The Influential Role of Perceived Risks versus Perceived Benefits in the Acceptance of Business Process Outsourcing: Empirical Evidence from the German Banking Industry

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Abstract

Business process outsourcing (BPO) has been suggested as one of the biggest areas of growth in the outsourcing market. Nevertheless, many organizations are still reluctant to outsource business processes that are part of their core business. In order to help overcome this divergence between expectations and reality, we systematically analyze the factors that form an organization's attitude towards BPO as well as their intention to adopt BPO. We develop a BPO adoption model which is based on the argument that BPO poses both risks and benefits and that decision makers need to balance both before adopting BPO. The model is tested based on data that was collected in the German Banking Industry. Altogether 218 data points on the perceptions of business managers in the four areas of transaction processing (credits, securities, domestic payments, and foreign exchange/money market) were available for model testing via Partial Least Squares. The results show that the intention to outsource these IT-intensive business processes is strongly influenced by the manager's attitude towards BPO. Other non-rational factors play a minor role. Only peer influences in the banking industry were found to significantly influence intentions. Around 77 percent of the variations in attitude are explained by perceived risks and perceived benefits. The perceived benefits have a much stronger influence on BPO acceptance than risks. This indicates that risks may be somewhat underrepresented in the adoption process. Moreover, it is instructive to note that the ability to focus on core competencies is the strongest advantage for BPO, followed by quality improvements and cost transparency. Interestingly, anticipated cost reductions have less influence than the previous three factors, and access to better resources plays no role in attitude formation. On the other hand, overall BPO risks are clearly dominated by financial risks. Strategic risks are also important and, to a lesser extent, performance risks, while psychosocial risks and privacy risks are not significant predictors. These findings support the recommendation that providers of BPO services should emphasize risk mitigation proposals in their offerings.

Subject Areas: *Business Process Outsourcing, Risk-benefit concept, Attitude-Behavior Structure, Perceived Risk Theory, Partial Least Squares, Questionnaire surveys*

1 Introduction

The concept of the industrialization of the banking industry, i.e. the segregation of formerly tightly integrated value chains has been around for several years now. Although banks have devoted considerable resources to the re-organization of their production chains, an industry-wide change in paradigm towards distributed value chains has not yet taken place (Gellrich, et al., 2005). The availability of business process outsourcing (BPO) may change this in the near future. 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. For example, Gartner Group estimated that the world wide market would increase from USD 110 bn in 2002 to USD 173 bn in 2007 (Gartner, 2004). BPO is defined as the delegation of one or more entire business processes to third party providers, including the information systems (IS) services that support those processes (Halvey and Melby, 2000). It is the combination of traditional information technology outsourcing (ITO), which has been a major trend over the last fifteen years (Dibbern, et al., 2004), and the outsourcing of non-IS business functions (Kakabadse and Kakabadse, 2002).

The growing practice of BPO is closely linked to the digitalization of the enterprise. Today, information technology (IT) plays an integral role in virtually every business process. Most of the data and information that is needed in order to carry out a business task is now available digitally and the majority of the processing is done using specialized software packages, and increasingly using automated routines. It is therefore hardly surprising that those business processes in which IT plays an important role for processing, have become prime candidates for BPO. Examples are administrative services such as the payroll function in HR, claims management in finance or warehousing in logistics (Rouse and Corbitt, 2004). Due to the digitalization of business processes, their execution has become increasingly independent of location. Many final products

supplied to the client are available digitally via network connections (e.g., a processed payroll list or a new inventory list may be transferred to the client by Electronic Data Interchange).

The progress of the digital environment serves as a key enabler for the digitally enabled extended enterprise. One industry where digitalization has dramatically altered the way in which business processes are carried out is the Banking Industry. Almost the entire portfolio of banking products is available in digital form and many services are now provided through the internet. The balance in a current account, an international payment, or the purchase of mutual funds is nowadays merely an electronic transaction which takes place in bits and bytes on a storage system within a corporate data center. Associated business processes like trade settlement or execution control are of an electronic nature as well.

Due to its IT-intensive business processes, the potential for BPO appears to be particularly high in the Banking Industry. It seems to be just a matter of time until back office functions in particular, such as processing payments, securities or consumer credit transactions are taken over by specialized vendors that could create significant economies of scale in transaction processing. The future scenario would be a supply chain of financial services like those established in other industries such as the automobile industry (Tas and Sunder, 2004).

Currently, however, the Banking Industry is still far from such a scenario. For example, in Germany, studies of service providers (Bongartz, 2004; Lamberti and Pöhler, 2004) and market research firms (IDC, 2002; TPI, 2005) have shown that the BPO adoption rate is still unexpectedly low. This raises the question: Why is the development of the BPO market lagging behind the constantly quoted growth rates? Or, from the perspective of an individual firm: Why would an organization choose to outsource part or all of an IT-intensive business process?

Current research on BPO has not yet focused on these questions. Most studies emphasize the high growth potential of BPO. For example, Tas and Saunders (2004), in their conceptual work,

compared the financial services sector with the manufacturing industry and came to the conclusion that the financial industry will follow a trend towards vertical disintegration similar to that in the product producing industry and that the strategy of focusing on core competences will be a major driver for the growth of BPO. Lancelotti et al. (2003) interviewed 70 board level executives of 31 different European banks on their BPO practices. Their main finding was that each of the banks already uses the outsourcing option to a certain extent, and that the majority intend to increase their level of outsourcing in the future – especially the level of BPO. On the other hand, however, they also found out that only 42% of the outsourcing deals (ITO and BPO) conducted by the banks interviewed delivered the expected value creation. Lacity et al. (2004) focused on companies that transformed their back office services into service providers. The paper is based on an in-depth case study of Lloyds of London. It indicates that the market for back office transactions is large enough for new vendors to enter and will grow substantially in the future. Willcocks et al. (2004) also found a rising market for BPO when reanalyzing over 350 outsourcing case studies to assess knowledge transfer in outsourcing ventures.

Taken together, these studies shed little light on the determinants of the BPO decision. There is hardly any empirical evidence on the specifics of the BPO decision, compared to the ITO decision. In reviewing the literature, Rouse and Corbitt (2004) came to a similar conclusion that "… despite the growth of BPO, an examination of the literature reveals a virtual absence of academic publications on the topic." (p. 2). This motivated our research, which is a systematic analysis of the determinants of the BPO decision.

For a number of reasons the focus has been on the German Banking Industry: First, the percentage of paperless transactions is particularly high in Germany (e.g., unlike other countries, check payments are virtually non-existent, accounting for less than 1% of total domestic payment transactions (Bundesbank, 2004b)). Second, German banks are currently facing severe cost

pressures (Hackethal, 2004) that require them to actively search for alternative ways of production and governance (Kumar and Hillegersberg, 2004; Lammers, 2004). Third, the German regulator of the banking system has established a stable and predictable set of regulations (Zerwas, et al., 2002) that have created a coherent frame of reference for outsourcing and the related issues amongst German banks. Fourth, following the first outsourcing mega deal in the German banking landscape (Deutsche Bank and IBM in 2003, EUR 2.5bn, 10 year contract, transfer of 900 employees, only data center operations) there is currently an atmosphere of embracing outsourcing in the German financial services industry.

Given this special situation, BPO in Germany may be seen as a major organizational innovation, similar to IS outsourcing in the early 90s (Loh and Venkatraman, 1992). This has important implications for theorizing about the BPO decision. In line with the theory of reasoned action and the theory of planned behavior (Ajzen, 1985), it may be more appropriate to explain variations in attitude towards BPO and the intention to increase the level of BPO rather than variations in the degree of outsourcing, which has been a common practice in IS outsourcing research (see e.g., Dibbern, et al., 2004). This is further supported by two more recent studies on IS outsourcing that included attitude as a dependent variable enabling one to understand the IS sourcing decision better (Benamati and Rajkumar, 2003; Dibbern, 2003).

Thus the major question underlying this research is: *What are the main factors that influence an organization's attitude towards BPO and its subsequent intention to increase the level of BPO?*

The argument is that, since attitudes towards BPO could be either negative or positive, there should be both negative and positive salient beliefs about BPO. Reviewing the literature on IS outsourcing, it soon became apparent that negative perceptions of outsourcing are often equated with the risks of outsourcing, i.e. the possibility of outsourcing failure (e.g., Aubert, et al., 1998;

Earl, 1996). On the other hand, there are a number of outsourcing advantages, which may be summarized as outsourcing benefits (e.g. (Dibbern, et al., 2004; ECB, 2004)). Consequently, we apply a risk versus benefit framework to study the BPO decision. This is in line with decision theory regarding decisions that involve risk or uncertainty (see e.g. (Friedmann and Savage, 1948; Machina, 1987; Tamura, 2005)). A comparable attempt has been conducted by Jurison (1995; 1998; 2002) who developed a framework analyzing the trade off between the cost advantages and monetary risks of IS outsourcing.

The resulting risk-benefit framework is depicted in Figure 1. It demonstrates that management's attitude towards BPO is positive when the benefits outweigh the risks, while it is negative when the perceived risks dominate.

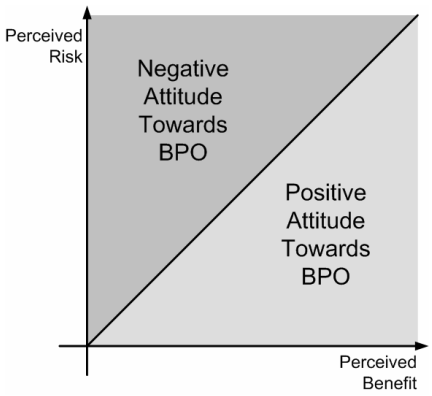

Figure 1: Attitude Framework: Risk versus Benefit of BPO

This paper contributes to current knowledge by systematically testing the effect of both perceived risks and perceived benefits on outsourcing decisions. The goal is to examine the influence of both factors on attitudes to BPO, and to see how much those attitudes are in line with future intentions to adopt BPO. Moreover, both risks and benefits are disaggregated into more salient risk factors and different types of benefits in order to examine which ones are most important for the BPO decision. To the best of our knowledge, it is the first confirmatory

empirical research study on the determinants of the BPO decision and the first that empirically examines a risk-benefit framework in the context of outsourcing decisions.

Subsequently, we will introduce our risk-benefit adoption model for BPO and its underlying theory. The model is then tested based on data from 218 managers in 126 German banks. The data is analyzed using the Partial Least Squares (PLS) procedure of Structural Equation Modeling (SEM). Finally, the limitations of the study will be explicated, the findings summarized and discussed as well as conclusions drawn.

2 Theoretical Framework

The risk benefit concept in decision theory compares the risks associated with and the benefits expected of a decision that is made, in order to achieve an optimal result. In an outsourcing context this concept has been discussed by Jurison (1995). Applied to the BPO context, this means that a decision maker has to assess all the potential risks and benefits that may arise as a result of BPO. These factors have to be combined into overall risks and overall benefits. The final step is the comparison of both factors, which captures the manager's attitude towards BPO. This is in line with the theory of reasoned action, where attitude "(...) refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" (Ajzen, 1991, p. 188). Based on this, we define attitude towards BPO as the overall evaluative appraisal, made by a manager that is responsible for a business process, of having that process provided by an external vendor (see also Dibbern, 2003). It is positively influenced by the perceived benefits of BPO and negatively impacted by the perceived risks of BPO. Both perceived risks and perceived benefits are influenced by five more salient beliefs about particular BPO benefits and risks. In addition, we argue that positive attitudes towards BPO are positively related to the intention to increase the level of BPO. The intention to increase BPO is also influenced by a

number of external factors that complement the explanatory power of the framework. The overall structure of the theoretical framework is depicted in Figure 2. Subsequently, each of the hypotheses (H*) in Figure 2 is deduced from theory and prior research on IS outsourcing.

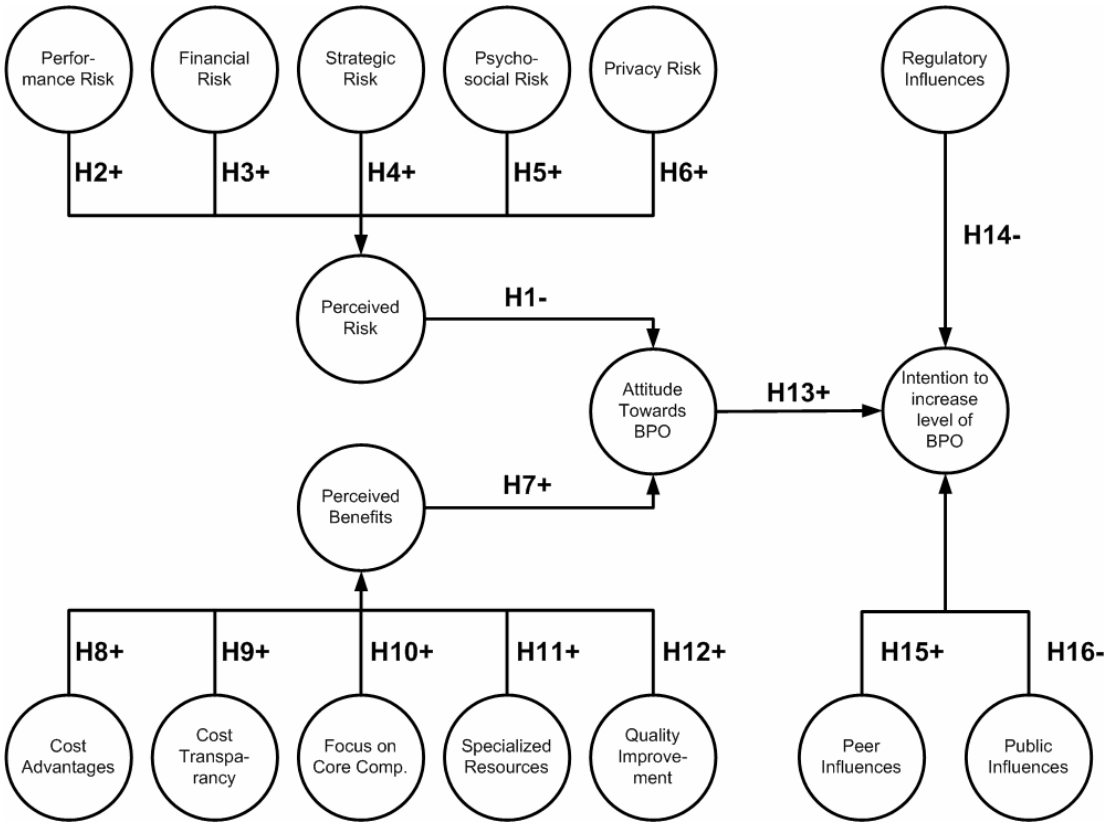

Figure 2: Risk-Benefit Adoption Model for BPO

2.1 Perceived Risk Theory

The construct "Perceived Risk" reflects an individual's subjective belief about the possible negative consequences of some type of planned action or behavior, due to inherent uncertainty. For example, in marketing research is was suggested that perceived risk affects consumer purchase behavior because of uncertainty about a product or service due to imperfect information (Bauer, 1967). The expectation of possible losses associated with a purchase inhibits buying behavior (Peter and Ryan, 1976).

In IS research, perceived risk plays an equally important role, especially in adoption-related research. For example, Featherman and Pavlou (2003) utilized perceived risk theory and the Technology Adoption Model (TAM) (Davis, 1989) to predict the adoption of e-services. They detected strong inhibiting influence of perceived risk on the criterion variables of the TAM. Featherman (2001) found that overall perceived risk reduces perceived usefulness and adoption intentions. Pavlou (2001) confirmed that perceived risk reduces an individual's intention to close a transaction. Featherman (2004) studied the influence of perceived risk to explain the adoption of a new IT-system. Montealegre and Keil (2000) found a negative impact of perceived project risks on the willingness to continue software projects. The influential role of perceived risks was supported both at the individual level and the group level.

The BPO decision is an organization's decision which usually takes place at the group level. Nevertheless, it is assumed that those managers who "own" the relevant business processes are representative of the entire organization. This is supported by the fact that the German banking regulations on outsourcing (Bundesbank, 2001) explicitly demand that banks remain fully responsible for their operations, even if they are outsourced. This means that the complete and undisputable responsibility for proper execution and control of the operations remains with the bank's management, regardless of whether the operations are performed internally or externally. Banks are further required to install an organizational unit which is responsible for monitoring the service provider and quality assurance. As the internal responsibility is typically delegated from top level management to senior management, the senior managers remain in charge of the operations after outsourcing. This should inherently lead to an increased sensitivity to outsourcing risks by the senior managers who are responsible for the outsourced process.

Following the discussion of the applicability of the concept of perceived risk and the attitude-behavior structure in explaining BPO acceptance, the next step is to identify the individual risks

that, taken together, form a manager's overall BPO risk perception. For this, the perceived risk framework developed by Cunningham (1967) has been adopted. He divided perceived risk into six dimensions (referred to as risk facets) namely performance risk, financial risk, opportunity/time risk, psychological risk, social risk and safety risk (Cunningham, 1967). These facets of perceived risk reflect the possible negative outcomes a consumer associates with the acquisition of a product. For this research, these facets need to be adapted to the outsourcing context.

2.2 Perceived Risks

Outsourcing has acquired the reputation of being risky business (Aubert, et al., 2002). There is empirical evidence that many organizations have failed to deliver their desired value (Lancellotti, et al., 2003). Some organizations have even decided to re-integrate the outsourced services into the internal organization because their expectations were not met (Lacity and Willcocks, 2001). The truth is that outsourcing is just as risky as many other uncertain business ventures (Aubert, et al., 2002). This is substantiated by numerous studies on the risks of IS outsourcing (e.g. (Aubert, et al., 1999; Aubert, et al., 2002; Earl, 1996; Willcocks and Margetts, 1994; Willcocks, et al., 1999) - for an overview see (Gewald and Hinz, 2004)). Moreover, recent literature on application service providing and BPO has already recognized the importance of risks (e.g. (Clark, 1995; Currie, et al., 2003; Gewald and Franke, 2005)). It is therefore only natural that decision makers carefully analyze the risks associated with alternative governance modes before deciding to outsource a business function.

This is particularly true of the banking industry in Germany. Regulations explicitly allow banks to outsource not only support processes but also core banking processes. The responsibility for the execution of the outsourced processes, however, remains with the bank. This means that

the bank continues to be responsible for any errors of the service provider and cannot limit liability to clients, the regulator, or other third parties. This should increase the awareness of BPO risks among senior managers who are responsible for business processes, leading to the following hypothesis:

HYPOTHESIS 1: *The level of perceived risk decreases senior management's attitude towards BPO.*

The risk facets of perceived risk theory adapted to an outsourcing context are assumed to have the following influence on the level of the perceived risk of BPO:

2.2.1 Performance Risk. This factor describes the possibility that the BPO engagement will not deliver the expected level of service. It is assumed that the manager in charge has a distinct idea of the performance of the service provider and their delivery abilities. Reviewing the literature on the risks of outsourcing reveals that the service provider is not always able to fulfill the performance expectations of the bank (e.g. (Adeleye, et al., 2004; Earl, 1996; Lacity, 2002)). This failure can occur for several reasons, such as the service provider's inability to engage the promised resources (Quelin and Duhamel, 2003), the bank and/or service provider lacking the necessary experience in handling outsourcing projects (Bahli and Rivard, 2003), or service levels declining over time (Aubert, et al., 2002).

HYPOTHESIS 2: *The level of perceived performance risk increases the level of perceived risk.*

2.2.2 Financial Risk. This means the possibility that the bank has to pay more money to reach the expected level of service than initially anticipated, i.e. the original business plan does not hold and the amortization period is prolonged. The relevant literature names this issue as one of the major risks of outsourcing (e.g. (Aubert, et al., 2002; Jurison, 1998)). Possible reasons for higher than anticipated payouts are: hidden costs imposed by the service provider (Alexander and

Young, 1996), overrun of budget for the set-up (Lancellotti, et al., 2003) and transition of the outsourcing project (Adeleye, et al., 2004), incomplete contracts resulting in costly renegotiations (Willcocks, et al., 1999).

HYPOTHESIS 3: *The level of perceived financial risk increases the level of perceived risk.*

2.2.3 Strategic Risk. This describes the possibility that the bank may lose its ability to perform its strategic options during the outsourcing engagement. This may be due to loss of flexibility (Khalfan, 2004), dependency on the service provider (Quelin and Duhamel, 2003), loss of control (Jurison, 1998), loss of know-how (Wilcocks, et al., 2004) or loss of innovative capacity (Earl, 1996).

This risk replaces the original risk facet known as safety risk (meaning a threat to life and health of the buyer of a product). This new risk facet is introduced as a means of transforming the individual's risk into an organization's risk. Although the organization itself cannot be threatened by health implications, it can lose its "organizational health" if senior management is no longer able to issue strategic instructions. Therefore, the strategic risk reflects the issue of safety risk from an organizational point of view**.**

HYPOTHESIS 4 : *The level of perceived strategic risk increases the level of perceived risk.*

2.2.4 Psychosocial Risk. This describes the possibility that the personal reputation of the manager responsible for the business process will be harmed due to an outsourcing engagement. It is assumed that this risk is based on the negative coverage outsourcing ventures receive in the daily press due to the loss of jobs in the bank. Therefore the indicators of this risk facet focus on the personal reputation of the manager amongst peers, clients and staff on the one hand and on the implications for the personal career path of the manager on the other hand. The latter being due to a loss of power as suggested by Lacity et al. (Lacity and Hirschheim, 1993b; Lacity, et al., 1994).

In the original framework of perceived risk, the psychosocial facet is twofold, comprising the psychological (the possibility of harming ones ego by closing a transaction) and a social (the possibility that the buyer's peer group will react negatively to buying a certain good) risk facet. For the sake of this research, the arguments included in both risk facets have been combined into one facet, as the two original risk facets cannot satisfactory be separated for the research question discussed in this paper. This was done in the research of Featherman and Pavlou (2003) in a similar way. The combined risk facet is constructed to embrace both intended risks of the original framework.

HYPOTHESIS 5: *The level of perceived psychosocial risk increases the level of perceived risk.*

2.2.5 Privacy Risk. This describes the possibility that sensitive client / internal data will be misused by the BPO vendor. This risk facet is not part of the original framework and was introduced by Featherman and Pavlou (2003) in an E-Business adoption context. It has two implications, data security (i.e. access controls and similar measures to prevent unauthorized personnel accessing the data) and data confidentiality (i.e. measures are taken to prevent authorized personnel disclosing data to third parties). The latter issue gains importance in BPO. Contrary to ITO, the service provider's staff needs to access the data in a non-encrypted form in order to process the relevant transactions. The issue of data security in an outsourcing context has been discussed by Khalfan (2004) and the risk associated with data confidentiality in BPO engagements by Gewald and Franke (2005). As the reputation of any financial services institution depends most importantly on discretion, this risk is expected to be of great importance.

HYPOTHESIS 6: *The level of perceived privacy risk increases the level of perceived risk.*

2.3 Perceived Benefits

Numerous studies have been conducted to analyze why corporations choose to outsource parts of their business. Four criteria were cited repeatedly, namely cost reduction, access to specialized resources, focus on core competencies and quality improvement (for an overview see (Dibbern, et al., 2004)). A recent study focusing on the banking industry, conducted by the European Central Bank, incorporating the statements of 82 individual banks from 19 European countries, confirmed these major reasons for outsourcing within the banking sector (European Central Bank, 2004).

HYPOTHESIS 7: *The level of perceived benefits increases senior management's attitude towards BPO.*

2.3.1 Cost Advantages. Previous empirical studies have substantiated the view that the IS sourcing decision is largely driven by the motivation of reducing production costs (Ang and Straub, 1998; Apte, et al., 1997b; Hirschheim and Lacity, 2000; Lacity and Willcocks, 1998; McLellan, et al., 1995a). Often the economies of scale argument has been used, arguing that an external vendor may produce the same output at higher quantity and thereby realize economies of scale due to specialization of the work force, learning curve effects, or diminishing fixed costs. Another argument is that of economies of scope, which is essentially based on the assumption that external vendors are able to share the assets required to produce different outputs. For example, it has been shown that external vendors may have advantages in coordinating complementary activities that are required in managing a customer's software applications (Levina and Ross, 2003). The same arguments can be put forward in the case of BPO.

HYPOTHESIS 8: *The higher the perceived cost advantages of an external vendor in performing a business process, the more positive the manager's attitude towards BPO will be.*

2.3.2 Cost Transparency. Another argument in favor of IS outsourcing has been the increasing

transparency of costs through outsourcing. Outsourcing is often associated with transforming fixed into variable costs (Currie and Willcocks, 1998; Huber, 1993). This leads to a higher level of flexibility on the client side, since variable costs are the precondition for a pay-per use charging system rather than a fixed price charging system (Clark, et al., 1995; Cross, 1995; McFarlan and Nolan, 1995). Moreover, higher cost transparency increases user satisfaction, because the user knows exactly what her/his money is spent for. Of course, cost transparency could also be achieved internally, e.g. by establishing a profit center IS organization (Venkatraman, 1997). However, it is quite often much harder to enforce the switch from fixed to variable costs internally rather than by outsourcing for political reasons (Lacity and Hirschheim, 1993b).

HYPOTHESIS 9: *The higher the perceived improvement in cost transparency of a business process through outsourcing, the more positive the manager's attitude towards BPO will be.*

2.3.3 Focus on Core Competencies. Another aspect of flexibility is implied in the argument that outsourcing helps organization to focus on its core business (Grover, et al., 1996; Lee and Kim, 1999; Saunders, et al., 1997). It is argued that outsourcing frees up customer resources that can be used more productively in areas that create value for the company (Huber, 1993). In IS outsourcing support for this argument has been mixed (Dibbern, et al., 2004), because it is potentially very difficult to separate IS activities that create value for the organization from those that do not. In the case of business process outsourcing, however, such a separation appears to be easier, since it is the business impact of the entire business process that is evaluated rather than the more indirect impact of IT that may eventually create value.

HYPOTHESIS 10: *The higher the perceived ability to focus on core competencies through outsourcing, the more positive the manager's attitude towards BPO will be.*

2.3.4 Access to specialized resources. BPO vendors are usually firms that specialize in

providing a specified set of services to their clients (Lamberti and Pöhler, 2004). By means of a learning curve, the vendor develops unique skills in handling those business processes. Furthermore, economies of scale allow the service provider to engage resources which cannot adequately be utilized by most banks (e.g. tax specialists for processing exotic mutual funds). This is in line with resource-based theory, which fundamentally assumes that organizations generally differ in their resources and capabilities (Penrose, 1959). Access to leading edge IT-resources was shown to be one of the main indicators of IS outsourcing success (Grover, et al., 1996; Lee and Kim, 1999; Saunders, et al., 1997) and an important driver for outsourcing decisions (Apte, et al., 1997a; Huber, 1993; Loh, 1994; McLellan, et al., 1995b).

HYPOTHESIS 11: *The higher the perception that outsourcing provides better access to specialized resources, the more positive the manager's attitude towards BPO will be.*

2.3.5 Quality Improvements. One of the constantly quoted reasons why corporations chose to use the outsourcing options is to improve the quality of their services to their clients (e.g. (Dibbern, et al., 2004; ECB, 2004; Jurison, 1995)). Especially for outsourcing business processes, some banks seem to expect to be able to offer better service quality in terms of extended services, faster execution or lower error/cancellation rates due to the engagement of a specialized service provider. A further argument for expected quality improvements is the opportunity to transform processes utilizing the external shock, an outsourcing engagement provides to the firm. This shock can enable process re-organizations would have otherwise not been possible due to old structures and resistance within the corporation. The incorporation of the process transformation procedure into the BPO venture is sometimes referred to as Business Transformation Outsourcing (BTO).

HYPOTHESIS 12: *The higher the perceived improvements in business process quality through outsourcing, the more positive the manager's attitude towards BPO will be.*

2.4 Intention to increase BPO

As argued in the beginning of this chapter, a positive attitude towards BPO is assumed to positively influence the intention to increase the level of BPO.

HYPOTHESIS 13: *The more positive the attitude towards BPO, the higher the intention to increase the level of BPO in the bank.*

In order to show that the outsourcing decision may not always follow a strictly rational process where an individual decision maker plays the dominating role in evaluating the BPO option based on a number of criteria that are finally aggregated to form her or his overall attitude to BPO, we included a number of variables that were found to influence the outsourcing decision to a certain extent in previous empirical research on IS outsourcing.

2.4.1 Regulatory influences play a major role when it comes to outsourcing in the financial services industry, one of the most highly regulated industries in developed economies (Repullo, 2004). In the context of this research, regulatory influence means banking specific regulations and the surrounding laws and regulations which are especially important for outsourcing ventures. Banking regulation on outsourcing in Germany took several years to develop to its current state (Zerwas, et al., 2002) and now provides a stable and reliable framework for banks to use outside services. Nevertheless, the requirements imposed by the regulator are tight and require additional effort if they are to be satisfied (BIS, 2004b; Bundesbank, 2001). General legal requirements like the need to keep all staff employed for at least one year in the service-providing company (§613a BGB) also add to the burdens of a BPO engagement.

HYPOTHESIS 14: *The laws and regulations applicable to outsourcing in financial services institutions negatively influence senior management's intention to increase the level of BPO.*

2.4.2 Peer influence, or in other words the corporation's external environment, is a major source of influence on the decision-making process (Goll and Rasheed, 1997). The competitive

landscape forces corporations to constantly re-assess their strategic position (Gewald and Lammers, 2005). In general, fierce competition forces firms to focus on their core competencies and to outsource other areas to specialized service providers, which adds flexibility in facing the uncertain environment (Benamati and Rajkumar, 2002). This sometimes leads to the famous "bandwagon effect", as described by Lacity and Hirschheim for the outsourcing hype in the early 1990's (Lacity and Hirschheim, 1993a). Ang and Cummings conducted an empirical study of the banking industry and found that the critical contingencies that arise due to hyper competition in this sector influence the ITO decisions in the financial services industry (Ang and Cummings, 1997).

HYPOTHESIS 15: *The action of competing financial services institutions positively influences senior management's intention to increase the level of BPO.*

2.4.3 Public influence is assumed to influence the decision to increase the level of BPO (see e.g. (Hu, et al., 1997; Loh and Venkatraman, 1992)). The contemporary press coverage on outsourcing engagements is primarily negative, due to fear of job losses and wage reductions. The ongoing discussion on offshoring adds to this negative direction of public opinion. As banks are eager to avoid negative press coverage, a negative influence on outsourcing activities is assumed.

HYPOTHESIS 16: *Public opinion regarding outsourcing ventures negatively influences senior management's intention to increase the level of BPO.*

3 Survey Method

The theoretical framework (see Figure 2) has been operationalized and converted into a model. Each construct is represented by a set of indicators, i.e. questions in a questionnaire. Together with control questions and basic demographic data the questionnaire comprised eight pages.

Questions regarding the perception of risk and benefit were measured on a 7-point Likert scale. The questionnaire was pre-tested independently with three managers from banks which were not included in the sample. Based on the insights acquired in these tests, the questionnaire was modified and finalized.

In 2003, 2,226 national banks were doing business in Germany, comprising 261 private banks, 504 savings banks, 1,395 cooperative banks and 66 other banks (specialized credit institutions, state owned banks etc.). For this research the 200 largest banks in Germany were chosen, based on their total assets as reported for the year 2003 (latest available figures at the time of the survey). The cumulated balance sheets of the 200 largest banks account for more than 90 per cent of the cumulated balance sheet of the whole German banking market (our own estimation, based on (Bundesbank, 2004a; Karsch, 2004)).

To assess the risk and benefit perceptions of the managers in charge of a business process, four core banking processes were selected, which are generally not regarded as areas of core competence for banks (Lamberti and Pöhler, 2004). These were the back office/settlement processes for transactions in securities, consumer credits, domestic payments and foreign exchange/money market. All top 200 banks were contacted by phone and the managers responsible for the business processes mentioned above were identified. Some banks do not offer all four products to their clients. Therefore, only 593 questionnaires were sent out.

The time period for returning back the questionnaires was six weeks from May 15th to June 30th 2005. Managers who had not returned the questionnaire by June 1st received a phone call asking if they needed assistance. This action resulted in an increased quota of responses. Overall, 218 usable questionnaires from 126 banks were returned out of a total sample of 593 managers in Germany's 200 largest banks. This equals a response rate of 36.8% amongst managers and 63% of the banks.

Each of the constructs of the model was measured using a block of questionnaire items/indicators. Whenever possible, existing measures from prior empirical studies were adopted. A (translated) overview of measurement items is provided in Table 4 the appendix.

4 Results of Data Analysis

4.1 Descriptive Findings

The accumulated balance sheet of the responses accounted for more than 90% of the total cumulated German banking balance sheet. This is only a rough estimate, as the questionnaire asked for the sum of assets on an interval scale to ensure anonymity. The response rate amongst large banks (assets > EUR 20bn) was exceptionally high (79.6%) which indicates a large amount of totally cumulated assets, given the structure of the German banking system.

The distribution of the banking groups (private banks, savings banks, cooperative banks, other banks) in the sample nearly matches the distribution in the market, as does the distribution of the responses. The numbers of responses per process were: Securities 62 (42.2% response rate within this process), consumer credits 52 (33.3%), domestic payments 74 (52.5%), and foreign exchange/money market 30 (25.6%).

The current state of BPO adoption of each bank was captured by asking the respondents to choose one of the following six options: (1) The bank has already outsourced the process: 56 responses (25.7% of all responses), (2) an outsourcing project is currently in progress: 9 (4.1%), (3) the outsourcing option is currently under investigation: 22 (10.1%), (4) the bank has not yet considered outsourcing the process: 58 (26.6%), (5) the bank decided against outsourcing the process: 69 (31.7%), (6) the bank decided to re-integrate the formerly outsourced process: 4 (1.8%). Respondents answering with 1 or 2 can be regarded as "pro outsourcing", 3 or 4 as

"undecided" or "neutral" and 5 or 6 as "contra outsourcing". Table 1 displays response rates on process, state of BPO and banking group level.

Process	**State of BPO**	**Private Banks**	**Savings Banks**	**Coopera-tive Banks**	**Other Banks**	
Domestic Payments	Process already outsourced / Outsourcing in progress	4 (3/1)	22 (20/2)	1 (1/0)	2 (2/0)	***29 (26/3)***
	Currently investigating / Not yet considered	1 (0/1)	6 (3/3)	3 (3/0)	2 (1/1)	***12 (7/5)***
	Decided against outsourcing / Re-integrated the process	7 (7/0)	22 (21/1)	3 (3/0)	1 (1/0)	***33 (32/1)***
	Total Responses	*12*	*50*	*7*	*5*	***74***
Securities	Process already outsourced / Outsourcing in progress	5 (3/2)	14 (13/1)	5 (5/0)	1 (1/0)	***25 (22/3)***
	Currently investigating / Not yet considered	4 (2/2)	11 (3/8)	3 (1/2)	2 (0/2)	***20 (6/14)***
	Decided against outsourcing / Re-integrated the process	4 (4/0)	8 (8/0)	3 (3/0)	2 (2/0)	***17 (17/0)***
	Total Responses	*13*	*33*	*11*	*5*	***62***
Consumer Credits	Process already outsourced / Outsourcing in progress	1 (1/0)	6 (3/3)	2 (2/0)	0 (0/0)	***9 (6/3)***
	Currently investigating / Not yet considered	6 (1/5)	20 (4/16)	3 (0/3)	1 (0/1)	***30 (5/25)***
	Decided against outsourcing / Re-integrated the process	3 (2/1)	6 (5/1)	2 (2/0)	2 (1/1)	***13 (10/3)***
	Total Responses	*10*	*32*	*7*	*3*	***52***
Foreign Exchange and Money Market	Process already outsourced / Outsourcing in progress	0 (0/0)	1 (1/0)	1 (1/0)	0 (0/0)	***2 (2/0)***
	Currently investigating / Not yet considered	4 (1/3)	12 (2/10)	2 (1/1)	0 (0/0)	***18 (4/14)***
	Decided against outsourcing / Re-integrated the process	2 (2/0)	6 (6/0)	2 (2/0)	0 (0/0)	***10 (10/0)***
	Total Responses	*6*	*19*	*5*	*0*	***30***
		41	***134***	***30***	***13***	***218***

Table 1: Respondent's State of BPO, Banking Groups and Processes

Most of the responding managers (85.9%) were positioned on the 2nd or 3rd hierarchical level of the corporation. This is in line with the goal of the study, as the 1st level (CEO, COO etc.) usually carries responsibility for more than one of the relevant processes and therefore does not

meet the requirements of undivided responsibility for the process in question. The aim of this study is to capture the perceptions of the highest ranking manager solely responsible for one of the business processes mentioned above. Table 2 summarizes additional demographic information about the respondents.

Item	n	Mean	Standard Deviation	Scale
Experience with outsourcing	218	4.08	1.67	7 scale: (1) little experience to (7) very experienced
Number of staff reporting to the respondent	216	71.29	117.72	numeric
Years of experience in this position	216	8.76	7.72	numeric

Table 2: Respondent Demographics

To measure the intention to increase the level of BPO, the current and the future level of outsourced value creation were requested (see Table 3).

Item	n	Mean	Standard Deviation	Scale
Percentage of value creation already outsourced	82	53.43	35.67	numeric (percentage)
Percentage of value creation to be outsourced	74	76.96	22.89	numeric (percentage)

Table 3: Process Outsourcing Demographics

4.2 Control Variables

In order to control for the influence of distinctive characteristics of the individual firms, several factors were analyzed to see whether they have a systemic influence on the results. The following factors were assessed: Firm size, type of process, type of bank (the vast majority of German banks belongs to either of three institutionalized groups: private banks, savings banks or cooperative banks (Hackethal, 2004)). No statistically significant influence of these variables has been detected.

4.3 Results of PLS Estimation

In the following, the results of the model testing will be presented. This includes the test of the measurement model and the structural model.

4.3.1 Measurement Model. In terms of convergent validity (Bagozzi and Phillips, 1982, p. 468), both indicator reliability and construct reliability were assessed (Peter, 1981, p. 65). *Indicator reliability* was examined by looking at the construct loadings. All but one of the loadings are significant at the 0.01 level and above the recommended 0.7 parameter value (significance tests were conducted using the bootstrap routine with 500 resamples (Chin, 1998)). *Construct reliability and validity* was tested using two indices: (1) the *composite reliability* (CR) and (2) the *average variance extracted* (AVE). All but one of the estimated indices were above the threshold (Bagozzi and Yi, 1988) of 0.6 for CR and 0.5 for AVE (see appendix Table 5). The item that did not pass the tests described above is 'a106s3', an indicator loading on the regulatory influence construct. Due to the unsatisfactory loading a solid interpretation of HYPOTHESIS 14 is not possible.

Finally, the *discriminant validity* of the construct items was assured by looking at the cross-loadings. They are obtained by correlating the component scores of each latent variable with both their respective blocks of indicators and all other items that are included in the model (Chin, 1998, p. 321). The cross loadings are presented in Table 6 (appendix). The loadings on their respective constructs are printed bold. Moving across the rows reveals that each item loads higher on its respective construct than on any other construct. Going down a column also shows that a particular construct loads highest with its own item. Taken together, this implies discriminant validity for both samples.

4.3.2 Structural Model. Having gained confidence that the measures work appropriately, the next step is to test the explanatory power of the entire model as well as the predictive power of

the independent variables. The explanatory power is examined by looking at the *squared multiple correlations* (R^2) of the main dependent variable, the attitude towards business process outsourcing. As can be inferred from Figure 2, 77% (R^2=0.774) of the variation in the attitude towards outsourcing is explained by the independent variables. Moreover, 57.5% of the variations in the intention to increase the level of BPO are explained by the model. The R^2 values for perceived risk (R^2=0.571) and perceived benefits (R^2=0.645) are also very encouraging.

The hypotheses are tested by examining the magnitude of the standardized parameter estimates between constructs together with the corresponding t-values that indicate the level of significance (t-values were obtained using the bootstrap routine (Chin, 1998, p. 320)). An overview of the results is given in Table 5 in the appendix. Figure 2 depicts the findings graphically.

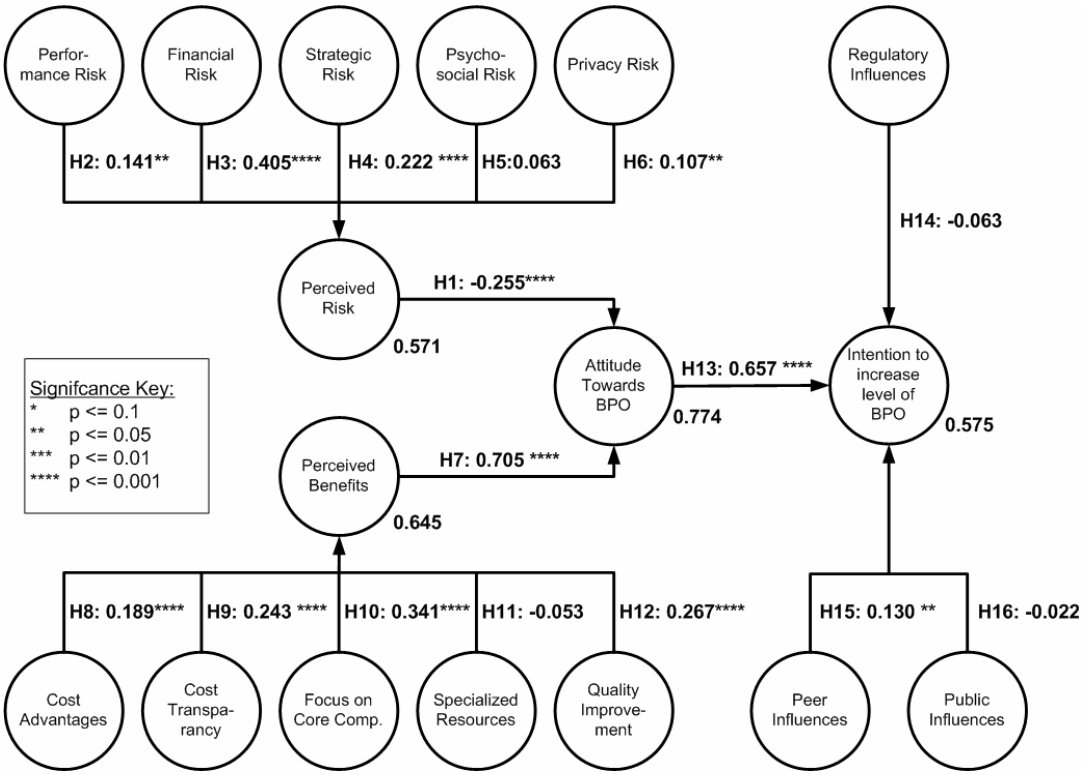

Figure 2: Structural Model Findings

The findings show solid support for the hypothesized model. All path coefficients show the expected signs and are -with few exceptions- significant at the 0.05 (**) or 0.001 (****) level.

5 Discussion and Implications

5.1 Discussion of Results

This study is the first quantitative empirical study of the determinants of the BPO decision and the first confirmatory work on the risk/return-concept in BPO. The results are very encouraging. The high response rate indicates the importance of the topic and the interest of practitioners in the results of this research.

The results show that both perceived risk and perceived benefits have a strong influence on the attitude of the manager in charge of outsourcing a business process. However, it is interesting to note that perceived benefits are much more important influencers than the perceived risks.

HYPOTHESIS 7, reflecting the positive influence of perceived benefits on attitude proved to be very strong, both in loading and in significance. The antecedents of the overall perceived benefits showed an interesting pattern. The most important benefit for the managers in charge is the possibility of re-focusing the business on the bank's core competences. This indicates that managers assume a great need for action in this area, which is in line with contemporary assessments of the German banking landscape (e.g. (Hackethal, 2004)). The second most important factor is the opportunity to improve the quality of process execution. This shows (also in line with the study of König et. al (2005)) that banks are currently not satisfied with their back office processes and see outsourcing as an opportunity to optimize them. It may be that outsourcing -as a kind of external shock- is regarded as being helpful in successfully achieving benefits from process-reengineering efforts. Surprisingly, cost issues rank only third and fourth on the benefit scale, cost transparency loading higher than cost advantages/reductions. This

indicates that managers are increasingly dis-illusioned about the savings potential of an outsourcing engagement and, rather, see benefits from higher transparency or the reduction of volume risk through variable pricing mechanisms (Ross and Westerman, 2004). The fact that access to specialized resources ranks lowest amongst the benefits of BPO implies two things: Firstly, this study focuses on outsourcing banking-specific processes, most of them having been conducted by the bank literally since it came into existence. Therefore the advantage of a specialized service provider in respect of deeper know-how may diminish. Secondly, the processes investigated in this study are more or less "commodity processes", indicating that the need for specialized resources may be of lesser magnitude.

HYPOTHESIS 1 regarding the negative influence of perceived risk towards attitude was supported on a very high significance level. An analysis of the risk facets shows that financial risk is by far the most important risk factor, indicating deep uncertainty regarding the pricing mechanism of an outsourcing engagement. Reasons for this can either be the anticipation of unexpected costs not covered by the outsourcing contract or a lack of confidence in the bank's own abilities to calculate business cases. The latter may be linked with the uncertainty about their own costs for executing the process prevailing in many financial services institutions (see the empirical study of credit processes in banking by König et al. (2005)). The second most salient risk is strategic risk, ahead of performance risk. This indicates that the managers are far more concerned with long term perspectives than with short term problems that could possibly be solved by allocating additional funds. The risk facets that prove to be of virtually no importance are also of special interest. The low loading of privacy risk is of special interest, as several cases have been reported where this risk became salient, the most recent one being the theft of 40 million sensitive client files from CardSystems Solutions, a service provider for Mastercard (Dash and Zeller, 2005). Another interesting result is the low importance of psychosocial risk, i.e.

the negative impulses for the personal reputation and career of the manager. The empirical results indicate that this risk may have been overestimated and is of no importance for the individual practitioner.

External influence on the intention to increase BPO has not been shown to be of high explanatory power. As expected, regulatory and public influences load negatively, but do not load very high. Therefore those influences cannot be interpreted correctly. Peer influences load positively, but nevertheless the loading is relatively low. This indicates that there is some kind of bandwagon-effect in the market, but that it is not as strong as that described years ago for ITO (Lacity and Hirschheim, 1993a).

The influence of attitude on the intention to increase the level of BPO (HYPOTHESIS 13) is highly significant. This shows that the explanatory power of the attitude construct is satisfactory for the decision.

Overall, this study has shown that attitude is a useful indicator for predicting the intention to outsource business processes. Furthermore it was revealed that perceived benefits outweigh perceived risks, which indicates that managers are more concerned with solving current problems by accessing the advantages of outsourcing, than with future problems that may or may not arise.

5.2 Study Limitations

There are a number of points to be kept in mind when interpreting the results of this research. This study focused exclusively on one industrial sector in one country. Therefore, the results may not be representative for other industries or across countries. This is of special importance if one takes the inherent reference framework of outsourcing and the associated risks and responsibilities into account, as required by tight national regulation. The national character may change in years to come, when the international supervisory body for the banking system (the

Bank for International Settlements) finally releases its recommendations for outsourcing in financial services (BIS, 2004b) to be incorporated in national regulations.

5.3 Future Research

It appears that more research into the antecedents of perceived risk and benefits is still necessary in order to gain a deeper understanding of the determinants of the BPO decision. Research would benefit from studies that further disaggregate the risks and benefits, to gain a better understanding of the composition and individual importance of the factors that constitute the risk facets discussed in this paper.

Furthermore, the development of innovative risk-sharing approaches would be a major area for additional research, especially taking the advances of the Bank for International Settlement regarding the sanctions for operational risk in the banking system (BIS, 2004a) into account. Risk sharing approaches between banks and service providers have been shown to be one of the major areas for future research.

6 Conclusion

This paper examined the determinants of the decision to outsource business processes in terms of the associated risks and benefits as perceived by the managers in charge. Empirical evidence that management values the benefits of BPO higher than the associated risks was found. Unlike other studies, this research found that cost reductions are not the key driver any longer, but that the BPO decision is driven far more by strategically motivated factors like the ability to (re-) focus on core competencies and possible quality improvements. Increased cost transparency also turns out to be more important than pure cost reduction. Overall, German banks can be seen to favor business value over cost reductions in business process outsourcing engagements.

An analysis of the risks managers associate with BPO also offers interesting insights. The most important risks are those that should be controlled mainly by the bank itself. Financial and strategic risks are, to the largest extent, influenced by the bank itself, much more than by the service provider. The risks in the area of responsibility controlled by the service provider (performance and privacy risk), are regarded of lesser importance. This implies a general trust and positive attitude to the service provider. Deeper investigations into the individual risk facets are necessary, but one can assume that the service provider's next task would be to help their (potential) clients to mitigate the risks that are within the bank’s sphere of control. This offers service providers new ideas for the development of outsourcing proposals.

6.1 Implications for Practice

This study has interesting points to offer for the practitioner, especially for service providers. The assessment of perceived benefits showed contrary to other empirical studies of the younger past (e.g. (Lancellotti, et al., 2003)), that clients are becoming increasingly cautious regarding cost advantages. Therefore, outsourcing offers should emphasize propagating business value not cost reductions. Clients tend to value quality factors like process improvements and cost transparency higher than pure cost savings.

Taking the perceived risks into account, it becomes important that this area should also offer the potential for re-thinking the current outsourcing proposal structure. It can be assumed that service providers will succeed in the future if they are able to offer additional business value in the form of risk mitigation or risk sharing approaches to their clients. In particular, innovative concepts aimed at lowering the client's financial risk, i.e. the possibility that the calculated costs will increase beyond her/his expectations, seem to be key to gaining market share.

6.2 Implications for Research

Previous research into ITO and BPO indicated that cost advantages are the prevailing reason why corporations choose to outsource parts of their business. This study indicates a shift in the mind of the managers responsible, at least in the German banking industry. As shown before, business value seems to be replacing cost reduction as the main motive for outsourcing. Researchers should be aware of this and think about re-focusing their research efforts on innovative pricing mechanisms and contract designs which include risk-mitigating concepts.

7 Appendix

Measurement Items: The items were measured on a (positive-to-negative) seven-point Likert scale ranging from "very high" to "very low" with "neutral" as mid-point for the risk constructs and "strongly agree" to "strongly disagree", with "indifferent" as a mid-point for the benefit constructs. Please note that (a) the items have been translated. The original survey was conducted in German. (b) Respondents were asked for their own personal opinion on the questions, a "corporate opinion" was explicitly not asked for. (c) The phrase "the process" refers to the process the respondent is in charge of. "The bank" refers to the employer of the respondent.

How do you perceive the risk that…	
Performance risk (PerfRisk)	
a16s2	…the service provider will not provide the agreed service?
a17s2	...the service provider will not perform the process to the desired quality (speed and accuracy) and quantity?
a18s2	...the service provider agrees on more beforehand than he actually delivers during the outsourcing venture?
Financial risk (FinRisk)	
a19s2	...the originally calculated business case does not include all the actual costs?
a20s2	...unanticipated costs emerge that reduce the calculated cost savings?
a21s2	...the anticipated cost savings will not be achieved?
Strategic risks (StratRis)	
a28s2	...the bank loses its ability to react flexibly to changes in the market ?
a29s2	...the bank loses its ability to improve its position in the market by means of internal optimization procedures?

a30s2	...the bank loses know-how that is required to remain competitive in future markets?
Psychosocial risk (PsycRisk)	
a22s2	...the outsourcing of the business process damages your standing among colleagues and business partners?
a23s2	...the outsourcing of the business process negatively affects your standing within and outside the bank?
a24s2	...the outsourcing of the business process decreases your personal esteem amongst colleagues and business partners?
Privacy risk (PrivRisk)	
a25s2	...the outsourcing of the business process negatively affects the security level of confidential customer data?
a26s2	...the service provider is not able to provide the level of security as requested by the bank?
a27s2	...your bank will suffer negative consequences from insufficient data security and confidentiality?
Perceived risk (Perc_Ris)	
a31s3	Outsourcing of business processes is associated with a high level of risk.
a32s3	There is a high level of risk that the expected benefits of outsourcing will not materialize.
a33s3	Overall, the outsourcing of business processes is risky.

Please rate the following statements:	
Cost advantage (CostAdv)	
a34s3	Our bank can carry out that process internally at lower cost than an external service provider.
a35s3	Our in-house costs are higher than the price an external service provider charges.
a36s3	Outsourcing lowers the costs that arise from executing this process.
a37s3	Overall, I believe that outsourcing is an appropriate measure to lower the costs within this business process.
Cost transparency (CostTrans)	
as84s3	Outsourcing this process will result in better programmability of the cost of process execution.
a85s3	Outsourcing this process will result in higher cost transparency.
a86s3	Outsourcing will convert the fixed costs of process execution into variable costs.
Focus on core competencies (CoreComp)	
a41s3	Outsourcing allows the bank to enhance the individual capabilities that distinguish the bank from its competitors.
a42s3	By outsourcing the bank can concentrate better on putting its strategies into action.
a43s3	Overall, outsourcing is a good way to foster the bank's concentration on its core competencies.

Access to specialized resources (SpecRes)	
a38s3	By outsourcing our bank can access resources (human and technological) which are not available internally.
a39s3	By accessing the resources of an external service provider the process can be performed more effectively.
a40s3	Overall, outsourcing enables us to better access resources.
Quality Improvements through outsourcing (Quality)	
a44s3	An external service provider has the potential to perform this process at higher quality than our bank.
a45s3	A external service provider is able to perform this process faster and/or at higher accuracy than our bank.
a46s3	By outsourcing the quality of this process is improved.
Perceived Benefits (Perc_Ben)	
a47s3	Outsourcing business processes has a lot of advantages.
a48s3	Outsourcing business processes is a useful instrument for corporate management.
a49s3	Overall, outsourcing business processes is a useful strategic option.
Attitude towards outsourcing (Attitude)	
a50s3	Overall, my attitude towards outsourcing is positive.
a51s3	The outsourcing of business processes is an attractive alternative to internal production.
a52s3	I believe that the benefits of business process outsourcing outweigh the associated risks.
a53s3	Overall, the outsourcing of business processes provides our bank with added value.

Table 4: Measurement Items / Reflective Indicators

Table 5: Indicator and Construct Reliability

Construct	CR	AVE	Item	Loading
CoreComp	0.96	0.90	a41s3	0.9429
			a42s3	0.9604
			a43s3	0.9398
Perc_Ben	0.94	0.84	a47s3	0.9103
			a48s3	0.9092
			a49s3	0.9269
Perc_Ris	0.93	0.82	a31s3	0.9044
			a32s3	0.9026
			a33s3	0.9165
StratRis	0.92	0.80	a28s2	0.9295
			a29s2	0.9185
			a30s2	0.8341
PerfRisk	0.94	0.83	a16s2	0.8873
			a17s2	0.9360
			a18s2	0.9080
FinRisk	0.95	0.87	a19s2	0.9416
			a20s2	0.9475
			a21s2	0.9009
PsycRisk	0.97	0.92	a22s2	0.9608
			a23s2	0.9613
			a24s2	0.9518
PrivRisk	0.96	0.90	a25s2	0.9388
			a26s2	0.9525
			a27s2	0.9532
CostAdv	0.92	0.75	a34s3	-0.8443
			a35s3	0.8549
			a36s3	0.8771
			a37s3	0.8845
SpecRes	0.92	0.79	a38s3	0.8157
			a39s3	0.9137
			a40s3	0.9334
Quality	0.96	0.90	a44s3	0.9311
			a45s3	0.9490
			a46s3	0.9602
Attitude	0.94	0.81	a50s3	0.8998
			a51s3	0.9296
			a52s3	0.8633
			a53s3	0.8949
Intentio	0.92	0.79	a55s3	0.8947
			a56s3	0.9333
			a54s3	0.8388
PeerInfl	0.78	0.65	a107s3	0.9335
			a108s3	0.6575
Regulati	0.40	0.31	a105s3	0.7549
			a106s3	-0.1994
PublInfl	0.89	0.80	a109s3	0.9580
			a110s3	0.8296
CostTran	0.88	0.72	a84s3	0.9261
			a85s3	0.9060
			a86s3	0.6872

N.B. Items a34s3 and a106s3 negatively influence their respective constructs.

Table 6: Cross Loadings

Item	PerfRisk	FinRisk	PsycRisk	PrivRisk	StratRis	Perc_Ris	CostAdv	SpecRes	CoreComj	Quality	Perc_Ber	Attitude	Intentio	CostTran	Regulati	PeerInfl	PublInfl
a16s2	**0,89**	0,53	0,23	0,45	0,43	0,51	-0,29	-0,20	-0,22	-0,36	-0,29	-0,33	-0,17	-0,20	0,12	-0,18	0,18
a17s2	**0,94**	0,57	0,26	0,52	0,47	0,56	-0,31	-0,23	-0,25	-0,39	-0,38	-0,38	-0,20	-0,24	0,15	-0,22	0,12
a18s2	**0,91**	0,61	0,27	0,48	0,55	0,53	-0,31	-0,28	-0,27	-0,46	-0,37	-0,33	-0,17	-0,17	0,10	-0,20	0,12
a19s2	0,56	**0,94**	0,27	0,37	0,53	0,62	-0,42	-0,28	-0,38	-0,39	-0,41	-0,41	-0,27	-0,26	0,13	-0,24	0,20
a20s2	0,60	**0,95**	0,27	0,38	0,57	0,62	-0,38	-0,27	-0,39	-0,42	-0,42	-0,40	-0,23	-0,24	0,16	-0,22	0,20
a21s2	0,59	**0,90**	0,30	0,38	0,57	0,68	-0,49	-0,28	-0,45	-0,44	-0,42	-0,44	-0,26	-0,28	0,08	-0,33	0,04
a22s2	0,23	0,29	**0,96**	0,36	0,38	0,33	-0,25	-0,07	-0,24	-0,20	-0,26	-0,33	-0,27	-0,12	0,05	-0,14	0,28
a23s2	0,30	0,33	**0,96**	0,39	0,41	0,38	-0,23	-0,08	-0,27	-0,21	-0,29	-0,37	-0,29	-0,16	0,05	-0,12	0,28
a24s2	0,27	0,24	**0,95**	0,38	0,41	0,32	-0,17	-0,06	-0,18	-0,21	-0,22	-0,30	-0,25	-0,09	0,04	-0,12	0,26
a25s2	0,51	0,40	0,43	**0,94**	0,44	0,48	-0,28	-0,23	-0,28	-0,31	-0,39	-0,48	-0,38	-0,28	0,21	-0,20	0,19
a26s2	0,51	0,38	0,35	**0,95**	0,37	0,40	-0,21	-0,21	-0,23	-0,30	-0,37	-0,42	-0,37	-0,20	0,24	-0,14	0,21
a27s2	0,49	0,39	0,34	**0,95**	0,39	0,44	-0,22	-0,25	-0,26	-0,28	-0,35	-0,44	-0,38	-0,21	0,20	-0,16	0,17
a28s2	0,57	0,60	0,36	0,43	**0,93**	0,61	-0,41	-0,28	-0,39	-0,47	-0,46	-0,46	-0,22	-0,25	0,11	-0,28	0,17
a29s2	0,45	0,53	0,43	0,40	**0,92**	0,55	-0,44	-0,27	-0,44	-0,47	-0,49	-0,49	-0,27	-0,26	0,09	-0,32	0,19
a30s2	0,40	0,47	0,33	0,29	**0,83**	0,48	-0,27	-0,27	-0,29	-0,45	-0,36	-0,37	-0,21	-0,15	0,13	-0,28	0,08
a31s3	0,52	0,55	0,30	0,43	0,56	**0,90**	-0,37	-0,27	-0,41	-0,38	-0,42	-0,48	-0,34	-0,19	0,11	-0,23	0,27
a32s3	0,57	0,72	0,35	0,42	0,59	**0,90**	-0,48	-0,33	-0,49	-0,46	-0,48	-0,55	-0,37	-0,34	0,18	-0,36	0,17
a33s3	0,51	0,60	0,33	0,42	0,51	**0,92**	-0,46	-0,36	-0,52	-0,52	-0,47	-0,60	-0,46	-0,32	0,17	-0,32	0,17
a34s3	0,27	0,43	0,24	0,19	0,39	0,44	**-0,84**	-0,43	-0,53	-0,42	-0,53	-0,48	-0,34	-0,36	0,04	-0,37	-0,03
a35s3	-0,28	-0,40	-0,22	-0,21	-0,38	-0,37	**0,85**	0,43	0,46	0,39	0,45	0,44	0,34	0,28	0,00	0,37	0,09
a36s3	-0,24	-0,35	-0,11	-0,17	-0,28	-0,36	**0,88**	0,53	0,48	0,45	0,50	0,48	0,39	0,37	-0,04	0,40	0,13
a37s3	-0,36	-0,42	-0,22	-0,29	-0,41	-0,49	**0,88**	0,51	0,58	0,54	0,60	0,63	0,48	0,46	-0,08	0,49	0,02
a38s3	-0,21	-0,20	0,00	-0,18	-0,19	-0,24	0,39	**0,82**	0,47	0,44	0,38	0,36	0,22	0,36	0,07	0,26	0,16
a39s3	-0,24	-0,31	-0,10	-0,23	-0,30	-0,37	0,58	**0,91**	0,53	0,53	0,50	0,48	0,35	0,45	-0,07	0,39	0,24
a40s3	-0,25	-0,28	-0,08	-0,22	-0,30	-0,32	0,49	**0,93**	0,52	0,48	0,46	0,43	0,32	0,40	0,06	0,35	0,17
a41s3	-0,26	-0,39	-0,18	-0,24	-0,38	-0,50	0,57	0,56	**0,94**	0,59	0,66	0,64	0,51	0,49	-0,11	0,53	0,09
a42s3	-0,27	-0,44	-0,22	-0,28	-0,39	-0,52	0,59	0,57	**0,96**	0,59	0,69	0,68	0,53	0,48	-0,09	0,54	0,05
a43s3	-0,25	-0,41	-0,28	-0,26	-0,41	-0,48	0,54	0,50	**0,94**	0,55	0,66	0,66	0,55	0,44	-0,11	0,56	0,06
a44s3	-0,42	-0,40	-0,21	-0,30	-0,47	-0,50	0,48	0,55	0,62	**0,93**	0,61	0,58	0,43	0,41	-0,04	0,46	0,02
a45s3	-0,43	-0,42	-0,21	-0,28	-0,47	-0,45	0,50	0,51	0,54	**0,95**	0,58	0,55	0,43	0,39	-0,01	0,42	0,08
a46s3	-0,41	-0,44	-0,21	-0,30	-0,51	-0,49	0,51	0,49	0,58	**0,96**	0,65	0,62	0,43	0,41	-0,05	0,45	0,08
a47s3	-0,38	-0,49	-0,26	-0,35	-0,51	-0,55	0,64	0,54	0,70	0,66	**0,91**	0,79	0,58	0,56	-0,13	0,59	0,01
a48s3	-0,28	-0,35	-0,22	-0,33	-0,41	-0,40	0,48	0,36	0,60	0,54	**0,91**	0,75	0,61	0,50	-0,13	0,50	-0,01
a49s3	-0,38	-0,38	-0,26	-0,38	-0,42	-0,44	0,55	0,48	0,63	0,58	**0,93**	0,80	0,59	0,54	-0,10	0,48	-0,04
a50s3	-0,28	-0,35	-0,30	-0,38	-0,36	-0,47	0,47	0,39	0,61	0,51	0,77	**0,90**	0,71	0,42	-0,18	0,50	-0,05
a51s3	-0,28	-0,35	-0,31	-0,42	-0,40	-0,48	0,53	0,41	0,62	0,55	0,81	**0,93**	0,72	0,51	-0,15	0,51	-0,01
a52s3	-0,43	-0,45	-0,30	-0,48	-0,48	-0,61	0,49	0,42	0,55	0,54	0,68	**0,86**	0,58	0,51	-0,16	0,46	-0,09
a53s3	-0,38	-0,48	-0,36	-0,42	-0,54	-0,62	0,64	0,50	0,72	0,61	0,78	**0,89**	0,66	0,55	-0,17	0,51	-0,09
a54s3	-0,22	-0,17	-0,31	-0,41	-0,19	-0,31	0,28	0,28	0,42	0,35	0,51	0,65	**0,84**	0,34	-0,19	0,34	-0,11
a55s3	-0,13	-0,26	-0,18	-0,29	-0,23	-0,40	0,47	0,32	0,54	0,41	0,61	0,64	**0,89**	0,44	-0,17	0,49	0,02
a56s3	-0,18	-0,30	-0,27	-0,36	-0,27	-0,44	0,45	0,31	0,53	0,44	0,61	0,71	**0,93**	0,42	-0,16	0,50	-0,02
a84s3	-0,23	-0,30	-0,11	-0,23	-0,30	-0,38	0,46	0,40	0,50	0,43	0,60	0,60	0,47	**0,93**	-0,15	0,41	0,00
a85s3	-0,21	-0,25	-0,06	-0,17	-0,20	-0,28	0,40	0,47	0,42	0,44	0,49	0,45	0,37	**0,91**	-0,05	0,39	0,09
a86s3	-0,11	-0,12	-0,19	-0,24	-0,10	-0,07	0,17	0,28	0,31	0,18	0,34	0,31	0,29	**0,69**	-0,03	0,24	0,07
a105s3	0,10	0,10	0,11	0,25	0,12	0,21	-0,05	0,07	-0,04	0,04	-0,02	-0,12	-0,12	0,01	**0,75**	0,02	0,11
a106s3	-0,03	-0,02	0,09	0,07	0,02	0,08	-0,01	0,09	0,08	0,10	0,15	0,07	0,08	0,15	**-0,20**	0,17	0,08
a107s3	-0,27	-0,33	-0,20	-0,24	-0,39	-0,41	0,48	0,38	0,60	0,48	0,61	0,61	0,51	0,47	-0,14	**0,93**	0,08
a108s3	0,00	-0,05	0,09	0,03	-0,03	-0,03	0,23	0,19	0,25	0,21	0,21	0,17	0,24	0,11	0,02	**0,66**	0,49
a109s3	0,16	0,17	0,26	0,22	0,16	0,21	0,05	0,19	0,05	0,04	-0,04	-0,07	-0,04	0,04	0,04	0,23	**0,96**
a110s3	0,10	0,09	0,26	0,11	0,14	0,18	0,09	0,20	0,08	0,10	0,03	-0,04	-0,02	0,07	0,09	0,22	**0,83**

N.B. Items a34s3 and a106s3 negatively influence their respective constructs.

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