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# CULTURAL INTELLIGENCE AND PROJECT MANAGEMENT INTERPLAY IN IT OFFSHORE OUTSOURCING PROJECTS

## L'interaction entre intelligence culturelle et gestion de projet dans les projets d'infogérance offshore

*Completed Research Paper*

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### **Abstract**

*Prior research on the management of IT offshore outsourcing projects has focused on cross-cultural issues or on project and relationship management issues. However, there is still a lack of understanding concerning effective management practices that help to overcome the challenges of client-vendor cultural distance in IT offshoring relationships. Therefore, the goal of this research is to increase our understanding of how the risks that result from this cultural distance in IT offshoring can be mitigated and which management practices must be employed. Thereby, we take both cross-cultural and project management issues into account and focus on the specific interplay between both elements. As research on this topic is scarce, we chose a theory-building and exploratory research design. We conducted an in-depth analysis of a single case from the financial services industry in Germany. Our findings suggest that cultural intelligence and IT project management techniques interact with each other in a reinforcing virtuous circle.*

**Keywords:** IT Project Management, Offshore Outsourcing, Cultural Intelligence, Financial Services, Exploratory Case Study, Grounded Theory, Germany, India

### **Résumé**

*Les recherches antérieures sur le management des projets d'infogérance offshore se sont focalisées soit sur les aspects inter-culturels, soit sur les aspects relationnels et de gestion de projet. Il existe toujours une insuffisante compréhension concernant les bonnes pratiques aidant à surmonter la distance culturelle. Nos résultats montrent que l'intelligence culturelle et les techniques de gestion de projet TI interagissent entre elles dans un cercle vertueux cumulatif.*

## Introduction

As globalization continues, the nature of knowledge-intensive work is changing in the sense that organizational boundaries of international collaboration are disappearing (Friedman 2005). Increasingly, services are being disaggregated globally and delivered from multiple places around the world (Apte and Mason 1995; Mithas and Whitaker 2007). Accordingly, offshore outsourced information technology (IT) development projects are receiving increasing attention and importance (Carmel and Tjia 2005; Dibbern et al. 2004; Heeks et al. 2001; Sahay et al. 2003; Willcocks and Lacity 2006). One of the major reasons for client firms to outsource software development work offshore is to reduce labor costs (Apte and Mason 1995; Currie et al. 2003; Rottman and Lacity 2004; Schaaf 2004). However, the expected cost savings are frequently not achieved. The ‘distance’ between client and vendor increases coordination and communication costs that can offset the expected benefits from offshoring (Dibbern et al. 2008). Since the reasons for ‘hidden’ costs in offshore projects are still not well understood, scholars call for more research on the effect of cultural differences between client and vendor personnel in IT offshoring and the necessary management practices to overcome these challenges (King and Torkzadeh 2008). Therefore, the goal of this research is to increase our understanding of how the risks that result from client-vendor cultural distance in IT offshoring can be mitigated.

One of the major risk factors in IT offshoring results from the cultural distance between client and vendor. These cultural risks make offshore projects especially susceptible to failure, or, as it has been noted by some scholars, can “make or break an offshore project” (Gupta and Raval 1999, p. 23). Research on cross-cultural issues in the information systems (IS) discipline has mainly focused on the national and organizational level of cultural differences (Ford et al. 2003). However, more recently scholars have been searching for new ways of studying culture at the individual level, including techniques and strategies for successful cross-cultural interaction (Weisinger and Trauth 2002). There has been little research on cross-cultural issues in IS that treats culture as a dynamic concept and which analyzes cross-cultural dynamics at the level of individual interaction (Molinsky 2007). Therefore, this study aims at generating new insights by focusing on the individual level of analysis and taking a social psychological perspective (e.g., Earley and Ang 2003) to analyze cross-cultural interaction in IT offshoring.

In the extant literature one can find many studies focusing on management practices in IT offshoring (Carmel and Agarwal 2001; Gopal et al. 2003; Heeks et al. 2001; Kliem 2004; Krishna et al. 2004; Nicholson and Sahay 2001). However, there is still a lack of understanding concerning the most effective management practices that help to overcome the challenges of client-vendor distance, including cultural differences (King and Torkzadeh 2008). Therefore, this study makes a theoretical contribution to the IS domain by developing a model incorporating both cross-cultural and project management factors to deliver an explanation of how offshore software development projects can be managed more effectively. This model is developed by analyzing an in-depth single-case study from the financial services industry, pursuing an exploratory and theory-building research approach. Our model illustrates that effective cross-cultural interaction, IT project management, and their interplay are equally important.

The goal of this research is to develop a deeper understanding of how IT offshoring projects can be managed more effectively. Therefore, we decided to analyze a project exhibiting problems of cross-cultural collaboration that were ultimately managed successfully. The case study we analyzed comprises an IT offshore outsourcing project involving the activities of a major international bank in Germany (the client) and one of the largest Indian IT service providers (the vendor). The goal of the project was to technically reengineer the core banking system responsible for daily financial transactions worth billions of Euros and integrate a 30 year-old legacy system with a newer, more flexible system. Roughly 200 individuals participated in this 5-year undertaking. The contract was signed on a fixed price basis.

The paper is structured as follows. The following section contains the theoretical foundations for the study which consists of cross-cultural literature (i.e. cultural intelligence) and IT project management literature. The methodology section explains in detail the reasoning for conducting a qualitative and exploratory case study. Also, information is provided on data collection and analysis techniques employed in our research. The following case description includes a brief introduction to the case, followed by a detailed analysis of the cross-cultural challenges in the project and how they were tackled by the responsible project managers. The final section of this paper presents our model of cultural intelligence and IT offshore project management as well as the theoretical and practical contributions that can be derived from this model.

## Theoretical Foundations

Offshore outsourced software development projects bring along challenges of global virtual teamwork where cross-cultural differences hinder effective team coordination and collaboration (Espinosa et al. 2006). It also adds to project complexity and therefore can be an inhibitor of project performance (Xia and Lee 2004; Xia and Lee 2005). Recent findings provide evidence for the assumption that the cultural distance between client and vendor personnel in IT offshoring is a major challenge (Dibbern et al. 2008). However, we have a lack of understanding in IS how these cultural risks can be managed more effectively (King and Torkzadeh 2008). As the goal of this theory-building research is to develop a deeper understanding of how IT offshoring projects can be managed more effectively, we included project management theory for our analysis and conceptualization process. Furthermore, because a major challenge in IT offshoring is to overcome cross-cultural barriers, we used cultural intelligence theory to guide the analysis of the cross-cultural processes involved in the project. The particular selection of this literature emerged through an iterative process of collecting and analyzing data, and looking in the literature for possible theoretical conceptualizations.

### Cultural Intelligence and Cross-Cultural Adaptation

Research on cross-cultural interaction at the individual level emphasizes the importance of learning how to cope with cultural differences and seamlessly adapting to new cultural settings (Raghuram 2006). Team members of IT offshore outsourcing projects need to develop cultural intelligence: a person's capability to be effective across cultural settings (Jarvenpaa et al. 2004; Kok-Yee and Earley 2006). People with high cultural intelligence are able to depict the universal, group-, or person-specific and culture-specific elements when observing a person's or a group's behavior (Earley and Mosakowski 2004). A person who is able to determine the culture-specific elements of behavior is able to advance to the more important step of adapting him- or herself to this behavior.

There are three facets of cultural intelligence – the cognitive, motivational, and behavioral dimension. Central to the cognitive dimension is the self, a person's mental representation of his or her own personality, social identity, and social roles (Kihlstrom and Cantor 1984). To adapt successfully to new cultural settings, individuals need to be cognitively flexible, which means constantly reshaping and adapting their self concept to the new situation. This may require abandoning pre-existing conceptualizations of how and why people function as they do (Earley 2002). It also means knowing about the basic beliefs, customs, and taboos of the foreign culture, because natives may be reticent or inexperienced about explaining themselves to strangers (Earley and Mosakowski 2004). In addition to content knowledge about cultural identities, values, attitudes, and practices of a foreign culture, the cognitive dimension also includes process knowledge about how cultural variation affects individual behavior (Cohen and Bacdayan 1994).

Concerning the motivational dimension of cultural intelligence, self efficacy plays an important role, which is a key facet of the self. It can be defined as a judgment of one's capability to accomplish a certain level of performance (Bandura 1986; Bandura 1997). A person who does not believe in his or her own capability to understand people from other cultures is likely to disengage and weaken his or her motivation after experiencing early failures. Consequently, cultural adaptation will not occur (Raghuram 2006). A further aspect of motivation in the context of intercultural interactions is curiosity – the desire to know about a foreign culture – which is essential for exploratory and mindful behavior in cross-cultural interactions (Berlyne 1960; Earley and Ang 2003). Although curiosity is to a large extent a personality trait (Langevin 1971), there are certain factors that may hinder a person's desire to learn about other cultures. Negative forces, such as the resistance to change, have to be eliminated by creating a stimulating environment (Earley and Ang 2003). Another important aspect is goal setting: specific goals and challenging objectives lead to high performance levels if accepted by the individual, and if feedback is provided (Locke and Latham 1990b).

Finally, the behavioral dimension of cultural intelligence refers to the repertoire of specific behaviors needed for successful cross-cultural interaction, including the adaptation to new cultural settings (Molinsky 2007). Essentially, the behavioral dimension is a result of the cognitive and the motivational dimension, put into action (Earley and Ang 2003). An example is the necessity of appropriate language skills to manage verbal, or even more important, nonverbal communication to facilitate successful interaction between different cultures. This is especially important since IT projects are increasingly rolled out across geographically distributed teams, spanning even across time zones and continents. Another important issue concerns actively adapting one's communication behavior to a new cultural setting - examples of which we will depict in our case analysis.

## **Project Management**

A large portion of project management activities concerns people and work management. This means that project managers need to assure that their project team performs well and that work is conducted towards the overall goal of project success. A well-established theory from social psychology, that has been applied before to IS research, goal-setting theory, delivers insights into motivational drivers of individuals (Locke and Latham 1990a; Locke and Latham 1990b; Wofford et al. 1992). At the core of the theory lies the assumption that specific and difficult goals result in high levels of effort and performance, supposing that they are accepted by the individual and that feedback is provided (Latham and Locke 1991; Locke 1996). The positive relationship between goal difficulty and performance depends on the individual's goal commitment as well as his or her knowledge and skills which are necessary to achieve it. Therefore, goal commitment and the individual's abilities are critical for the performance-enhancing effect of goal-setting (Ambrose and Kulik 1999; Latham and Locke 1991). An additional positive effect of setting specific and clear goals is to reduce role ambiguity of individual project workers (Locke and Latham 1990b; Rasch and Tosi 1992). This means that specific goals – either predetermined by the project or program manager or set individually in case of leeway for maneuver – make it clearer for the individual what the responsibilities, tasks, and performance evaluation criteria are. According to the above mentioned concepts, project managers need to employ adequate techniques and mechanisms to stimulate individual and team performance, driven by clarified roles and responsibilities, individual abilities (including cultural intelligence), and specific and difficult goals.

Research on project control in IS distinguishes between formal and informal controls. Control mechanisms that are documented and made explicit belong to the category of formal control and include for example written project plans, testing procedures, and job descriptions (Kirsch 2004; Rustagi et al. 2008). Informal control mechanisms are implicit and include such things as peer pressure, influence, and social events (Kirsch 2004; Rustagi et al. 2008). With regard to formal controls, there are two types: the control exerted by personal surveillance, or behavior control, and the form of control for measuring the output of employees, or output control (Ouchi 1979). These two forms are independent from each other. The former, behavior control, is more appropriate when cause-and-effect chains are known and therefore, instruction is possible. The managerial control mechanisms for behavior control include instruction, monitoring, evaluation, and rewarding (Eisenhardt 1985). Outcome control differs from behavior control as performance results are measured and evaluated directly, rather than the behavior that leads to the outcomes (Kirsch 1997). With IT project teams in general, empirical results indicate that a high level of behavior control by managers and a high level of outcome control by team members have positive outcomes to project performance (Henderson and Soonchul 1992). In summary, formal and informal project controls are employed to stimulate individual and team performance.

Besides formal project management and control techniques, the emergence of a shared understanding between client and vendor project members is important. Therefore, informal project management, including relationship and team building activities, are equally critical for successful client-vendor collaboration in IS offshoring projects. Developing a shared understanding is important to assure that team members have similar ways of thinking in situations of conflicts or problem solving activities (Klimoski and Mohammed 1994). There is extensive empirical support for the assumption that team mental models can improve team processes such as communication, adaptation, coordination, and team performance of global virtual teams (Cramton and Webber 2005; Espinosa et al. 2002; Hitt et al. 2007; Rentsch and Klimoski 2001; Sadanand et al. 1989). Additionally, targeted team building activities can enable a project group to become a cohesive working unit capable of functioning at the high performance levels (Constantine 1993). These activities may include socialization activities and the stimulation of extensive teammate interaction, including, for example, regular meetings and communication on a personal and work level. Team building has found to have a strong impact on work performance and member satisfaction in IS project teams (Janz 1999; Janz et al. 1997; Nath and Lederer 1996). In summary, the above mentioned informal relationship and team building activities are important drivers of individual and team performance and can also be a driver for cross-cultural adaptation by creating a shared understanding among client and vendor project members.

## **Research Methodology**

Our research approach is an interpretive in-depth exploratory single-case study (Stebbins 2001; Walsham 1993; Yin 2003). The research objective – exploring how IT offshoring projects can be managed more effectively – asked for an exploratory rather than an explanatory research design due to the lack of prior research. Hence, our goal was not to test theoretical propositions, but to build theory and develop a model of project and cross-cultural management in

IT offshoring (Benbasat et al. 1987; Yin 1993). The interpretive epistemological lens through which we conducted our empirical investigations and data analysis, as well as the exploratory and theory-building nature of our research, led us to the applied grounded theory approach (Stebbins 2001). The exploratory single-case study approach fits well with the grounded theory method because it allows for an in-depth understanding and detailed insight of the phenomena at study (Levina and Ross 2003; Levina and Vaast 2008). This is an essential prerequisite for generating theory inductively from the data (Glaser 1978). Grounded theory helped us to define the boundaries and scope of our research and guided the search for relevant concepts and categories in the empirical data. The research flexibility that results from our exploratory research approach allowed us to link the theory and the data iteratively (Eisenhardt 1989), moving back and forth between the collected data and possible theoretical conceptualizations (Glaser and Strauss 1967). Therefore, the role of theory in this research was not to explain the observed phenomena. Instead, theory served alongside the qualitative data for the purposes of conceptualization, guiding and enabling the theory-building process (Glaser 1998; Glaser and Strauss 1967).

In order to find answers to our research question concerning the effective management of IT offshoring projects, we needed a revelatory case containing offshore-specific problems, challenges, and problem solution strategies that would tell us a rich story. Secondly, we needed to get full access to the project on-site with the possibility to collect as much data as necessary, until we achieved 'theoretical saturation' (Eisenhardt 1989). The following case provided us with that opportunity. It is an IT offshore outsourcing project involving the German operations of a major international bank and one of the largest Indian IT service providers. The project started in 2004 and is about to terminate at the end of 2008. In total, approximately 200 project members participated in more than a dozen different sub-projects. The case offered us unique insights into the effective management of IT offshoring projects that will be presented in the following case analysis.

Firstly, we conducted a total of 28 interviews for our primary data collection, resulting in over 45 hours of interview time and 250 pages of interview transcriptions. This sample size was chosen because the last interviews we conducted only marginally contributed new insights to our inquiry (Glaser and Strauss 1967). The interview partners were selected along three dimensions. First, we included interview partners from both companies involved in the outsourcing relationship, the client firm in Germany (17 interviews) and the vendor firm from India (11 interviews). Furthermore, we included interview partners within the client firm from both the business and the IT department (4 out of 17 interviewees were from business). The benefit from including all these perspectives in our analysis was to get a more complete picture of the dyadic relationship issues between the business and IT department within the client organization on the one hand, and the IT department and the vendor on the other hand. Secondly, we conducted interviews with the top-level management (4 interviews), project-level management (6 interviews), subproject-level management (8 interviews), as well as the team-member level (10 interviews). Thirdly, we interviewed mostly project members who were involved during the whole course of the project, but also included interview partners who participated only partly in the project (6 out of 28 interviewees did not participate during the whole course of the project and due to the hierarchical level many interviewees were only involved in certain sub-projects).

We were given permission to analyze the case in early 2007 when the top IT management board of the company realized that it would generate unique insights for their own knowledge base. The goal was to identify success factors for the successful realization of further projects of this kind. For this reason, we conducted the first interviews between April and November, 2007. At this point in time we had gained sufficient support from the company's top IT management. The interviews were held in a semi-structured manner and were conducted by two of this paper's authors. The average interview time with each partner was approximately one hour and 30 minutes, although we also had interviews which lasted up to three hours. We took notes at the sites and transcribed the interviews immediately after each interview session (Eisenhardt and Bourgeois 1988; Walsham and Sahay 1999). We conducted a second round of interviews between March and April, 2008 because we realized from our analysis of the first 15 interviews in 2007 that we were about to generate interesting and unique insights. However, we realized that we needed additional data to theoretically saturate the identified concepts and categories. This time, more focused questions were asked related to the identified concepts and categories from the first interviews. The core categories that we had identified were cultural intelligence and offshore specific IT project management which we found to be pivotal for the project's success.

In addition to the primary data, we collected secondary data for triangulation purposes. This included steering committee meeting protocols, project and status presentations, a project member matrix with information about all project members, as well as related changes which occurred during the lifetime of the project. Furthermore, we received presentation material concerning kick-off meetings and cultural workshops. We compared the primary data

collected with the secondary data materials for data triangulation purposes which increased the reliability of our findings.

In an interpretive and inductive fashion, our goal was to develop a substantial theoretical contribution, following the recommendations of Glaser and Strauss (1967) as well as Eisenhardt (1989). The collected data was interpreted by the three researchers (enabling investigator triangulation) and from the viewpoints of our interview partners. Our process for analyzing the data collected consisted of various steps in order to distill and derive a substantive theory contribution (Garud and Kumaraswamy 2005; Lehmann and Fernández 2007; Levina and Ross 2003).

In the first phase, the interview transcriptions, personal notes, and secondary data first had to be sorted to write an analytical chronology of the project. During the process of writing up the case, we classified and organized pivotal findings according to key dimensions (i.e., company and department affiliation of the interview partner, position in the company hierarchy, and assigned role in the project). This initial organization of the data was helpful in obtaining different viewpoints on similar issues and was consistent with our interview partner selection methodology. After the completion of the first interview round in 2007, we entered into an iterative process of analyzing the collected data and searching the extant literature from related fields (e.g., international business and organizational literature) for relevant concepts and categories. Two core categories emerged: cultural intelligence and offshore specific IT project management. Subsequently, we narrowed our questions on these issues in the second interview round. This gave us the opportunity for a more detailed analysis and saturation of the identified categories and concepts.

In the second phase we coded the data along the main theoretical concepts and attributes which we derived from the theory after the first and second interview round (e.g., goals and objectives, self-efficacy, and curiosity for the motivational dimension of cultural intelligence). In this diagnostic phase, we alternated back and forth between the data analysis and possible theoretical conceptualizations and through an iterative process ensured that our interpretations fit with the theoretical definitions (Eisenhardt 1989). We found many phenomena in the data which supported the theory. However, we also noticed that the cultural intelligence theory we included for our investigations is much more powerful than previous theories used to explain cross-cultural interaction in IS outsourcing or offshoring projects. However, the concepts provided by cultural intelligence theory did not explain all phenomena which we observed. Therefore, in our coding process, we generated new concepts which we included in our data analysis (e.g., clarified expectations for the motivational dimension of cultural intelligence).

The third and last phase of our analysis was a theorizing and conceptualization phase, where we re-evaluated the derived categories and propositions in the research team to assure the consistency as well as the validity of the final substantive theory contribution. The identification of critical phenomena and issues was guided partly by the theory and partly by the real-world observations. In that sense, we present interpretations of various issues found in the data, including those which are related to the theoretical concepts presented in this paper. This is consistent with the exploratory and interpretive research design chosen for this study (Stebbins 2001; Walsham 2006).

## **Case Description**

The research we conducted comprises a large IT offshore outsourcing project involving the German operations of a major international bank (the client) and one of the largest Indian IT service providers (the vendor). Roughly 200 individuals worked on this 5-year undertaking, while personnel changed over time. The project was subdivided into more than a dozen sub-projects, each consisting of a number of detailed phases.

The goal of the project was to technically reengineer two core banking systems on which millions of daily financial transactions ran. The older IT system, a 30 year-old legacy system, needed to be integrated into the newer, more flexible and modular system from the 1990ies. The older system caused high maintenance costs because of its inflexibility to meet changing business demands. In addition, operating two systems with similar functionalities was costly because of data redundancies. A third problem was the lack of personnel that had valuable knowledge about the old system's technology. Skilled staff was hard to find for replacing the people who originally designed the system and were about to retire.

The project was started as a purely internal reengineering project. However, after a couple of months, the decision was taken to execute the reengineering project with an external vendor. There were two reasons for that. The first reason was to achieve higher levels of business agility and flexibility, giving the possibility to adjust the level of IT investments to the current needs of the organization in the long run. The second reason was obviously to save costs

and reap the benefits of lower labor costs in India. The project was agreed on a fixed price basis. Despite having involved some very experienced project workers (managers as well as team members) from both the client and the vendor organization, for many of the involved project members it was the first time to be assigned on such an international offshore outsourcing project with Germany or India respectively. The following description provides an overview over the main pattern of events across all sub-projects.

During the initial phases, good working relationships between client and vendor project members emerged. This appeared to be a result of the first positive encounters in kick-off meetings and workshops that were organized to work out an operating model for joint collaboration as well as to start the initial requirements analysis. For most of the project members it was an exciting opportunity to work on such an international project. The generally friendly attitude of Indian project members as well as the hospitality of German project members helped to build up good personal relationships. However, when the first milestones approached and the deliverables of the Indian vendor showed a certain discrepancy between expected and actual quality, the underlying challenges of cross-cultural communication and collaboration came to the surface. Different understandings of quality contributed to this crisis. This led to frustrations on behalf of German project members who initially could not explain the variance in quality and did not know how to cope with it. The Indian project members did not understand why their German colleagues were so keen about so many details (e.g., formal documentation) and why their work did not receive the expected amount of respect, given the fact that during critical project phases they worked day and night and even on weekends to fix problems and deliver the expected results.

These phases of mutual frustration were eventually overcome through targeted informal and formal project management activities as well as cultural intelligence from individual project members or continued cross-cultural learning and adaptation. What makes this case so unique is that it contains many instances of disrupted cross-cultural client-vendor collaboration, but despite the problems eventually became a success. It became a success in the sense that the client and the vendor agreed to continue with their relationship and the vendor was granted a follow-up contract for the maintenance of the reengineered system. It can also be defined as a success because the promised functionality was provided with only minor time and budget slippages. Hence, something was done especially well in this project which we will analyze in the following section.

## **Case Analysis**

### **Cultural Intelligence**

The first set of themes that emerged from our analysis relates to the core category 'cultural intelligence'. It refers to an individual-level capability of successful cross-cultural interaction and adaptation to new cultural settings. Our following analysis and discussion of the case study findings illustrates how effective cross-cultural interaction is driven by motivational, behavioral, and cognitive factors of cultural intelligence. Hence, for the effective management of IT offshoring projects, the accumulation of cultural intelligence in project teams needs to be fostered. Our case analysis shows how this can be done by targeted project management behavior, including, e.g., informal project management mechanisms.

#### *Knowledge or Cognitive Factors*

Although some of the project managers involved in the project had extensive cross-cultural experience (e.g., one of the project managers from the German organization had more than eight years of experience working together with Indian vendors), for many members of both the client and the vendor organization it was the first time to be assigned to an international project involving collaboration with a foreign vendor. Hence, both parties had to learn a lot about the other respective culture during the course of the project and develop cultural intelligence. Concerning the cognitive dimension this meant primarily building up content knowledge about the cross-cultural differences and process knowledge regarding the effects of these differences on individual behavior. Table 1 provides an overview over the most salient cross-cultural differences in the project (content knowledge) as well as their effect on individual behavior (process knowledge) by Germans and Indians respectively.

**Table 1: Cross-cultural content and process knowledge**

Individual Behavior (process knowledge)	Cultural Differences (content knowledge)
Theme #1: Germans laid emphasis on highly formal working approach (e.g., concerning documentation, review sessions, testing procedures, etc.); Indians focused on implementation issues (attitude ‘just do it’) and were generally more ‘relaxed’	Differences in risk attitude and formality in work procedures
Theme #2: Germans and Indians had different perceptions and expectations concerning deadlines and the quality of deliverables	Differences in quality perception and attitude to timelines
Theme #3: Indians avoided disagreements with their German communication partners and focused on respect and face-saving; Germans emphasized frank, direct communication and transparency	Differences in hierarchy orientation and communication style
Theme #4: Germans made maximum use of their room for maneuver and questioned procedures; Indians adhered to pre-specified tasks or orders and avoided asking frequent questions	Differences in working style and activity orientation

### *Motivational Factors*

Motivation regarding cross-cultural learning and adaptation is driven by different factors and it has to be distinguished between those forces having a negative and those having a positive influence. We found the fear of job loss to be a highly relevant negative force on building up motivational cultural intelligence. In particular, the decision to conduct an outsourcing of IT development work to an offshore service provider from India was related to the overall goal of cost savings and was part of a larger restructuring and concentration process at the bank in Germany. This, of course, created fears and caused resistance among many employees. A top-level manager explained to us how the problem was overcome:

*“We organized a ‘smooth restructuring’. There was no firing and the only way to reduce the size of our workforce was to avoid replacements of retiring employees and release some early into retirement while receiving a once-off financial bonus. The remaining employees were most often relocated to different departments or they conducted their own search for a new position within the restructured organization.”*

Another issue that discouraged German and Indian project workers was the moment when the first deliverables were presented by the Indian vendor. At this point in time differences in quality perception as well as communication style came to the surface. Germans were not satisfied with the deliverables and Indians were shocked about the behavior of their German colleagues knowing that they had invested extra-hours of work during nights and on weekends to meet the expectations of their client.

Concerning positive forces, what one of our Indian interview partners told us illustrates the role of goals and objectives for developing motivational cultural intelligence:

*“We wanted to get this project up and running fast in order to demonstrate our capabilities and build up trust in the relationship with our client. [...] Our goal was to understand their culture and adapt ourselves to them in order to create a more effective work environment and deliver high-quality results.”*

This theme repeated itself in interviews with Indian and German project workers who emphasized their high level of motivation to be assigned on an international project with high strategic importance to their organizations.

A further issue that was revealed by our analysis was that several project members from the Indian vendor as well as the German client had a high level of self-efficacy towards working on international project teams involving project members with different cultural backgrounds. Some of them explained this with prior experiences they had made before, either with other clients in Europe and the United States of America, or with other vendors from Europe. While on the one hand many project members were very self-confident due to prior multi-cultural experiences or personality reasons, other project members feared the cross-cultural interaction and developed the necessary self-efficacy only through a constant learning process during the project’s lifetime.

Besides self-efficacy and goals, curiosity is a further factor that can stimulate positive, individual motivation to learn and to adapt to foreign cultural behaviors and develop cultural intelligence. This is demonstrated representatively by the following comment made by a senior-level project manager from the client organization:

*“In the beginning most of our project members feared to lose their jobs due to the new outsourcing strategy and we [the project management team] were faced with resistance towards our plans of running this project together with an Indian IT service provider. However, as time passed, the restructuring process was finished, and the first joint workshop was conducted together with the Indian service provider, curiosity prevailed and our project members started to develop a strong motivation for making the project a great success.”*

This statement was supported by subsequent interviews with German and Indian interviewees who emphasized the motivating factor of curiosity for their cross-cultural collaboration.

Besides the above mentioned factors, we also found that the mutual clarification of expectations for developing trust and good communication in intercultural relationships is vital for motivational cultural intelligence to evolve. The following statement made by an Indian project member illustrates this:

*“Initially, we did not report setbacks or problems in the implementation process directly to our supervisors or our German team colleagues. They did not seem to be happy with that situation and after telling us over and over again that they wanted us to communicate frankly and openly any problems, we realized that it was okay for them to know about implementation problems without getting upset with our performance.”*

This statement shows that the trust-based relationship that evolved over time and the clarified expectations of the client project members gave the Indian project members the confidence and motivation to adapt themselves and report implementation problems. Thereby, they realized that this openness would not have any negative consequences for the collaboration in the project. Similarly, we heard from many German interview partners that good working relationships with their Indian colleagues increased their motivation for cross-cultural adaptation and interaction.

#### *Skill or Behavioral Factors*

Cross-cultural learning and adaptation is always a process that involves two parties and both the Indian as well as the German project members had to adapt their behavior to the new cultural setting in the project. Table 2 provides an overview over the main adaptation behaviors by individuals in the project.

**Table 2: Individual-level cross-cultural adaptation**

<b>Cultural Differences (according to table 1)</b>	<b>Adaptation by Individual Project Members</b>
Theme #1: Differences in risk attitude and formality in work procedures	Indian project members developed a deeper understanding of the risks in the project and adapted their behavior, for example concerning documentation style or intensity and frequency of tests before going live with new modules; Germans learned over time to appreciate the calmness of Indian colleagues in moments of severe problems and their constant focus on implementation tasks rather than formal procedures
Theme #2: Differences in quality perception and attitude to timelines	Indian project members learned over time to meet deadlines and continuously improved the quality of deliverables; Germans communicated clearly what their expectations were, for example by sending sample project documentation templates
Theme #3: Differences in hierarchy orientation and communication style	Indian project members learned to say ‘no’ and value open and frank communication to avoid problems or misunderstandings; Germans learned to interpret hidden messages, phrase questions adequately, and respect hierarchy differences between superiors and subordinates
Theme #4: Differences in working style and activity orientation	Indian project members adapted working procedures to the preferences of their client, for example concerning testing procedures; Germans specified clearly and precisely the tasks they wished to be done and communicated the important issues actively

In summary, we learned from our discussion of the emerging themes relating to cultural intelligence that significant cross-cultural learning and adaptation occurred in this project on behalf of both client and vendor. Cultural

intelligence by the individual project members helped to mitigate the risks of cultural distance between client and vendor personnel as summarized in table 2. The identified themes of cross-cultural differences (as perceived by the individual project members), attitude or motivational factors, and cross-cultural learning and adaptation result from our interpretive analysis from our participant's viewpoints. Hence, cultural intelligence is an important individual-level driver of performance in IT offshoring projects and its development and accumulation needs to be actively managed by organizations and project managers.

Besides adaptation at the individual level, cross-cultural learning occurred also at the project management level, and was stimulated by training and team building activities (interplay of cultural intelligence and project management). This will be explained in detail in the following sections.

## **IT Project Management**

A number of formal project management techniques (concerning the management and controlling of goals, precise assignment of roles and responsibilities, deadlines and milestones, etc.) as well as informal project management techniques (concerning the formation of a project culture, cross-cultural coaching and training, and fostering of project manager relationships) were employed to assure that the project would not get off course and stay on track. Concerning the formal techniques, it can be distinguished between those focusing on behavior control (i.e. 'operational processes documents', 'replay sessions', 'cascading approach to meet deadlines'), and those focusing on outcome control (i.e. 'parallel test runs' and 'rigorous quality control of deliverables'). We elaborate in the following how the employed techniques helped to overcome challenges due to the cultural distance between Indian and German project members (see table 1).

### *Formal Project Management*

The 'operational process documents' were a set of project documentation and process and task descriptions that were developed jointly by the client and the vendor during an early phase of the project. These documents were very detailed and made explicit the expected services and products. They also included instructions for work coordination, such as document templates. Through a longitudinal process of cross-cultural experiences and resulting improvements, the operational process documents were advanced and refined. They turned out to be very helpful tools for project management and for the harmonization of working styles of both client and vendor. Over time, they were used as a controlling instrument to document and track project goals, clearly define roles and responsibilities, and to provide in-depth task and process descriptions. One project manager for the vendor stated:

*"There are a number of different approaches possible and we had to deliberate a lot. We had a lot of discussions on how to do things. The usage of OPDs [the operational process documents] helped to mitigate the risks caused by cultural differences by setting clear goals and responsibilities, supporting the tracking of deliverables, and specifying our joint work coordination."*

What also helped in association with the OPDs was the use of a matrix list. The timeline of the project was inserted on one axis, while the sub-projects were inserted on the other axis, so that the full set of deadlines and deliverables could be tracked. This helped to create transparency and thus motivated the project members. The following statement made by an Indian project member emphasizes the motivating role of the matrix list:

*"As our German colleagues continuously raised more and more issues and timelines started to slip, we wanted to know when their expectations would be fulfilled. The matrix list helped us to see exactly where we were in the project, what deliverables had been accomplished and what still had to be done. This increased transparency and helped us a lot."*

In summary, the OPDs helped to harmonize different working styles of Indian and German project workers (theme #4) and lay the foundation for a smooth cooperation by defining clearly roles and responsibilities, the project's goals, and in-depth task and process descriptions.

Rigorous and extensive 'parallel test runs' of modules implemented were carried out, before going live and switching off the old systems. The German project managers laid special emphasis on this procedure to mitigate the risks of system failure. Test environments and testing cases were set up particularly for the purposes of this project which took months of hard work. The extensive parallel test runs helped to mitigate the different risk attitudes in the project (theme #1).

One of the major problems in the project concerns the differences in quality perception and attitude to timelines (theme #2). Indian project members frequently agreed to deliver results at deadlines proposed by German project

members without being able to produce the necessary quality within the scheduled time. This resulted in lower than expected quality deliverables and created frustration on behalf of the German project workers. After many negative experiences with this issue, the team members finally came to comprehend the cross-cultural differences involved and understood that this would not change unless they acted upon this problem with a new approach to setting deadlines and controlling deliverables. The solution was a ‘cascading approach to meeting deadlines’. At its core, this approach consisted of setting multiple deadlines for the same deliverable and splitting up deliverables into manageable sub-tasks. A client project manager explained:

*“We defined smaller, more manageable work packages that were clearly defined and where the results could easily be measured. Additionally, deadlines for these smaller work packages were set at an early point in time in order to have more continuous control over the work progress and depict any problems at an early stage. Basically, instead of waiting for questions, our new approach was designed to ask questions actively ourselves.”*

A major challenge for the effective use of this procedure was to assure that the preliminary deadlines would be taken seriously by the vendor, knowing that they were preliminary and that further deadlines would follow concerning the same deliverable. A certain level of pressure and control had to be built at an early stage in order to give the necessary incentives for high-quality results at the proposed deadlines.

In summary, the cascading approach to meet deadlines helped to overcome differences in quality perception and attitudes to timelines (theme #2). Additionally, it helped to overcome the differences in working style and activity orientation (theme #4).

A project management technique that helped to overcome communication problems and misunderstandings (related to theme #3) was the use of so-called ‘replay sessions’. The idea was to overcome the problem that Indian project members had a tendency to hide misunderstandings and not ask questions in order to fully understand the requirements or expectations concerning a particular task. Thus, the goal of the replay sessions was to get the Indian project members actively involved in the definition of deadlines and work packages and make sure that they had understood the functional and business requirements and expectations of the German client. The following statement made by a German project manager illustrates how these replay sessions were organized:

*“We organized joint meetings with our Indian colleagues. For example: maintenance work on a particular application. In the first session, the members involved from our organization [the client] transferred their knowledge concerning the application. The Indian colleagues would listen and take notes. In the second session, which would take place one or two days later, the Indian colleagues explained how they had understood the issues involved and eventual misunderstandings were clarified directly.”*

Whereas in some of the sub-projects the procedure for carrying out these replay sessions was quite formal, a more informal and interpersonal way of implementing the basic goal of this technique was carried out in other sub-projects. For example, when asked specifically for the use of replay sessions, a project manager from the client organization commented:

*“We did not carry out such replay sessions in a structured format. However, over time we noticed that simply waiting for the required questions from our Indian colleagues to clarify misunderstandings and check for successful knowledge transfer did not work due to cross-cultural barriers. So we started to lay more emphasis on building up close interpersonal working relationships and having open communication on a daily basis. Thereby, we frequently addressed certain issues more than once in direct conversations and assured ourselves that they had understood our message.”*

This citation shows that different forms of implementing replay sessions were employed in the project, depending on the project management style of each project leader. In summary, replay sessions helped to overcome misunderstandings due to differences in communication style and hierarchy orientation (theme #3).

A further issue that emerged in our data was related to the ‘rigorous quality control of deliverables’. Project managers of all sub-projects had similar experiences: The perceptions of the client and vendor project members concerning what quality should to be delivered and in which way were different from one another. After a continuous learning process due to repetitive negative feedback and experimentation with different procedures for applying optimum project management techniques, the project managers realized that tight controls and constant surveillance of delivered quality was indispensable. As one project manager explained:

*“After working together with large vendors before, we are used to several iterations and review rounds before getting the quality results that we expect. However, in this project I remember several cases where we went around*

*in circles several times, causing much frustration. Ultimately, I learned that when working together with an offshore vendor, tracking and controlling the quality of deliverables to the very last detail is absolutely essential.”*

In summary, the rigorous and in-depth quality control of the deliverables was indispensable for mitigating the risks of different quality perceptions (theme #2).

The following table provides a summary of the main formal project management techniques employed in this project and how they helped to mitigate the risks of cultural distance between client and vendor.

**Table 3: Project management techniques and cultural differences**

Cultural Differences (according to table 1)	Selected Project Management Techniques
Theme #1: Differences in risk attitude and formality in work procedures	‘parallel test runs’
Theme #2: Differences in quality perception and attitude to timelines	‘rigorous quality control of deliverables’ and ‘cascading approach to meet deadlines’
Theme #3: Differences in hierarchy orientation and communication style	‘replay sessions’
Theme #4: Differences in working style and activity orientation	‘operational process documents’ and ‘cascading approach to meet deadlines’

#### *Interplay of Formal Project Management and Cultural Intelligence*

The project management techniques mentioned above might also have been used in a similar way in a non-offshore context. However, cultural intelligence of project managers in this project led to an adapted use of these techniques that was specific to the offshore context. For example, the development of the cascading approach to meet deadlines was a result of constant learning and day-to-day experiences, while working together with the Indian vendor organization. Use of traditional deadline setting techniques had led to negative experiences and stimulated a cultural learning process. Deeper cultural understanding led to the ideas of developing and using the cascading approach. This reinforcing cycle resulted in continued sophistication in the use of this technique. As another project manager commented:

*“As we gained more cross-cultural experience we started to get a feeling for how much buffer time we had to calculate and how early we had to set the deadlines to get the expected high-quality results when we needed them.”*

Or, as another project manager from the client organization formulated:

*“Most of the project management techniques used are well-known and widely applied methods. But as the project goes on, you constantly adapt the techniques to the offshore context you are operating in. This is a continuous improvement process. You use a selected method only to see that it does not work when working together with an Indian vendor. Then, you adapt your procedures as a consequence of your deeper understanding.”*

#### *Informal Project Management*

Based on the observations mentioned above, the solution to the offshore challenge at first sight appears to be simply extensive vendor control and project risk management, stimulated by cross-cultural learning and experience. However, a careful analysis of our data reveals a more complex picture. An offshore outsourcing project involves two parties, and in a trust-based client-vendor relationship continuous collaboration from both parties is indispensable for offshore outsourcing project success. As one of our senior-level interview partners commented:

*“Thinking about the real reason for the success of this project, from my point of view it is the fact that the project members from our organization and the vendor organization always continued to work on the tasks and goals of the project in a collaborative way, constantly overcoming frustrating setbacks and negative feedback.”*

A project manager from the client organization in charge of three important sub-projects explained in greater detail how this worked:

*“During critical phases of the project where frustrations on both sides were high and caused serious obstacles to the progress of the project’s goals, I had regular meetings with my counterpart from the Indian organization. We discussed different perceptions, misunderstandings, cultural and communication issues, and reflected jointly on the experiences (positive and negative) we gained from working together in the project. Afterwards we carried out*

*extensive coaching with our project members on both sides independently from one another. That way, we were able to solve many conflicts and misunderstandings in the project and motivate our project workers.”*

To give an example of the issues that were discussed in these meetings, a project member from the Indian organization felt offended by the communication behavior of a German project member who had criticized the quality of a deliverable in front of other Indian project members. As a result of the joint reflection between the project managers followed by coaching sessions on both sides, the German project workers realized that they had to be more careful about their communication behavior despite legitimate reasons for disappointments about the delivered quality. Another example concerns the frequently stated problem that the offshore vendor did not carry out certain tasks that were assigned to them by the client team. Discussing this issue at the project manager level helped, and as a consequence the Indian project manager delegated the relevant tasks downward on the vendor-side. This proved to be more effective in some cases due to the power distance between superiors and subordinates in Indian organizations.

In summary, apart from the above mentioned formal project management techniques, informal project management mechanisms were important for mitigating the risks of cultural distance between client and vendor project members.

#### *Interplay of Informal Project Management and Cultural Intelligence*

In essence, regular client-vendor project manager meetings involving open communication and joint reflections upon the critical behavioral issues in the project, as well as extensive coaching of team members by project managers, helped enormously to build up a trust-based client-vendor relationship and cross-cultural understanding (concerning all four cultural themes of table 1). This led to continuous cross-cultural adaptation and the developing cultural intelligence, which is mandatory for overcoming the problems due to cultural distance between client and vendor as shown in table 2. There are several additional informal project management and team building initiatives that helped to build up trust-based intercultural relationships and cultural intelligence in the case at hand.

One important success factor is for the provision of sufficient face-to-face contact between client and vendor project members in both home countries. Due to the offshore model employed in this case the vendor organization had a dedicated onshore team that offered the German client the possibility for direct personal contact, while the German client also sent its project members to the home country of the vendor organization for on-site visits. To see how the offshore project members worked at the remote location helped tremendously to understand that the cross-cultural differences that exist have to be managed. In the project we analyzed, the client organization sent most of its project managers for one week to India. The principal project manager commented:

*“We sent all our project managers for one week to India. Even though it was a very expensive trip, we really benefited from this site visit. When they came back from India, during the weeks that followed all status lights of our project jumped from orange to green.”*

This comment shows how the on-site visits in India leveraged the success of the project. They helped to develop cultural intelligence in all three dimensions. The project managers came back to Germany with a higher degree of motivation, with a deeper understanding about the cross-cultural differences, and with an enhanced set of intercultural behaviors. Enhanced cultural intelligence helped the project managers for adapting the use of project management techniques to the offshore context.

Another supporting factor was to conduct cross-cultural workshops on both the client and the vendor side. The German client contracted a professional trainer for two workshops that were held in two different locations of the bank that were involved in the project. The Indian vendor conducted similar workshops, embedded in a more complete ‘cultural sensitization program’ which included also German language courses for dedicated onshore project workers. Although these workshops were only conducted at the beginning of the project, a senior project manager from the client organization called for a more continuous approach to cross-cultural training:

*“Our experience has shown that knowing the cross-cultural differences and the implications of these for cross-border collaboration is important for working successfully with Indian vendors. Even though we only had cross-cultural workshops once during the initial phase of the project, I would repeat these workshops several times during the course of the project to offer the possibility for regular reflection and learning.”*

## Discussion of the Findings: Model of Cultural Intelligence and Project Management Interplay

The above findings show an in-depth analysis of the success factors of the project, involving both formal and informal project management techniques, as well as cultural intelligence. They have a positive moderating influence on the negative relationship between cultural distance and offshore project success (see figure 1). In the analysis presented above, we have first shown how cultural intelligence of individual project members has a positive effect on the relationship between cultural distance and project success, and that the development and accumulation of cultural intelligence helped to overcome problems due to perceived cross-cultural differences (#1 below). Second, we explained how formal and informal project management techniques (see table 3 above) helped to overcome cross-cultural problems (#2 below). Next, we also provided empirical evidence for the interplay between cultural intelligence and project management. In particular, the use of formal project management techniques was driven by the cultural intelligence of the responsible project managers (#4 below). Also, informal project management and team building techniques, i.e. cross-cultural training, project manager coaching, and client-vendor project manager interaction, stimulated the accumulation of cultural intelligence by individual project members (#3 below). Hence, cultural intelligence and project management reinforced each other. In this way a cycle of continuous improvement and learning was created to overcome the problems of cultural distance between client and vendor. More than just a single-loop learning process, the analysis also shows that joint reflection was important, both in interpersonal meetings as well as during cross-cultural workshops and site visits in the home country of the foreign partner. Hence, joint reflection helped to stimulate cultural understanding and cross-cultural adaptation. The model as depicted in figure 1 below represents our main findings and is our substantial theoretical contribution to the IS domain. In addition, it offers insights for best practice that will be provided in the following section.

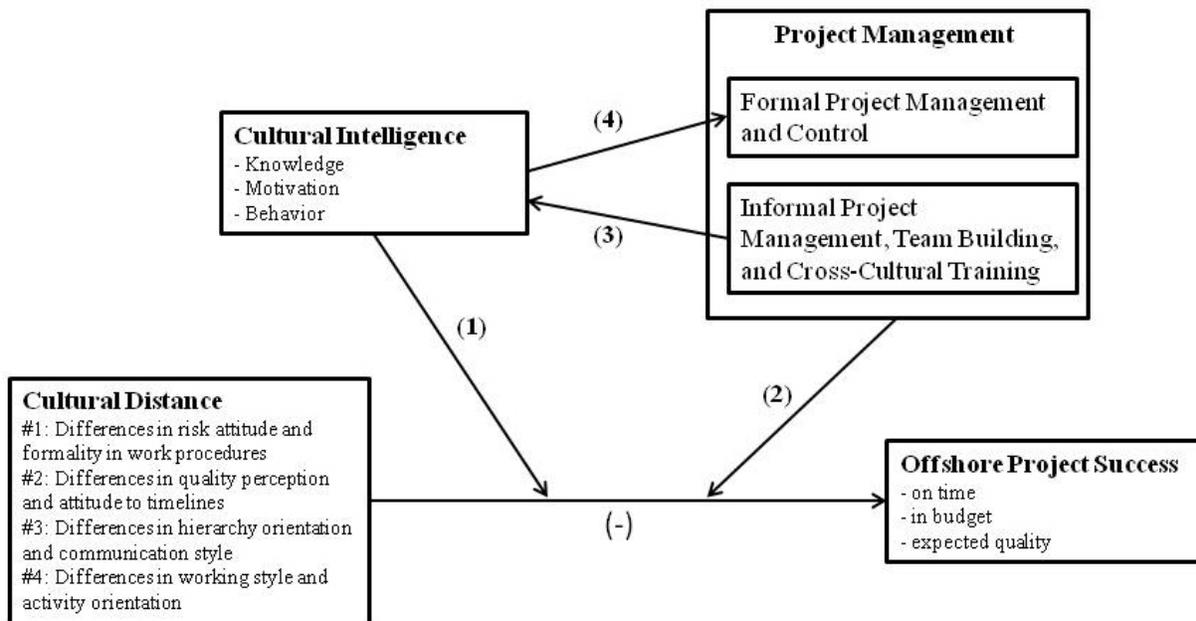


Figure 1: Model of Cultural Intelligence and IT Offshoring Project Management

## Conclusions

The development of cultural intelligence in IT project teams can be stimulated by targeted offshore specific project management techniques. Similarly, the appropriate selection and use of project management techniques in an offshore outsourcing context is enabled by the project manager's cultural intelligence. Hence, cultural intelligence as well as formal and informal project management skills are intertwined with each other. Together, they moderate the relationship between cultural distance and offshore project performance in that the performance inhibiting effect of cultural distance between client and vendor personnel is reduced. In other words, cultural intelligence and project management skills jointly reduce the inherent cultural risks in IT offshore outsourcing projects and are both indispensable for offshore outsourcing project success. While project management concepts are well known and wide spread in current practice, the concept of cultural intelligence and its interplay with offshore specific project management skills and techniques represents a novel explanation for IT project success in an offshore context.

The results of this research show that the business challenge of how to manage offshore projects successfully is still not well understood. By applying a substantiated theoretical approach we were able to inductively generate a model that takes into account cultural intelligence and the impact of project management techniques at the individual level, which at the same time links the individual level to the organizational project level. The combination of deductively derived concepts from the literature together with the empirical findings of this study allowed us to explain how globally distributed teams can overcome project difficulties from cultural differences by not only including cultural intelligence and project management into a holistic offshore management model, but also by illustrating the dynamic interplay between those two forces. While previous studies often focused only on the formal project management techniques, while ignoring the intangible, personal skills, such as cultural intelligence and informal project management approaches, we combined all three concepts in a unified model. Furthermore, the findings may help project managers to identify problems related to cultural difference in their projects earlier than was possible before. A majority of interviewees in our case study believed that managing cross-cultural projects successfully must be a kind of gift a project manager cannot acquire if it is not already in his or her possession. Doubtlessly, social intelligence in all its facets is complex and difficult or even impossible to create intentionally, which distinguishes 'good' project managers from 'not so good' project managers. However, the findings that led us to our model reveal some basic, underlying 'mechanics' in the gear box of cross-cultural projects that have not been discovered in current literature on the subject and might be useful for project managers as a sensitizing device and as a unique tool for use on their own projects.

With this theory-building research approach we were able to develop a model of cultural intelligence and IT offshore project management interplay inductively from an in-depth single case study in the financial services industry. The model we present in figure 1 is a substantial theoretical contribution and a middle range theory addition (Merton 1968) to the IS domain that fills an important gap, namely explaining how IT offshore projects can be managed more effectively. In particular, the model illustrates the interplay between cultural intelligence and formal and informal project management approaches, and their joint impact on offshore outsourcing project success.

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