed with the service provider on a regular basis. Within the SLA framework, all outsourced processes and the way in which their accomplishment is measured have been agreed upon. Bank 1 states that based on their service level framework, they are able to maintain control over outsourced services. A decrease in service quality has not occurred so far. Bank 1's SLAs are well-defined. The service provider exactly knows what Bank 1 expects from them. The objectives of the outsourcing deal (i.e. cost savings and quality improvements) have been reached so far. In contrast, the outsourcing contracts of Bank 2 and Bank 3 only contain an SLA framework. The link to a Penalty-Reward-System is missing. Both banks do not control their SLAs on a regular basis. Bank 2 complains about a 'creeping' decline in service quality. Bank 3 had to suffer from service debasement, as services were not clearly defined within the SLA framework. Bank 3 was fighting with quality problems caused by the supplier's strategy to standardize the clients' processes for its own cost reduction purposes. As a consequence, these quality problems forced Bank 3 to allocate internal staff for the accomplishment of "workarounds". These "workarounds" demanded so many resources that cost reductions from external service delivery were exceeded. As no Penalty-Reward-System was set up, Bank 3 was not able to introduce any incentives for the service provider to avoid service debasements. The cost reduction had a negative influence on the outsourcing success. Finally, Bank 3 backsourceed its services.

Process specificity can drive the risk of cost escalation. Bank 3 aimed at serving their customers individually, which resulted in a high extent of additional (sub-) processes. Since the service provider was not willing to deliver these processes, the bank had to set up internal staff. The allocation of this staff resulted in severe costs, which has been one important reason why the bank backsourceed the entire process. Another reason for backsourceing was the fact that the objectives of the bank and the outsourcer did not match. The expected sharing of risk and reward did not occur. This case shows that a clear definition of SLAs is of utmost importance to synchronize expectations of the in- and outsourcer *ex-ante*.

As a result, potential service debasement caused by moral hazard and potential cost escalation caused by process specificity can be limited by combining SLAs with a Penalty-Reward-System. An SLA framework on its own does not provide enough incentives for the service provider to deliver high quality services.

The risk of service debasement can also be influenced by the incompetence of the service provider resulting in 'wrong' actions taken either by mistake or on purpose. Well-defined liability clauses can prevent losses caused by willful misconduct, gross or ordinary negligence of the service provider. All banks have contractually agreed upon such clauses. The limit of liability in each case is related to deal size (i.e. defined in percentages). All banks state that liability clauses are very important to actually prevent financial losses. However, it is difficult to compensate for qualitative (e.g. reputational) losses that may also be caused by gross or ordinary negligence of the service provider.

Uncertainty can drive the risk of cost escalation, especially when the bank has to pay excessive prices. Benchmarking clauses combined with renegotiation options can minimize this risk. Bank 1's outsourcing contract contains a clause that allows them once a year to benchmark the service provider's prices with market prices. If prices are above a certain threshold, Bank 1 has the right to renegotiate fees. This mechanism prevents Bank 1 from paying excessive fees. Bank 2 and Bank 3 did not contractually agree on a benchmarking clause. Within Bank 2, the service provider increases fees continuously and prices new services exceptionally high. As neither a benchmarking nor a renegotiation option has been contractually implemented, Bank 2 feels that they pay too much for the services received. The achievement of cost savings has been an important outsourcing decision criterion for Bank 2. This risk and the respective negative consequence therefore negatively influence outsourcing success. As a result, we conclude that the risk of cost escalation caused by uncertainty can be mitigated by combining a benchmarking clause with a renegotiation option.

Uncertainty may also drive the risk of volume fluctuations. The agreement of price caps linked with a renegotiation option can minimize this risk. The contract of Bank 1 contains such a price cap combined with a renegotiation option. If the number of transactions exceeds a certain limit, prices have to be renegotiated again. Due to economies of scale, the service provider should be able to reduce unit costs when volumes increase. Then, the outsourcer expects a decrease of prices. Bank 2 and Bank 3 did not implement a price cap. Therefore, their pricing scheme is inflexible. If volumes increase and their vendors realize further economies of scale, neither Bank 2 nor Bank 3 can expect to realize additional cost savings. Thus, price caps combined with a renegotiation option are a further tool to ensure the achievement of cost savings.

Table 4 sums up our results and highlights the importance of 'complementary' clauses to reduce outsourcing risks from the outsourcer's perspective.

Risk Factor	Event	'Complementary' Contract Clauses	Result (for the Outsourcer)
Moral Hazard, Process Specificity	Service Debasement	SLAs with Penalty-Reward-System	Reduced Payment to the Service Provider
Moral Hazard,	Service Debasement	Liability	Financial Compensation for Loss
Uncertainty	Volume Fluctuation	Price Cap with Renegotiation Option	Renegotiations Resulting in New "Fair" Pricing Structure
Uncertainty	Fixed Date for Benchmarking (as contractually agreed upon)	Benchmarking with Renegotiation Option	Renegotiations Resulting in New "Fair" Pricing Structure
Uncertainty	Fixed Date for Renegotiations (as contractually agreed upon)	Renegotiation Clause within SLA Framework	Renegotiations Resulting in an Updated Definition and Pricing of Respective Service

Table 4. Results Case Study Analysis

Answering our research questions, it can be established that the design of the contract influences the impact of risk factors on the extent of undesirable outcomes (H1 and H2). 'Complementary' contract clauses need to be linked with each other to effectively mitigate risk. The extent of negative consequences is heavily affected by the extent of undesirable outcomes, since all of the potential outcomes lead to quantitative or qualitative losses (H3). Finally, the extent of negative consequences negatively affects outsourcing success (H4). However, by synchronizing the objectives of the in- and outsourcer *ex ante* and agreeing upon contract clauses which compensate for losses *ex post*, the impact of risk on outsourcing success can be minimized.

LIMITATIONS

Our research is limited in two ways. First, generalization is limited as results are based on case study research. Second, we focus on the outsourcer's perspective only. We suggest for further research to also analyze the service provider's perspective. Thereby causes and drivers of moral hazard could be identified in greater detail.

CONCLUSION

The importance of contracts within outsourcing relationships has been stressed by various researchers. However, they either just 'claim' the importance of the contract in general or they discuss the significance of single contract clauses. Our research analyzes the effect of risk on outsourcing success and how 'complementary' outsourcing clauses effectively tackle outsourcing risks. We emphasize the importance of managing outsourcing risks. Our study provides insights into the question of how the severity of risks influences outsourcing success. These findings set the basis for the development of a risk and a contract management capability.

While this study contributes to research by (a) combining the risk perspective with contract design and (b) analyzing the 'complementarity' of contract clauses, it is also valuable for practitioners. Outsourcers benefit from our research by knowing (under risk mitigation aspects) which clauses should especially be paid attention to when entering into contract negotiations. Our analysis helps outsourcers to define a clear 'going-in position' and supports them in their evaluation of the importance of different contract clauses and their design for risk mitigation purposes. Thereby, practitioners become more aware of 'what's worth fighting for' during contract negotiations when an effective risk management is desired.

REFERENCES

1. Alborz, S., Seddon, P. B. and Scheepers, R. (2004) Impact of Configuration on IT Outsourcing Relationships, *10th Americas Conference on Information Systems*, New York.
2. Aubert, B. A., Dussault, S., Patry, M. and Rivard, S. (1999) Managing the Risk of IT Outsourcing, *32nd Hawaii International Conference on System Sciences*, Hawaii.
3. Aubert, B. A., Houde, J.-F., Patry, M. and Rivard, S. (2003) Characteristics of IT Outsourcing Contracts, *36th Hawaii International Conference on System Sciences*, Hawaii.
4. Aubert, B. A. and Patry, M. (2005) A Framework for Information Technology Outsourcing Risk Management, *The DATA BASE for Advances in Information Systems*, 36, 4, 9-28.
5. Aubert, B. A., Patry, M. and Rivard, S. (1998) Assessing the Risk of IT Outsourcing, *31st Hawaii International Conference on System Sciences*, Hawaii.
6. Aubert, B. A., Patry, M. and Rivard, S. (2002) Managing IT Outsourcing Risk: Lessons Learned in: Hirschheim, R., Heinzl, A. and Dibbern, J. (Eds.); *Information Systems Outsourcing - Enduring Themes, Emergent Patterns and Future Directions*, Springer, Berlin, 155-176.
7. Bahli, B. and Rivard, S. (2001) An Assessment of Information Technology Outsourcing Risk, *22nd International Conference on Information Systems*, New Orleans, Louisiana.
8. Bahli, B. and Rivard, S. (2003a) The Information Technology Outsourcing Risk: A Transaction Cost and Agency Theory-based Perspective, *Journal of Information Technology*, 18, 211-221.
9. Bahli, B. and Rivard, S. (2003b) A Validation of Measures Associated with the Risk Factors in Information Technology Outsourcing, *36th Hawaii International Conference on System Sciences*, Hawaii.
10. Banker, R. D. and Kemerer, C. F. (1992) Performance Evaluation Metrics for Information Systems Development: A Principal-Agent Model, *Information Systems Research*, 3, 4, 379-400.
11. Barki, H., Rivard, S. and Talbot, J. (1993) Toward an Assessment of Software Development Risk, *Journal of Management Information Systems*, 10, 203-225.
12. Beulen, E. and Ribbers, P. (2002) Managing Complex IT Outsourcing-Partnerships, *35th Hawaii International Conference on System Sciences*, Hawaii.
13. Cross, J. (1995) IT Outsourcing: British Petroleum's Competitive Approach, *Harvard Business Review*, 73, 3, 94-102.
14. Davenport, T. H. and Short, J. E. (1990) The New Industrial Engineering: Information Technology and Business Process Redesign, *Sloan Management Review*, 31, 4, 11-27.
15. Dibbern, J., Goles, T., Hirschheim, R. and Jayatilaka, B. (2004) Information Systems Outsourcing: A Survey and Analysis of the Literature, *The DATA BASE for Advances in Information Systems*, 35, 4, 6-102.

16. Domberger, S., Fernandez, P. and Fiebig, D. G. (2000) Modeling the Price, Performance and Contract Characteristics of IT Outsourcing, *Journal of Information Technology*, 15, 107-118.
17. Earl, M. J. (1996) The Risks of Outsourcing IT, *Sloan Management Review*, Spring, 26-32.
18. Eisenhardt, K. M. (1989a) Agency Theory: An Assessment and Review, *Academy of Management Review*, 14, 1, 57-74.
19. Eisenhardt, K. M. (1989b) Building Theories from Case Study Research, *Academy of Management Review*, 14, 4, 532 - 550.
20. Elitzur, R. and Wensley, A. (1997) Game Theory as a Tool for Understanding Information Services Outsourcing, *Journal of Information Technology*, 12, 45 - 60.
21. Gartner (2004) Management Update: Outsourcing Market View, What the Future Holds, *Gartner Dataquest*, June 2004.
22. Gewald, H. and Hinz, D. (2004) A Framework for Classifying the Operational Risks of Outsourcing, *8th Pacific Asia Conference on Information Systems*, Shanghai, PR China.
23. Goo, J., Kishore, R. and Rao, H. R. (2004) Management of Information Technology Outsourcing Relationships: The Role of Service Level Agreements, *25th International Conference on Information Systems*, Washington, D.C., USA.
24. Grover, V., Cheon, M. J. and Teng, J. T. C. (1996) The Effect of Service Quality and Partnership on the Outsourcing of Information Systems Functions, *Journal of Management Information Systems*, 12, 4, 89-116.
25. Halvey, J. Melby, B. M. (2000) Business Process Outsourcing: Process, Strategies, and Contracts, John Wiley & Sons, New York, 2000.
26. Harris, A., Giunipero, L. C. and Hult, G. T. M. (1998) Impact of Organizational and Contract Flexibility on Outsourcing Contracts, *Industrial Marketing Management*, 27, 5, 373-384.
27. Kern, T. (1997) The Gestalt of an Information Technology Outsourcing Relationship: An Exploratory Analysis, *18th International Conference on Information Systems*, Atlanta, Georgia.
28. Kern, T. and Willcocks, L. P. (2000) Exploring Information Technology Outsourcing Relationships: Theory and Practice, *Journal of Strategic Information Systems*, 9, 321 - 350.
29. Kern, T. and Willcocks, L. P. (2001) The Relationship Advantage: Information Technologies, Sourcing, and Management, Oxford University Press, Oxford.
30. Lacity, M. C. and Hirschheim, R. A. (1993) Information Systems Outsourcing: Myths, Metaphors and Realities, Wiley, New York.
31. Lacity, M. C. and Willcocks, L. P. (2003) IT Sourcing Reflections - Lessons for Customers and Suppliers, *Wirtschaftsinformatik*, 45, 2, 115 -125.
32. Lee, J.-N. and Kim, Y.-G. (1999) Effects of Partnership Quality on IS Outsourcing Success: Conceptual Framework and Empirical Validation, *Journal of Management Information Systems*, 15, 4, 29-61.
33. Marcolin, B. and McLellan, K. (1998) Effective IT Outsourcing Arrangements, *31st Hawaii International Conference on System Sciences*, Hawaii.
34. McFarlan, F. W. and Nolan, R., L. (1995) How to Manage an IT Outsourcing Alliance, *Sloan Management Review*, Winter, 9-23.
35. Saunders, C., Gebelt, M. and Hu, Q. (1997) Achieving Success in Information Systems Outsourcing, *California Management Review*, 39, 2, 63-80.
36. Willcocks, L. and Kern, T. (1998) IT Outsourcing as Strategic Partnering: The Case of the UK Inland Revenue, *European Journal of Information Systems*, 7, 1, 29-45.
37. Willcocks, L. P. and Currie, W. L. (1997) Information Technology in Public Services: Towards the Contractual Organization?, *British Journal of Management*, 8, 107-120.
38. Yin, R. K. (2003) Case Study Research: Design and Methods, Sage Publications, Thousand Oaks, California.