The impact of cultural differences in offshore outsourcing—Case study results from German–Indian application development projects

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Abstract Offshore outsourcing to vendors in foreign countries causes unique challenges which need to be understood and managed effectively. This paper explores cultural differences in IS offshoring arrangements involving German client organizations that outsource application development activities to Indian vendors. For this purpose, a research framework is developed based on both theoretical considerations and specific empirical observations from multiple case studies. The goal is to (1) explore the nature of cultural differences in offshore outsourcing arrangements in depth and to (2) analyze the relationship between those cultural differences and offshore outsourcing success. Based on the case findings, implications and practices for the management of offshore development projects are outlined. The results indicate that cultural differences in terms of power distance, IS designer values, and an active versus passive working attitude critically affect several dimensions of relationship quality, thereby influencing offshore outsourcing success. A clear definition of roles and mechanisms, strong leadership, and an active management of culture by adapting to either the client's or the vendor's national culture appeared to be effective ways to manage cultural differences.

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1 Introduction

In the early 1990s, offshoring of software work to development centers in low wage countries pertained to large Western companies such as IBM and SAP who systematically attempted to take a hold of wage differences and resources of a global market. With the rise of the new millennium, former development countries such as India and emerging nations in Eastern Europe began to establish themselves as outsourcing vendors in the global market of IT services, drawing from a growing pool of qualified IS resources (Bode and Mertens 2006; Hirschheim et al. 2004). Given this global supply, offshore outsourcing of IT services has become a widely adopted part of many global organizations' sourcing strategies, especially in the labor-intensive domain of application services. Similar to domestic outsourcing, however, offshore outsourcing is associated with the typical market-based frictions. These frictions pertain to the very nature of systems development and maintenance as services that require a lot of communication and cooperation between the client (e.g., users, business managers, as well as systems analysts and architects) and the vendor (e.g., solutions architects, systems designers and programmers). It is therefore of little surprise that studies on domestic outsourcing have shown that effective relationship management that is aimed at reducing frictions is one of the key challenges and success factors of IS outsourcing (Goles 2001; Grover et al. 1996; Kern 1997; Lee and Kim 1999).

Offshore outsourcing, however, brings about yet another challenge to relationship management: the cultural differences between client and vendor. Existing literature on IS offshoring frequently mentions cultural differences and associated problems (Heeks et al. 2001; Krishna et al. 2004; Nicholson and Sahay 2001; Rao 2004; Vogel 2005). However, the actual effect of cultural differences on offshore outsourcing success has not been analyzed in a systematic way. When examining the emergent literature, it is striking that little attempt has been made to draw on existing research on outsourcing success factors (for an overview see Dibbern et al. 2004) and to analyze the influence of offshore-specific factors. Existing studies have mostly discussed offshore outsourcing as a separate phenomenon, either on a conceptual basis (Carmel and Agarwal 2001; Kliem 2004; Krishna et al. 2004; Rao 2004) or by developing 'best practices' based on case studies (Heeks et al. 2001; Kaiser and Hawk 2004; Nicholson and Sahay 2001; Rottman and Lacity 2004). However, when looking closer, there is considerable overlap between the arguments pertaining to IS outsourcing success in general and IS offshore outsourcing success in particular.

Accordingly, the main goal of this paper is to draw a link between general outsourcing success factors and offshore-specific factors. From the range of offshore-specific factors (Carmel and Agarwal 2001; Gopal et al. 2003; Heeks et al. 2001; Kliem 2004; Krishna et al. 2004; Nicholson and Sahay 2001), the focus is set on cultural differences in offshore outsourcing of application development. The following research questions will be addressed:

1. How can cultural differences in offshore outsourcing be characterized?
2. How do cultural differences affect the success of offshore application development projects?

Specifically, offshore development projects involving German customer organizations and Indian vendor organizations are considered. By focusing on offshoring projects to India, the results of this study may be compared to other, mostly USA and UK based studies that also analyzed offshore outsourcing to India (such as Heeks et al. 2001; Kaiser and Hawk 2004; Nicholson and Sahay 2001; Rottman and Lacity 2004). Our study takes an exploratory approach, thereby attempting to identify relevant cultural differences in German–Indian software development projects and to analyze the influence of those differences on established determinants and measures of outsourcing success from studies on domestic outsourcing.

2 Research framework

This work starts with an a priori development of a theoretical, heuristic framework (Eisenhardt 1989), thereby allowing for a focused analysis of the role of cultural differences in offshore outsourcing. It will serve as a guide for gathering qualitative data, ensuring that those factors that turned out to be relevant in previous (offshore) outsourcing studies will be considered. The research framework is shown in Fig. 1.

The influence of relationship quality on offshore outsourcing success essentially reflects previous findings about success factors of outsourcing relationships. The focus of this study will be to analyze how those factors are influenced by cultural differences. It is important to note that the framework serves as a *conceptual framework* that guides our research (Eisenhardt 1989; Kubicek 1977); we do not intend to test specific relationships between selected variables. The framework shall foster our understanding of the factors that may be influenced by cultural differences. In the spirit of Eisenhardt's (1989) process of building theory from case study research, we specified our dependent variable based on existing outsourcing literature, which is the relation between relationship quality and offshoring success. Moreover, we outline our preliminary thoughts about potential cultural differences; however, we do not a priori specify specific relationships between cultural differences and our dependent variable. Instead, the influence of cultural differences will be examined in an exploratory fashion by the means of case study analysis.

In the following, the constructs will be presented in detail. Furthermore, based on literature on cross-cultural issues and offshore outsourcing, cultural dimensions will be selected which lend themselves to explain cultural differences between clients and vendors in IS offshore outsourcing arrangements.

2.1 Success measures in IS outsourcing literature

Two ways of measuring success have commonly been applied in the literature on IS outsourcing (see Dibbern et al. 2004, pp. 69 ff.): (1) the realization of initial expectations and (2) the level of overall satisfaction. As existing studies indicate, the reasons for offshore outsourcing center around saving costs, getting access to skilled and qualified resources, increasing flexibility, and receiving a good quality of services (Bartenschlager et al. 2005; Carmel and Agarwal 2001). In contrast to domestic outsourcing (Teng et al. 1995), strategic considerations play a less
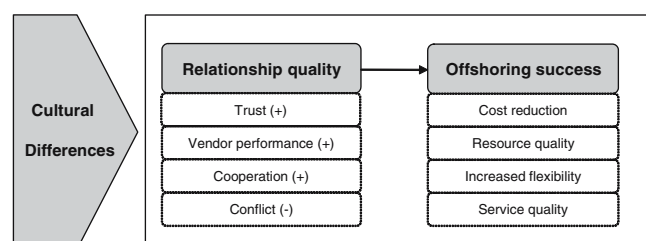

Fig. 1 Research framework

significant role for the offshore outsourcing decision and only become relevant in later stages (Carmel and Agarwal 2002). Therefore, this study will use four measures of offshore outsourcing success, that is, cost reduction, resource quality, increased flexibility, and service quality (Grover et al. 1996; Lee and Kim 1999; Saunders et al. 1997) (Fig. 1). In aggregate, these four success indicators amount for a higher level of overall satisfaction with an outsourcing arrangement (Goles 2001; Grover et al. 1996).

2.2 Success factors in IS outsourcing literature

In various empirical studies, the quality of the relationship between the client and the vendor was found to have a key influence on outsourcing success (Goles 2001; Grover et al. 1996; Lee and Kim 1999). The concept of a client–vendor 'relationship' is related to Social Exchange Theory (Blau 1964) which explicitly considers social processes between two parties. This client-vendor relationship becomes highly relevant in offshore outsourcing of application services, since such tasks require an ongoing exchange of information between the parties involved (Ramarapu and Parzinger 1997).

In our study, *relationship quality* will be defined as the degree of connectedness between a client and a vendor in an aim to achieve specified goals. It is indicated by four attributes, that is, trust, vendor performance, cooperation and conflict (Grover et al. 1996; Lee and Kim 1999). The level of *trust*, that is, the confidence in the other's benevolence (Ring and Van de Ven 1994) was found to be a major attribute of outsourcing relationships (Grover et al. 1996; Heinzl and Sinß 1993; Lee and Kim 1999; Sabherwal 1999; Willcocks and Kern 1998). Existing findings suggest that higher levels of trust positively affect the quality of the relationship between the client and the vendor (Grover et al. 1996; Lee and Kim 1999). The *performance of the vendor's employees*, that is, the results which they achieve, was also found to have a positive effect on the quality of the relationship (Grover et al. 1996). Furthermore, the *cooperation* between the client and the vendor, that is, the common pursuit to perform (Kern 1997), was found to have a positive effect on their partnership (Grover et al. 1996; Kern 1997). Finally, Lee and Kim (1999) suggest that *conflict*, that is, the incompatibility of activities and goals, has a negative effect on the partnership.

2.3 Cultural differences in IS offshore outsourcing

The concept of 'cultural differences' or 'cultural distance' is a common concept which has been applied in a variety of cross-cultural research in order to assess differences between two national cultures (Shenkar 2001, p. 519). Cultural differences refer to the extent to which the members of two distinct groups differ on one or more *cultural dimensions*, that is, their shared values, norms, beliefs and assumptions that help them organize and structure the world (based on Roberts and Wasti 2002, p. 545).

From the variety of cultural dimensions which have been identified and analyzed in the literature (Lytle et al. 1995), five dimensions are selected which will be included in the IS offshore outsourcing research framework. The dimensions are evaluated in terms of their suitability to explain cultural variations that may affect the success factors identified in domestic outsourcing. Two dimensions—individualism and power distance—are selected based on findings from existing cross-cultural studies (Hofstede 1980) which showed differences between Germany and India. In addition, three dimensions are selected based on cross-cultural studies (Doney et al. 1998; Earley 1993; Kumar and Bjorn-Andersen 1990; Lytle et al. 1995; Triandis 1982) and existing IS offshoring literature (Carmel and Agarwal 2002; Heeks et al. 2001; Hirschheim et al. 2004; Nicholson and Sahay 2001; Rao 2004; Vogel 2005). In the following, the selected dimensions will be illustrated and exemplified in a comparison between India and Germany.

Individualism/collectivism In one of the most influential cross-cultural studies which was conducted by Hofstede in the 1970s, Hofstede (1980) identified four dimensions to describe national cultures. *Individualism*, that is, "the degree to which people in a country prefer to act as individuals rather than as members of groups", was found to be one of those characteristic dimensions (Hofstede 1993, p. 89). In Hofstede's study (1983), Germany was found to be more individualist, whereas India was found to be more collectivist. In recent studies, the Indian culture is also described as collectivist (Sahay and Walsham 1997; Sinha and Sinha 1990). Differences in individualism/collectivism are likely to have some influence on the cooperation. In a study on collectivistic and individualistic work groups, Earley (1993) found that collectivist individuals show lower *performance* when working by themselves or as part of an outgroup, that is, a group they do not identify with, as compared to collectivist individuals that work in an ingroup, that is, a group they identify with and feel they belong to. In contrast, individualistic people were found to perform better when working alone (Earley 1993, p. 335). The results suggest that individualists and collectivists perform differently in different group settings. If a group is made up of employees from different cultures, differences in individualism may result in different levels of performance in a given group setting. In another study, Doney et al. (1998) propose that the degree of individualism has an influence on the way how *trust* is built. They

argue that individualists are more likely to develop trust through calculative and capability processes, that is, through a control of behavior and through an assessment of competencies and abilities, whereas collectivists rather develop trust through prediction, intentionality and transference processes, that is, through an observation of consistency, through shared values and beliefs, and through connections that are perceived to be strong and reliable (Doney et al. 1998, p. 610 ff.). As Doney et al. point out, differences in the degree of individualism or collectivism may hinder the process of building trust.

Power distance On the dimension of *power distance*, that is, the extent to which unequal distribution of power is accepted within a society (Hofstede 1993, p. 89), Germany and India showed the highest discrepancy in Hofstede's study (1983). In Germany, power distance was found to be quite low, suggesting a rather equal distribution of power between superiors and subordinates, whereas in India power distance was found to be rather high. Social relationships in India have been described as hierarchical (Sahay and Walsham 1997). Those findings are consistent with what has been observed in several studies on IS offshore outsourcing. Indian professionals were described as submissive and hierarchically oriented, or sometimes as 'always saying yes' (Heeks et al. 2001, p. 57; Nicholson and Sahay 2001, p. 36). The less hierarchical client organizations were not used to the Indian organizations' rigid hierarchies, which frequently led to *conflicts* (Vogel 2005, p. 14). Furthermore, Doney et al. (1998) propose that the degree of power distance—similarly to individualism— influences the way how *trust* is developed. They argue that in high power distance cultures, trust is developed through calculative, prediction and capability processes, whereas in low power distance cultures, trust is more likely to be developed through intentionality, transference and calculative processes. Just as in the case of individualism– collectivism, differences in the degree of power distance may hinder the process of building trust.

Activity/passivity In offshore outsourcing arrangements between German clients and Indian vendors, some German clients have observed that Indian co-workers tend to keep to specifications, often unreflectedly, rather than actively contributing their own ideas. Furthermore, some German clients have complained about lacking communication on behalf of their Indian vendors (Vogel 2005, p. 14). In cross-cultural literature, such behaviors are described by the degree of *activity* or *passivity*, that is, the "extent to which individuals in a culture see themselves as doers (active shapers of the world) or beers (passive reactors to the world)" (Lytle et al. 1995, p. 178). Depending on the degree of activity, different management styles are more or

less effective. Participatory forms of management are likely to be more effective in active cultures, whereas directive methods of management are considered more effective in passive cultures (Triandis 1982, p. 148). Managers may have certain expectations about the level of activity, and they will chose their management style accordingly. However, if they do not account for cultural differences in activity, *conflicts* may arise or the *performance* my not be as expected.

Communication styles In offshore outsourcing arrangements between German and Indian organizations, English is usually the common language in which the two parties communicate. Since English is not a native language for either of the countries, differences in language skills and language usage can cause difficulties in communication and misunderstandings (Carmel and Agarwal 2002; Hirschheim et al. 2004; Rao 2004). The way in which language is used frequently interplays with the way in which a culture communicates. In *abstractive cultures*, only that information which is considered significant and relevant is communicated in an explicit and precise way. In contrast, *associative cultures* also communicate many other—seemingly irrelevant—things which are associated with an issue (Triandis 1982, p. 150). In *high context cultures*, information which is communicated usually carries some sort of symbolic or embedded meaning. Communication in *low context cultures*, in contrast, occurs very directly without implicit or hidden meaning (Lytle et al. 1995, p. 183). Communication can also occur with greater or lesser reference to the context of an issue. *Holistic cultures* take a more systemic view on issues, that is, all aspects that may be affected by a decision are discussed in its context. In contrast, *linear cultures* look at issues in a more isolated way, that is, aspects associated with a decision are looked at separately (Lytle et al. 1995, p. 182). Differences in communication styles can lead to misunderstandings and thus hamper the *cooperation* or even cause *conflicts* in offshoring arrangements.

IS designer values Kumar and Bjorn-Andersen (1990) found that the process of IS development is influenced by the underlying values of the IS designers. These values were found to differ between countries. IS designer values are shaped by the developer's individual background, that is, socialization and education, her or his personal context, that is, organizational and societal environment, the chosen IS development methodology, that is, prescribed development guidelines and standards, and the control and reward structure of an organization (Kumar and Bjorn-Andersen 1990, pp. 529 ff.). These values can be technical, economical, or socio-political in nature. In the case described by Nicholson and Sahay, the Indian

developers used a methodology that placed emphasis on a structured and disciplined development approach that followed international standards. The client's UK employees used different methodologies, however, the client's management pursued the goal of intendedly imposing the vendor's methodology onto their own organization. The UK client successfully adapted to the new methodology (Nicholson and Sahay 2001). The case provides an example how differences in IS designer values can be successfully addressed. However, differences in IS designer values may also cause disruption or affect performance when expectations towards certain standards are not met.

It should be noted that the cultural dimensions 'power distance' and 'activity' are not completely disjunctive. Activity may be a result of power distance. That is, if power distance is high, a lower level of activity should be expected. However, in order to grasp different aspects of power distance and activity, different dimensions will be used.

3 Empirical exploration

In order to gain empirical insights into the field of offshore application development, multiple case studies were conducted between August and October 2005. The case study method was chosen as it is especially applicable for the purpose of theory building (Eisenhardt 1989). Personal interviews with key informants enabled us to find out about how the offshore outsourcing relationships evolved over time and to identify causal relationships (Benbasat et al. 1987; Yin 2003). Moreover, due to a rather limited amount of existing cross-cultural studies in the context of offshore outsourcing, a qualitative research method was deemed to be appropriate.

For the purpose of data gathering, a total of nine project managers and senior IS managers from five German companies were interviewed to describe their experiences with six specific offshore development projects with Indian vendors. Two of the six cases (Bank1a and Bank1b) were conducted at the same company. The respective company representatives were interviewed in an open one-hour interview. The interview language was German. All interviews were face-to-face, except for one interview which took place via conference call. The interviews were based on a semi-structured interview guideline that included several questions about each phase of the offshore outsourcing process (decision and implementation). The participants were also requested to describe issues and situations in which they had to handle cultural differences. In addition, the interviewees were asked to evaluate the offshore outsourcing projects with regard to the different success measures on a scale between 0% and 100%. The interview guideline is included in the Appendix.

All interviews were tape-recorded and transcribed. The transcripts from the interviews were aggregated into a case protocol which comprised 54,449 words and 108 pages of text. In order to become familiar with the individual cases, the interview data was processed for each case. Based on the transcripts and some general information from the companies' websites, case write-ups and case profiles containing the qualitative data were made. A brief overview of the cases is given in Table 1.

The projects were encoded and structured using the software NVivo. The coding involved the identification of cultural themes. Based on the interviewees' descriptions of situations in which they had to handle issues related to cultural differences, those text passages were assigned codes that best described the issues and cultural themes (Stake 2006). Furthermore, text passages with statements relating to the pre-specified relationship dimensions of the

Table 1 Case overview

Case	Logis1	Tele1	Insur1	Bank1a	Bank1b	Finance1
Sector	Transportation	Tele-communication	Financial services	Financial services	Financial services	Financial services
Interviewees	Project manager	Senior IS manager	Project manager	Project manager, Senior IS manager	Project manager, Senior IS manager	2 senior IS managers
Application to be developed offshore	Handling system	System landscape for B2B	E-business solution for re-insurance	Payment systems	Payment system	Sales cooperation platform
Offshore outsourcing arrangement	Onsite-offshore model	Onsite–offshore model	Offshore model	Onsite–offshore model	Offshore model	Onsite–offshore model
Number of personnel (onsite, offshore)	Onsite–offshore model (4:5)	Onsite–offshore model (40:40)	Offshore model (0:10)	Onsite–offshore model (2:7)	Offshore model (0:14)	Onsite–offshore model (8:42)

theoretical framework (i.e., trust, vendor performance, cooperation, and conflict) were selected during this part of the coding procedure. Finally, management reactions to address issues and cultural differences were identified. The coding procedure to identify cultural themes and relationship dimensions is illustrated in Table 2.

Building on the individual case findings, a cross-case analysis was conducted (Miles and Huberman 1994; Stake 2006; Yin 2003). Patterns were searched throughout the cases and similarities and differences were discussed based on the constructs of the research framework and the pre-selected cultural dimensions. Based on the coding of cultural themes, 'grand themes' were identified, that is, themes that recurred across several cases. Thereafter, relationships between the extracted cultural themes and the pre-specified cross-cultural dimensions as well as the success factors and success measures were examined across the cases (Stake 2006). The analysis procedure is outlined in Fig. 2. The findings are presented in the following section.

4 Findings

4.1 Success

At the time when the interviews were conducted, the offshore development projects were perceived as successful in the majority of the cases. Initial expectations about cost improvement, increased flexibility and service quality were also fulfilled to a large extent (80–100%). This is also reflected by a rather high level of perceived overall satisfaction (80–100%). However, the projects had not been successful from the start, as challenges occurred in all projects that the managers needed to cope with. Accordingly, the perception of certain success factors varied within the cases in the course of time. As it will be shown in the following section, cultural differences between the clients and the vendors caused some recurring problems in the relationship between the client and the vendor that had to be dealt with as the projects proceeded in order to ensure a successful cooperation.

4.2 Cultural analysis

4.2.1 Matching themes and cultural dimensions

All of the companies studied observed some cultural differences during the cooperation with their offshore vendors. In the following, several cultural themes will be presented. Grand themes, that is, themes which appeared throughout a number of cases, as well as individual themes, that is, themes which were identified only in one individual case, will be pointed out. The cultural themes will be linked to the cultural dimensions identified in Section 2.3.

Grand theme 1: The Indian professionals have difficulty in saying no One theme which appeared in the majority of the

Table 2 Coding of cultural themes and relationship dimensions

Case	Quote	Theme (code)	Relationship dimension
Insur1	"It turned out to be a real problem in the course of the project that the Indian professionals like to nod—which doesn't necessarily imply 'yes'." (Project manager)	Difficulty in saying no	NA
Logis1	"They have difficulty in saying no, they have a hard time saying 'I haven't understood' or 'I want to ask further questions'. This is getting better. In the beginning, it was more difficult. They simply accepted and said 'Yes, I will do so'. At some point, this comes up and I say 'Gee, if we had only talked about this for two minutes. Then this [inappropriate software quality] could have been prevented'." (Project manager)	Difficulty in saying no	Vendor performance (software quality)
Bank1a	"They have a different way of addressing problems. While I prefer to work in a very analytical and structured way, Indian professionals are often pragmatic and prefer short and straight ways to reach their objectives." (Project manager)	Different development approaches (structural vs. pragmatic)	NA
Bank1b	"I didn't expect that we would have to define the processes and templates ourselves. That we would have to say four or five times, 'this is plain text', or 'you have to use content from this document'."	Different development approaches (broad versus narrow specification)	NA
Tele1	"The Indian professionals also need more time [to complete a task], for example because they design their program in a less structured way […] because they are not able to relate to the whole. […] They are less inclined to anticipate future changes." (Project manager)	Different development approaches (systemic vs. pragmatic)	Vendor performance (software quality/ project delay)

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│ 1 │──▶│   Identification of cultural themes  │
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│ 2 │──▶│ Matching themes and cultural dimensions │
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│ 3 │──▶│   Impact of cultural differences     │
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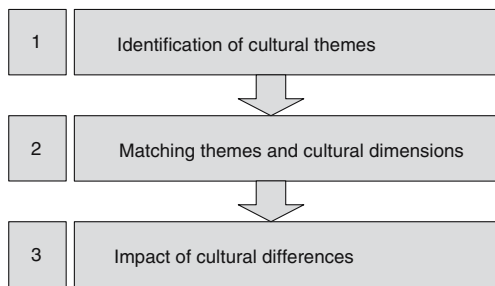
Fig. 2 Analysis procedure

cases is that the Indian team members were perceived to have difficulty in saying no. When asked if they had fully understood a problem or instructions they were given, the Indian staff showed a tendency of simply saying yes, as illustrated by the following quotes.

> They have difficulty in saying no, they have a hard time saying 'I haven't understood' or 'I want to ask further questions'. (Logis1, project manager)

> In India, people have a certain service attitude, they have a very hard time to say no, they have a hard time delivering bad news. This can be fatal in a software development environment. (Finance1, senior IS manager)

Nicholson and Sahay made similar observations in the case of a British software company outsourcing to India (2001, p. 36).

Cultural interpretation Apparently, the Indian team members had a hard time to communicate whenever they had not fully understood a given task towards superiors from both the Indian vendor and the German client company. This behavior may be interpreted as a consequence of the high level of *power distance* between the Indian team members and their superiors.

Grand theme 2: Indian and German IS professionals pursue different development approaches In four cases (Logis1, Tele1, Insur1, Bank1b), we were able to observe that the perception of what makes up software quality differed between the German and the Indian team members. While German team members placed a high emphasis on modular and structured programming, the Indian team members preferred a much more pragmatic approach towards software development.

> What I really perceive as a problem is that they have a different understanding of quality. […] We were certainly aware of the fact that, at a price of €120,000, €130,000, we wouldn't get a product that can be enhanced or further developed. But they were not so sure about this. […] They said, 'yes, we can

easily build upon this software, it is clustered, we have classes' and whatsoever. And then we had the source code checked by our own IT people, and they said 'this is the famous spaghetti code, you cannot re-use any of this." (Insur1, project manager)

Moreover, the Indian developers appeared to prefer to developing software based on precisely described specification, while in the German firms it was more common to develop systems based on loose specification where the system is developed through gaining a joint understanding of the solution between the business side and the IS professionals. The result was that the business side and the clients' IS groups had to invest much more time in systems analysis and specification. The desire for detailed specification has also been a result of a lack of business understanding by the offshore personnel, which had to be compensated for by the client through detailed specifications. However, there was a general tendency among Indian IS professionals to work from detailed specifications.

> On the working level—development, testing, etc.— you have to give very precise specifications. And they will do exactly as prescribed. But if you don't say 'you should also consider this or that', if you don't specify in a clear way—that's why you encounter a lot of problems in software development projects, because they are not able to relate to the whole. (Tele1, senior IS manager)

Cultural interpretation The differences in the development approaches described above may be interpreted as differences in (a) IS designer values, (b) activity versus passivity, and (c) power distance. Apparently, the German IS employees—compared to their Indian co-workers—placed a different emphasis on certain development approaches, for example, the employment of flexible development standards which can be associated with agile methods and the importance of relating to the business context. In this context, differences in *IS designer values* become apparent. Moreover, the Indian employees had a different way of applying their skills and knowledge to the given tasks. While in the majority of the cases studied the German employees were perceived to be more *active*, the Indian team members were described as rather passive reactors to pre-specified tasks and methodologies. Furthermore, the higher level of *power distance* among Indian professionals may explain their preference for working from clearly defined instructions, such as detailed specifications.

Grand theme 3: Indian and German IS employees differ in criticism behavior From the cases studied, another common theme concerning the cooperation with Indian vendors

can be identified. In three cases (Insur1, Bank1a, Bank1b), management found that the Indian team members, in contrast to the German staff, were much more sensitive towards criticism.

> How to criticize Indian team members is definitely an issue. When I say something, it often involves personal criticism. For example, if I reprimand my German team or if I address an issue that didn't work out the way it should have, then I am very direct in telling the team members in order to show them what went wrong. And I think that's the way you have to do it in Germany, so they will understand for sure. You cannot act like this to somebody from Asia. You can't, you must not simply blame someone from Asia and tell him it was his mistake. You have to advise him in a very polite way and explain the mistake to him, but you also have to give him a chance to keep his face. […] You have to find a way to convey criticism." (Bank1a, project manager)

Cultural interpretation The attitude towards criticism may also be explained by different levels of *power distance*. While in Western countries with a low level of power distance voicing criticism is an integral part of the discourse between superiors and subordinates, in countries with a high level of power distance a less open way of holding discourse and resolving issues is preferred. As Sinha and Sinha (1990, p. 709) have observed, Indian professionals place high value in personal relationships and rather accommodate than confront each other.

Individual themes In Insur1, the Indian professionals showed the tendency to repeat statements throughout hierarchical levels. A plausible explanation for this behavior is that a high degree of *power distance* prevailed in the vendor organization in Insur1. The client, in contrast, was not used to such

behavior, since at the client organization the level of power distance was rather low. In Insur1, the Indian professionals also provided an excessive amount of documentation, which was not appreciated by the German client. This differing perception of good documentation can be associated with differences in the underlying *IS designer values*.

In Bank1a, the German project manager had to realize that the open team meetings which he intended were not appreciated by the Indian team members. The differing preferences can be explained by the different levels of *activity* which prevailed in the client and in the vendor organization, that is, the client's employees were more active and the vendor's employees were perceived as more passive. Another explanation is that the Indian team members were comfortable with a higher level of *power distance* and thus preferred to get instructions from their superiors.

As shown above, the cultural themes we identified from the cases related to three of the cultural dimensions presented in Section 2.3: power distance, IS designer values, and activity. The matching of cultural themes with those cultural dimensions is summarized in Table 3. For the remaining dimensions (individualism and communication styles) we were not able to find strong evidence of cultural differences in the cases.

4.2.2 The influence of cultural differences on offshore outsourcing success

The German client and the Indian vendor organizations showed general differences on the cultural dimensions which were attributed to the grand and individual themes described above (power distance, IS designer values, and activity). From the case situations, it can be inferred that cultural differences can affect the factors preliminary to offshore outsourcing success, that is, relationship quality (trust, vendor performance, cooperation, and conflict). Examples from the cases will be used to illustrate this point.

Table 3 Matching cultural themes and dimensions

Cases	Themes	Cultural dimensions
Logis1, Tele1, Insur1, Bank1b, Finance1	Difficulty in saying no	Power distance
Logis1, Tele1, Insur1, Bank1b	Different development approaches	IS designer values; activity; Power distance
Insur1, Bank1a, Bank1b	Different criticism behavior	Power distance
Insur1	Repeat statements through hierarchy	Power distance
Insur1	Excessive documentation	IS designer values
Bank1a	Open team meetings not appreciated	Activity; Power distance

- Differences in power distance and IS designer values can affect the performance in IS offshore outsourcing arrangements.

We saw performance influenced by two cultural dimensions: (1) power distance and (2) IS designer values. The tendency to say yes (cf. *power distance*) can cause misunderstandings between Indian and German team members, for example, if the Indian team members develop a software solution without having fully understood the specifications and the underlying business processes. This can necessitate adaptations that may cause a project delay.

> We realized rather late that the Indian professionals do indeed have difficulty in saying no. They tend to take things and believe they will succeed, and they try really hard to achieve. But sometimes they fail. And such problems come up relatively late. (Example (power distance) from Tele1, senior IS manager).

Differences in *IS designer values* may result in the client's perception of poor software quality and inadequate development methods.

> What I learned during the past years is that the Indian colleagues—or at least what I know from our vendor—the company may have a lot of know-how, they may have a CMM certificate, they may be a big company with processes in place. However, they are not always able to apply their know-how to a specific project, for that the Indian team benefits from this know how. I would have expected them to bring in a methodology of how to test software, to have processes, documentation, and templates. But what we got was plain text documents, and the methodology they used was really chaotic in the beginning. (Example (IS designer values) from Bank1b, project manager)

- Differences in power distance and activity can affect the cooperation between the client and the vendor.

This is illustrated by a situation in the case of Bank1a, where open team meetings as intended by the project manager were not appreciated by all of the Indian team members.

> Once a week, we have a team meeting with all team members—onsite coordinators, offshore project managers, and the entire team. In fact, they don't like this that much, they don't like things to be that open. With the Indian professionals, structures are very hierarchical, which means that the project manager passes on information to the team. I do not want this, I want all the members of the development team to be equally informed. (Example (power distance and activity) from Bank1a, project manager)

- Differences in power distance can lead to conflicts and decrease trust.

Two situations from the cases Bank1b and Insur1 will be used to illustrate this point. In the case of Bank1b, the Indian team members were criticized by their German colleagues for repeatedly asking the same questions. This led to a decrease of trust, since, after this situation had occurred, the Indian team members refrained from asking questions at all.

> We had two members in our team who were very experienced and also very direct. It occurred that colleagues from our vendor asked the same questions two or three times. Our people got tired of giving the same answers again and again, and they were a bit harsh in telling the Indian colleagues. The Indian team members saw this as an insult. This wouldn't have been a problem, but as a result, the Indian team members hardly asked questions, which was really a problem." (Example, criticism behavior, from Bank1b, project manager)

In the case of Insur1, the German team members criticized their Indian colleagues for repeating statements throughout the hierarchy. This led to a conflict and a decrease of trust, as communication between the cultures stopped for a while.

> At one point, a conflict occurred and even escalated—as I said, the hierarchical structure, which implied that they repeated everything their subordinate had just said—when they started doing this on the phone. Which made us tell them 'you can talk to yourselves, it is enough if one of you talks to us', because time really was too precious to keep listening to those repetitions. Then they were a bit insulted, and we had no telephone conferences for a while. (Example, power distance, from Insur1, project manager).

4.2.3 Management practices addressing cultural differences

Despite some problems and conflicts in the cooperation between the client and the vendor, the companies in the cases studied were able to conduct successful offshore outsourcing projects, as the success ratings indicate (see Section 4.1). Three major management themes appeared in the cases which enabled the companies to successfully increase

performance and address cultural differences in the cooperation: (a) a clear definition of roles and mechanisms, (b) strong leadership, and (c) managing culture. Those management practices were successfully implemented in the cases.

(a) Clear definition of roles and mechanisms. A structured management approach seems very important for the coordination of the offshore outsourcing arrangement. All of the companies in the cases studied had certain roles (e.g., project manager) and mechanisms (e.g., telephone conferences) in place which coordinated the day-to-day cooperation and accounted for incidents, that is, conflicts.

> What we have learned is that you need clear contact persons on different organizational levels and with different functions. […] This evolved over time. It wasn't clear from the beginning which roles we would have to establish. (Tele1, senior IS manager)

The establishment of management mechanisms ensures close cooperation between the client and the vendor and facilitates control. As the head of international accounts in Finance1 points out:

> We have been fostering a very close cooperation, and we do alike in other projects. We have regular meetings on different organizational levels, on a project and on a management level, and we have steering committees where we constantly work with our partner.

An important issue in establishing management mechanisms is to consider the offshoring arrangement as part of the entire organizational structure, especially when different organizational units or even different organizations are involved. The project manager in Bank1a emphasizes this point.

> If you have many interfaces, specifying those interfaces is a critical issue. […] You need clear interfaces and dedicated contact persons.

(b) Strong leadership and coordination. Based on the case findings, strong leadership seems to be a key element in managing the offshore outsourcing arrangement. The case of Bank1b provides an example in which the client tried to manage the offshore outsourcing arrangement in a more independent way. However, the project manager soon came to realize that strong management and guidance of the Indian team members was essential for the project to succeed. As the project manager explains:

> I had to lead them—contrary to my initial expectation that they would have the know-how, that I

would be more of an observer to the project. […] Eventually, we decided to adopt more control and tell them what we expected. A lot more than we had thought initially.

One central aspect about leadership which was found in the cases was the provision of detailed documentation. This guided the vendor in the development activities and ensured better performance. As the senior IS manager of Tele1 points out:

> At the level of work you have to provide very detailed specifications for the developers, testers, etc. And they will perform very accurately. But if you don't say 'please do this and that' and if you don't specify this clearly, then you will encounter problems in software development, because they are not able to relate to the project as a whole.

Another central aspect about leadership was to manage the Indian offshore employees as a team. The project manager in Bank1a explains this team approach.

> The colleagues who are onsite, I see them as a team. For me, this is not a mere supplier–buyer relationship, but a team.

The case findings suggest that personal leadership is important in the management of offshore outsourcing arrangements. Especially in the cases Logis1 and Bank1a the project managers adopted key roles in managing the development teams. The project manager in Logis1 explains his way of leadership:

> I don't expect more from my team than I would expect from myself. If I expect them to be here in the middle of the night, then I will also be here by no doubt. I think this is a matter of leadership.

Providing leadership for the team also proved to be an effective way to increase performance. The project manager in Bank1a explains how the team setup encouraged the Indian team members to make contributions:

> As a matter of fact, we were able to realize that people are willing to speak out on things, for example when innovations are concerned. Or if you ask a question about improving a certain issue, someone from way behind […], someone who is usually very quiet, tries to make a contribution, really shows the courage to communicate within the team. I think this is great. You have to see, we have a very young team, and we have a good cooperation, we also get along personally. The team lead was not top-down, simply giving instructions, but has been very open.

(c) Managing culture. An active management of cultural issues that usually caused some problems was found to be a successful way of addressing cultural differences. This helped the companies to dampen the negative effects of cultural differences and thus improve performance, cooperation, and trust, and reduce conflicts between the client and the vendor. Cultural differences were successfully addressed in two different ways:

Adaptation to the client's culture: One way of addressing cultural differences which was pursued in one of the cases was to actively manage the team through setting clear rules for the cooperation. For example, the project manager in Logis1 highly emphasized that the Indian team members asked questions instead of simply saying yes. The project manager made clear what his expectations were, and the team members learned how he expected them to behave.

> Once they have been here for about a month, they should know how to behave. I really emphasize on this. You have to talk to the people a lot. (Logis1, project manager)

Adaptation to the vendor's culture: Another way of addressing cultural differences which was pursued in two of the cases was to recognize cultural differences and to adjust management styles accordingly. For example, the project manager in BANK1a came to realize that the Indian team members preferred to be instructed by their superiors rather than participating in open team meetings. As a result, the project manager agreed on less open team meetings.

> Now I leave it to the Indian colleagues. Previously, I insisted that everyone participated in the meeting. But I have come to accept that when a colleague says that it does not make sense to involve everyone because half of the team members are not interested, then I agree that they resolve things within the team. (Bank1a, project manager)

In Finance1, IT management tried to address cultural differences by adopting a mediating role between the business units and the Indian team members. As the head of international accounts explains:

> "I think what it all comes down to is that IT adopts more of a mediating role between what the business units say and what the Indian vendor says on the other hand. [...] This implies that we pay attention to whether our partner over-commits. This would be great because we can get very cheap services. On the other hand, if I know from my experience, if our organization knows that this implies that in the end the project is at risk because our partner has over-committed himself and cannot provide the service at the suggested cost and time, [...] then we will

intervene and say 'wait, this is not right', and then we will mediate.

In the cases studied, getting to know and learning about the Indian co-workers' cultural traits and working behaviors proved essential to be able to successfully manage the offshore outsourcing arrangement. Most of those issues were relatively subtle and required dedicated managers to get personally involved. Learning about cultural differences involves a lot of personal interaction and communication with the Indian team members. Yet, just as cultural management, cultural learning is something which should be actively promoted by the company.

> If you have no experience in working with Indian colleagues, then you easily 'put your foot in your mouth'. That's the way it is, you simply don't have the experience. This is why intercultural training is very, very important. I think the Indian colleagues did have intercultural training, they take this very seriously. I think we underestimate this. We might be an international company—but not everyone gets along with Indian colleagues. There are really huge differences. That's why you simply have to know how they are and how they think. Then you are able to get along." (Bank1a, project manager)

Learning about cultural differences involves a lot of personal interaction and communication with the Indian team members. In the cases, this was described to be an ongoing process, as the head of international accounts in Finance1 explains:

> I think we didn't really deal with this in a conscious way. This is something we learned from talking to the people, having a glass of wine with our partner, to create an understanding of what is happening. But we didn't address this in a conscious way, no, I couldn't say so.

4.3 Refinement of the research framework

Now that cultural constructs and relationships between cultural differences and offshore outsourcing success factors have been identified based on the case findings, the IS offshore outsourcing framework can be refined to include cultural differences (Fig. 3).

The cultural constructs which have been found to play a role in offshore outsourcing—power distance, IS designer values, and activity—are subsumed as *persistent* 'cultural differences' between nations. In the framework, the relationships between cultural differences and offshore outsourcing success factors are portrayed according to the findings in Section 4.2: Persistent cultural differences (e.g.,

Fig. 3 Refined research framework including the effects of culture
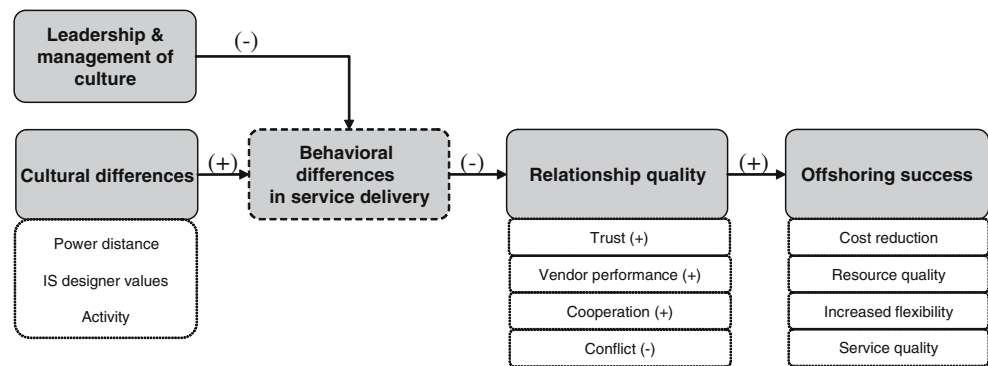
in power distance) can translate into *behavioral* differences between Indian and German team members (e.g., differences in criticism behavior). In this study, persistent cultural differences between the German and the Indian culture were identified as drivers of behavioral differences. As illustrated in Table 3 in Section 4.2.1, recurring themes or behaviors are associated with cultural dimensions. That is, cultural differences (as classified by the cultural dimensions power distance, IS designer values, and activity) manifest themselves in terms of behavioral differences between team members from different cultures. As shown in the cases (Section 4.2.2), these behavioral differences in service delivery can negatively affect relationship quality (e.g., if conflicts occur), which in turn has a negative influence on offshoring success (e.g., reduced service quality or project delays). However, as shown by the case evidence (Section 4.2.3), those culturally induced behavioral differences may be addressed by effective management techniques. In the cases studied, a clear definition of roles and mechanisms, providing strong leadership and an active management of culture were identified as effective management reactions to cultural differences in order to ensure a successful cooperation. The case findings suggest that dedicated leadership, for example by a project manager who is personally committed to the team, helps to improve the cooperation and hence the team performance by avoiding frictions due to behavioral differences (e.g., differences in criticism behavior). Corresponding with findings of Tripathi (1990, p. 719) Indian workers prefer personal leadership, since they consider it highly important to know who they are working for. In this respect, an active management of culture proves to be essential. On the one hand, culturally induced behavioral differences may be addressed by fostering an adaptation of behaviors to the client's culture (e.g., by encouraging criticism or 'saying no'). On the other hand, the client may choose to address culturally induced behavioral differences by adapting project management

and leadership styles to the vendor's culture (e.g., by pursuing a more hierarchical project management). It is important to note that leadership and management techniques do not influence the cultural differences directly. That is, they do not change the culturally grown norms and values of the project members. Rather, they influence the specific culturally induced behaviors that project members show within a project.

5 Discussion

5.1 Limitations

Before delving into the discussion of the study results, it is important to point out its major limitations in order to put these findings into perspective. First of all, the results of this study have been derived from six cases, four of which took place in the financial services industry. Therefore, this study can by no means be considered representative for a larger population; it is rather an attempt to explore the impact of cultural differences in real world offshore outsourcing settings, thereby identifying relationships that subsequently can be substantiated and tested with other case studies or surveys.

Second, this study addresses offshore outsourcing arrangements between two specific countries (Germany and India). Although India holds a dominant position in the IS offshore outsourcing market, differences on the cultural dimensions which have been identified in this study may be specific for offshoring arrangements between Germany and India. Furthermore, India should be recognized as a continent with 14 languages, thus being subject to cultural variation. Still, an important finding of this study is that cultural differences do matter in IS offshoring arrangements. The way in which those differences were identified and analyzed may be transferred to other offshoring arrangements.

Finally, it must be recognized that this study analyzes offshore outsourcing arrangements solely from a client perspective. The offshore vendors may perceive cultural differences differently.

5.2 Theoretical implications

Despite these limitations, this paper makes a dual contribution from a theoretical point of view. First of all, as shown in Section 4.3, the existing framework of success factors of an outsourcing relationship (Goles 2001; Grover et al. 1994; Lee and Kim 1999) can be extended by two offshore-specific constructs: (1) differences in the country-specific cultural profile between client and vendor reflected by differences in selected cross-cultural dimensions and (2) the resulting culturally induced behavioral differences. As the case findings demonstrate, *culture does matter* in IS offshore outsourcing arrangements (compare to Moczadlo 2002). Cultural differences between the client and the vendor are observable on a number of dimensions, for example, power distance, IS designer values, and activity versus passivity. Such differences can result in behavioral differences between client and vendor personnel that negatively affect attributes of relationship quality, such as trust, performance, cooperation, and conflict, which are important antecedents of offshore outsourcing success. This paper's contribution is unique in a sense that (1) it outlines a method of linking behaviors (i.e., themes) to cultural dimensions and (2) reveals the relationship between cultural differences and preliminary success factors of offshore outsourcing projects.

Another important finding with regard to culture is that cultural differences in IS offshore outsourcing arrangements can be *successfully managed*, that is, certain managerial practices play a moderating role by alleviating the negative effects of cultural differences. It is important to note that such management practices do not change the cultural norms and values of either the client or vendor personnel directly, but rather have an influence on the actual behavior of the persons involved in a particular offshore outsourcing project. Persistent changes of behavior patterns that sustain beyond the end of a particular project may only be achieved over a very long time.

Thus, active management should be an integral part of a successful offshore outsourcing venture. The managerial practices which have successfully addressed cultural differences center around the provision of strong leadership and an active management of culture. Thereby, this study illustrates the interplay of managerial practices, culture and relationship factors that is necessary to move up the learning curve. Thus, this paper offers yet another theoretical contribution, as existing outsourcing literature has omitted to thoroughly analyze the interplay of management practices and relationship factors (Dibbern et al. 2004).

Furthermore, the case findings indicate that a lot of managerial effort, that is, an establishment of roles and mechanisms, providing personal leadership and documentation, is necessary for IS offshore outsourcing arrangements to succeed. From a theoretical point of view, this managerial effort may be seen as extra transaction costs for the client (Carmel and Tija 2005; Dibbern et al. 2008), for example, costs for conflict resolution and team coordination. These costs need to be explicitly accounted for when calculating and controlling the cost savings from offshore outsourcing.

The results of this study and its limitations provide interesting opportunities for future research. The case study results show that managerial perceptions of offshore outsourcing success of particular projects are subject to changes over time. The successful implementation of management practices led to an improved perception of success by the managers. Future research may analyze project dynamics and the effects of specific management practices (e.g., control and coordination; Sabherwal and Choudhury 2006) in the light of cultural differences. Moreover, the study of the costs of such management practices provides another fruitful avenue for future research.

5.3 Implications for practice

The role of management was found to be essential for conducting successful offshore outsourcing projects. From the case findings, a number of best practices emerged of how to successfully manage IS offshore outsourcing arrangements. It should be kept in mind, however, that these findings pertain to German–Indian offshoring projects which were the focus of our case studies.

1. Establish a structure including roles and mechanisms for the management of the offshoring arrangement. Good organization provides the basis for successful management of offshore outsourcing arrangements. Clear roles and dedicated contact persons, for example, project managers and coordinators, should be selected, and management mechanisms, such as steering committees and regular meetings, should be implemented for coordination and control.
2. Nominate a dedicated project manager who provides strong leadership within the project team. A dedicated project manager is able to integrate team members from different countries. As a central person of contact, a dedicated project manager gets deep insights into the working processes and gets to know the team members' capabilities. If necessary, he or she can exercise direct coordination and control.

3. Learn about the specific cultural traits of the offshore vendor's team members. Creating an understanding for specific cultural traits of the offshore vendor's team members is important in offshore outsourcing arrangements, since such an awareness can prevent misunderstandings in the cooperation between the different cultures. An awareness of specific cultural traits can be raised by a lot of communication with the offshore vendor's team members. Another way to actively spur cultural awareness is to provide cultural training for employees.

4. Recognize cultural differences and actively balance them. Companies should aim at recognizing cultural differences early in the cooperation with an offshore vendor. If not actively managed, culturally induced behavioral differences can decrease performance, hamper cooperation, decrease trust, and lead to conflicts. Management, however, can balance those culturally induced differences by tactics of adapting to either the client's or the vendor's culture.

6 Conclusion

As in the face of internationalization the IS offshore outsourcing trend is likely to continue (Schaaf and Weber 2005), it will become increasingly important to recognize, understand and manage cultural differences between client and vendor organizations. This study has identified relevant cultural differences, and it has presented a framework which illustrates how cultural differences influence the success of IS offshore outsourcing arrangements. As such, the framework provides an important contribution to the incorporation of the construct of culture into IS research. Furthermore, this study has identified best practices which can guide companies to successfully manage cultural differences. Future research is encouraged to further investigate cultural differences in various forms of IS offshore outsourcing arrangements. There is clearly a need to enhance the understanding of unique features in offshore outsourcing.

Appendix

Interview guideline

I.   General project information
1. Please give a short description of your offshore development project:
   a. Type of project
   b. Project timeframe

c. Offshore provider and country
d. Project size (man days, % of total IS budget, number of people involved)

II.   Decision to offshore
1. What were your reasons for outsourcing application development to an offshore vendor?
2. What were the main drawbacks associated with offshoring during the decision process?
3. Who was involved in the decision process to offshore?
4. Who was most influential in the decision to offshore?
5. Have you had previous experience with...
   a. … domestic outsourcing?
   b. … offshore outsourcing?

III.   Implementation
1. How did you evaluate and compare potential offshore vendors?
2. How did you select your particular offshore vendor?
3. Please provide some information about your offshore development contract:
4. What arrangements did you make prior to the project launch during the transition phase?
   a. Meetings for top management to get to know each other
   b. Meetings for team members to get to know each other
   c. Meetings to make clear each other's goals
   d. On-site visits
   e. Cultural training for staff
   f. …
5. How did the transfer of knowledge take place?
6. What coordination and control mechanisms do you have in place? Please describe the role of each mechanism you use.
7. Please describe conflict situations you encountered in cooperating with your vendor. Why did those conflicts arise? How did you address those conflicts? Were you able to resolve those conflicts?
8. Please describe situations in which, during the project, you had to cope with cultural differences.

IV.   Evaluation
1. Has the project met your expectations? Please indicate to what extent (0–100%) your expectations were met with regard to:
   a. Cost savings
   b. Quality of the vendor's resources
   c. Increased flexibility
   d. Quality of service delivered
2. Overall, how satisfied (0–100%) are you with:
   a. The resulting application?
   b. The relationship with your offshore vendor?
   c. The performance of the vendor's employees?
   d. The project as a whole?
3. Are you planning to have follow-up projects with this vendor?

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