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How to Prevent before You Must Cure – A Comprehensive Literature Review on Conflict Management Strategies in Global Project Teams

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ABSTRACT

Global project teams are frequently confronted with diverse conflicts. As these teams involve people from different cultures, who work at different locations, they are more prone to conflicts than collocated teams. Geographical dispersion and dependency on information and communication technology entail more challenges for conflict management. In this study, we examine prior literature on cross-cultural conflicts and conflict prevention, management and resolution. We found that previous research on conflict prevention in global project teams is scarce. Therefore, we discuss effective conflict prevention methods and develop a model of a conflict prevention process. This paper contributes to the field in two ways: first, it structures existing literature on conflicts in global project teams, and secondly, it can be used by practitioners to improve conflict prevention in their global project teams.

Keywords

Conflict prevention, conflict management, cross-cultural differences, cross-cultural conflicts, global project, virtual team.

INTRODUCTION

As a result of globalization, the number of multicultural organizations and globally dispersed multicultural projects has grown (Greblikaite and Daugeliene, 2010). Numerous studies on cross-cultural differences and effective management strategies for global project teams are available. Comprehensive literature reviews exist on topics such as international management (Pisani, 2009), culture research (Zhou, 2011) and multinational distributed teams (Connaughton, 2007). However, to our knowledge, there is no comprehensive review focusing on conflicts in global project teams. Conflicts in such teams may arise because team members from different cultures, working at different locations across the world, are involved.

In this section, we discuss the nature of conflict in globally dispersed project teams and relevant terms such as conflict management, conflict resolution and conflict prevention. The second section describes the research method and the data (selected journals) the study is based on. In the third section, a review of conflict management issues investigated in prior research is outlined. The fourth section (discussion) presents the main findings of the study, differentiating research on the origins of conflict, the consequences of conflict, conflict management measures and conflict prevention measures; and briefly describing a conflict prevention model.

The concept of global project teams has been a subject of study for many years. In contrast to collocated project teams, which are situated in a single location and are usually working within one organization, global project teams are distributed across country borders (international projects), often involving people from different organizations who work together as a virtual project team (Binder, 2007, p. 1). Challenges and conflicts that arise in this type of project teams have also been widely elaborated.

The purpose of this research is to analyze prior literature in the global project management field and to investigate cross-cultural conflicts that occur in such projects. We aim to present an overview of effective conflict management strategies that could be used by leaders of global projects. The focus, however, is not on negative effects and costs arising once a conflict in a virtual team has occurred, but on preventive measures that can be taken to avoid cross-

cultural conflicts before they begin. Following the common saying, "an ounce of prevention is worth a pound of cure" (Brown & Rosecrance, 1999, p. 1), we focus our research on conflict prevention strategies.

Given the increased potential for cross-cultural conflicts in today's globalized world, we expected to find many studies that address conflict prevention. A review of the available literature shows, however, that most studies deal with the potential challenges and pitfalls facing virtual teams, and ways to handle cross-cultural problems after they have already occurred. They do not address how these conflicts might have been prevented in the first place (Kirkman, Rosen, Gibson, Tesluk and McPerson, 2002; Morris, 2008; Reed, 2007; Zeitoun, 1998). This paper attempts to fill this gap by examining literature that does deal with conflict prevention and management, and by comparing prior theoretical contributions through a comprehensive literature review and synthesis. Based on the results of the literature review, we propose a set of prevention strategies and methods that could be adopted by practitioners.

Not every conflict is harmful for the project team or the project output. Several research studies examined the phenomenon of positive results of conflict, showing that some conflicts (especially conflicts related to different understanding of a task) might lead to better team performance (Bantel and Jackson, 1989; Jehn, 1995; Pelled, Eisenhardt and Xin, 1999). Conflicts can improve the quality of group decision making and increase the organization's productivity (De Dreu and Van de Vliert, 1997; Robbins, 1978). Therefore, a challenging management task, in addition to determining the conflict potential within the project team, is to assess whether a conflict would be harmful and should be prevented, or might positively impact the team's work, if appropriately managed.

Obviously, conflict management is not necessarily the same as conflict resolution. According to Robbins (1978), some conflicts should be managed not by resolving them but by stimulating them appropriately. In this paper, we adopt the definition of Robbins (1978), who described conflict as "any kind of opposition or antagonistic interaction between two or more parties (…) [that is] perceived by the involved parties" (Robbins, 1978, p. 67). In this context, conflict resolution is understood as any way of "reduction, elimination, or termination of conflict" (Rahim, 2002).

Conflicts in global project teams are most often categorized as either relationship conflicts (also known as affective, emotional or interpersonal) or task conflicts (a.k.a "cognitive" or "functional") (Connaughton, 2007; Kankanhalli et al., 2007; Mortensen and Hinds, 2001; Pinkley, 1990). Another type of conflict, which has often been neglected in the literature, is a "process conflict". By process conflict we mean a disagreement regarding tasks and resource assignments (Jehn, 1997).

We define *conflict management* as controlling and coordinating conflicts that already exist, and taking actions that lead to mitigation of the negative consequences of the conflicts. In other words, the focus is on conflicts that have already surfaced. Methods for conflict management can be implemented solely on existing conflicts, whereas preventive measures apply to the future. It is important to distinguish between these two categories of overcoming conflicts. In addition to Rahim (2001, 2002), who highlighted the difference between conflict management and conflict resolution, we include *conflict prevention* as the third category. In order to develop an appropriate framework for conflict alleviation in global project teams, these three categories must be distinguished.

RESEARCH METHOD AND LITERATURE BASE

To select the literature sources, we used the structured approach of systematic literature review proposed by Webster and Watson (2002). In order to determine the leading journals contributing to the research field, we first defined the scope of our research. Since the focus is on conflicts within global project teams, the core field of investigation is project management (PM). Furthermore, management information systems (MIS) and international management (IM) are included, because in these fields, conflict management and prevention methods have also been investigated. The fourth relevant field is social psychology. Conflict management and prevention are not only subject of research in management, IS and business studies, but also in psychology. With regard to international teams and the causes of conflicts, social psychology researchers try to understand the motives behind the human behavior. For this reason, social psychology journals are also included in the literature review. By covering all four fields (PM, MIS, IM and social psychology), there is less risk of omitting a study relevant to this review.

The list of leading journals related to project management is based on Heupers, Hillegersberg and Katsma (2011), who used a selection by Kwak and Anbari (2009) and extended it with eight additional journals. Altogether, they list 26 academic journals devoted to project management. We adjusted the list to the scope of our review by eliminating

journals that specialize in engineering and construction, bringing the number down to 20 project management journals.

The leading MIS journals were adopted from the Association for Information Systems list, which contains a ranking of 95 MIS journals based on nine different rankings (AIS, 2012a). We included the top 20 journals and magazines from this list in the systematic literature review and adjusted the list by eliminating journals and magazines devoted to engineering science.

General management journals were selected from Pisani's list of 20 journals (Pisani, 2009), based on the research of Gomez-Mejia and Balkin (1992) and Werner (2002). Despite the fact that Gomez-Mejia and Balkin's research was conducted 20 years ago, it is still acknowledged as the most precise and comprehensive ranking of management journals. Because the focus of our analysis is on *multinational* teams in *global* projects, we included in the review list only those management journals that address international management issues. According to Pisani, there are 8 management journals that have led the field of IM research between 1980 and 2006. Given that the number of IM articles published in the selected journals has increased from year to year (Pisani, 2009), we assume that these journals continue to have the greatest influence on IM research, although there is a lack of research for the period between 2007 and 2012.

Regarding psychology literature, we limited the review to only include a selection of journals, namely those focusing on social psychology. According to Hewstone et al., social psychology is "the scientific study of how personal, situational, and societal factors influence the cognition, motivation, and behavior of individuals and (members of) social groups" (Hewstone et al., 2007). From the field of social psychology, we included the leading 10 journals as ranked by SCImago (SCImago, 2011) and expanded this list to incorporate journals which deal specifically with cross-cultural research and conflict management.

In order to limit this very broad scope, we analyzed only recent theoretical and empirical studies, published between 2005 and 2012. Several scientific literature databases and collections of articles were used in the search process: EBSCO (EBSCO, 2012), Emerald (Emerald, 2012), ScienceDirect (ScienceDirect, 2012), SAGE (SAGE Journals, 2012), the AIS electronic library (AIS, 2012b), and the Tailor and Francis online database (Tailor and Francis Online, 2012). These databases were searched using a systematic set of keywords: global project, project management, information systems, conflict prevention, conflict management, conflict resolution, cross-cultural conflict, cross-cultural difference, cross-cultural management, cross-cultural team, virtual team, dispersed team, multinational team, and information system development project. The list of leading journals was used to determine relevant scientific literature databases; however, the search process included all articles, case studies, proceedings and working papers dated from 2005 to 2012 in the databases.

Overall, we included 52 journals related to the four fields of study mentioned above (PM, MIS, IM, social psychology). Table 1 shows the entire list of journals analyzed in this literature review in alphabetical order, indicating which field the journal belongs to. 1006 articles fulfilled the search criteria and were examined in more detail. By analyzing the title and abstract, the articles' relevance for cross-cultural conflicts in global project teams was assessed (Heupers et al., 2011). We selected the articles based on two criteria. The first criterion is relevance to conflict management in global project teams, which resulted in 15 articles. The second criterion is relevance to cultural differences and challenges in global virtual teams. This search resulted in additional 17 articles.

Relevant and influential articles are not always published in leading specialist publications. Thus, it is important to expand the research sources by backward and forward search (Webster and Watson, 2002). Backward search is done by reviewing the references of the articles that were initially selected, while forward search means searching for other articles that cited the selected entries (Webster and Watson, 2002). Because earlier contributions may also be highly valuable in an analysis of the topic, backward search and forward search were not limited to the period of 2005-2012. After conducting the search, we included 7 additional papers on conflict management and 6 on challenges of global virtual teams. In total, this literature review involves a comprehensive analysis of 45 theoretical and empirical studies.

Field / Top journals	PM	MIS	IM	Social Psychology
Administrative Science Quarterly	X			
AOM Perspectives/Executives	X			
AOM Journal	X		X	
AOM Review	X		X	
California Management Review	X			
Harvard Business Review	X	X		
Information Systems Research	X	X		
International Journal of Managing Projects in Business	X			
International Journal of Project Management	X			
Journal of Operations Management	X			
Journal of Small Business Management	X			
Management Science	X	X	X	
MIS Quarterly	X	X		
Operations Research	X			
Organization Science	X			
Project Management Journal	X			
Sloan Management Review	X	X		
Strategic Management Journal	X		X	
Technovation	X			
Artificial Intelligence		X		
Communications of the ACM		X		
Communications of the AIS		X		
Decision Sciences		X		
Decision Support Systems		X		
Information & Management		X		
Journal of Computer and System Sciences		X		
Journal of Management Information Systems		X		
Human Relations			X	
Journal of International Business and Cultural Studies			X	X
Journal of International Business Studies			X	
Journal of Management			X	
Journal of Management Studies			X	
Advances in Experimental Social Psychology				X
Cyberpsychology, Behavior, and Social Networking				X
European Review of Social Psychology				X
Group Processes and Intergroup Relations				X
International Journal of Conflict Management			X	X
International Journal of Cross Cultural Management			X	X
International Journal of Intercultural Relations				X
Journal of Conflict Resolution				X
Journal of Cross-Cultural Psychology				X
Journal of Experimental Social Psychology				X
Journal of Intercultural Studies				X
Journal of Multilingual and Multicultural Development				X
Journal of Organizational Behavior				X
Journal of Research in Personality				X
Journal of Social Psychology				X
Personality and Individual Differences				X
Psychology of Learning and Motivation - Advances in Research and Theory				X
Social Neuroscience				X

Table 1. Leading journals relevant for cross-cultural conflict management

Selecting articles based on an analysis of the title and abstract reduced the risk of omitting a relevant article. However, to identify whether an article is actually important for our research we had to evaluate the content. When screening the content, we focused on studies providing cross-cultural conflict management methods that can be implemented in global project teams. Particularly, we looked for research that is based on or is applicable to globally distributed project teams.

Studies from the pre-selection stage that were not included in the final review were rejected mostly due to little or no connection with cross-cultural conflict management. Most of these researches investigate issues such as the influence of culture on risk management in IT projects (Prifling, 2010), behavioral competences for IT project management (Taylor and Woelfer, 2009), and cultural differences in virtual software teams (Dafoulas and Macaulay, 2001). They do not focus on cross-cultural conflict management, resolution or prevention methods.

Based on the content screening, we finally selected 20 conflict-related articles, as shown in table 2. Our findings are derived from the studies described in these articles.

REVIEW OF CONFLICT MANAGEMENT IN PRIOR RESEARCH

The articles included in the review were selected in such a way that conflicts in working teams can be considered from a broader perspective (e.g., some articles compare collocated teams with virtual teams (Hinds and Mortensen, 2005) and some others study solely virtual teams (Kankanhalli et al., 2007, some papers focus on the relationship between conflict and team performance (Mortensen and Hinds, 2001), some evaluate sources of conflict (Vogt and Beck, 2008), and some propose conflict management and resolution strategies (De Dreu et al., 2001)). Only few articles distinguish between conflict management and conflict resolution. Very few researchers propose conflict prevention measures, and none of them defines preventive methods. This is a problem because many different definitions exist, leading to discrepancies in the results.

Authors	Year	Journal	Conflict terminology	Culture/Conflict defined
Barki, H. and Hartwick, J.	2001	MIS Quarterly	Interpersonal conflict	Definitions of *conflict* based on multiple sources; e.g. a process in which one party perceives that its interests are being opposed or negatively affected by another party (Wall and Callister, 1995)
Behfar, K. J., Mannix, E. A., Peterson, R. S. and Trochim, W. M. K.	2011	Small Group Research	Relationship conflict, task conflict, process conflict	No distinction between 'conflict management' and 'conflict resolution'
Behfar, K. J., Peterson, R. S., Mannix, E. A. and Trochim, W. M. K.	2008	Journal of Applied Psychology	Relationship conflict, task conflict, process conflict	No distinction between 'conflict management' and 'conflict resolution'
De Dreu, C. K. W., Evers, A., Beersma, B., Kluwer, E. S. and Nauta, A.	2001	Journal of Organizational Behavior	Interpersonal conflict	*Conflict management* is what people who experience conflict intend to do as well as what they actually do (Van de Vliert, 1997)
Furumo, K.	2009	Journal of Computer Information Systems	Relationship conflict, task conflict	*Conflict* – disagreement among team members that results from incompatible goals and interests (Jehn, 1995)
Gibson, Ch. B. and McDaniel, D. M.	2010	Perspectives on Psychological Science	Contingency approach to conflict management	*Culture* – a shared meaning system, which implies that members of the same culture share common meanings and are likely to interpret and evaluate situational events and management practices in similar way; No distinction between 'conflict management' and 'conflict resolution'

Hinds, P. J. and Mortensen, M.	2005	Organization Science	Interpersonal (affective, emotional) conflict, task conflict, process conflict	Definition of interpersonal and task conflicts; no definition of conflict management, resolution or prevention; no definition of culture
Kankanhalli, A., Tan, B. C. Y. and Wei, K.-K.	2007	Journal of Management Information Systems	Relationship conflict, task conflict	*Cultural diversity* includes national and linguistic differences among members as well as differences along broader cultural dimensions (Hofstede, 1991); *Conflict* – disagreement, both manifest and latent, among members; it implies incompatible goals or interests (Robbins, 1974)
Leidner, D. and Kayworth, T.	2006	MIS Quarterly	Vision conflict, contribution conflict, system conflict	National culture and organizational culture defined based on multiple sources
Mahalingam, A. and Levitt, R.E.	2007	Journal of Construction Engineering & Management	Cross-national conflicts on global projects	No definition
Mortensen, M. and Hinds, P. J.	2001	International Journal of Conflict Management	Affective (relationship, emotional) conflict, task (cognitive, functional) conflict	Definition of interpersonal and task conflicts; no definition of conflict management, resolution or prevention; no definition of culture
Parolia, N., Jiang, J. J. and Klein, G.	2008	Conference paper		*Conflict resolution mechanisms* are addressed in the broader area of conflict management
Paul, S., Samarah, I., Seetharaman, P. and Mykytyn, P. P. J.	2005	Journal of Management Information Systems	Collaborative conflict management style	*Culture* – the collective programming of the mind which distinguishes one group or category (nation) from another (…); *Conflict resolution mechanism* – a preferred behavior that people use in order to bring a conflict situation to a settlement
Pelled, L. H., Eisenhardt, K. M. and Xin, K. R.	1999	Administrative Science Quarterly	Intragroup emotional conflict, intragroup task conflict	No definition
Prifling, M.	2010	Conference paper	Interpersonal conflict	No definition of conflict, no distinction between 'conflict management' and 'conflict resolution'; Culture classification and level dimensions
Somech, A., Desivilya, H. S. and Lidogoster, H.	2009	Journal of Organizational Behavior	Interpersonal conflict, relation-ship conflict, task conflict	No distinction between 'conflict management' and 'conflict resolution'
Vogt, K. and Beck, R.	2008	Conference paper		No distinction between 'conflict management', 'conflict resolution', and 'conflict prevention'
Vogt, K., Beck, R. and Gregory, R.W.	2010	Conference paper	Inter-personal conflict	*Cultural distance* – the degree of difference in organizational and national cultures between an offshore outsourcing vendor company and the client company (Abbot, 2007); *Conflict* – actual struggle between actors and groups – arises as a result of divergent viewpoints causing contradiction within and between social groupings
von Stetten, A., Beimborn, D. and Weitzel, T.	2012	Wirtschafts-informatik		No definition
Wehrenfennig, D.	2007	Conference paper		No definition

Table 2. Articles on cross-cultural conflict in global teams

DISCUSSION

Given the increasing importance of global project teams, this analysis is meant as a contribution to the research on cross-cultural conflict prevention. One finding is that while conflict management has been widely discussed, only a few studies focus on conflict prevention methods used in cross-cultural virtual teams and, to our knowledge, there is no comprehensive review on the existing conflict-related literature.

Global project teams can be protected by properly adopted conflict prevention methods. If the prevention fails, cross-cultural conflicts may occur. They must be cured by conflict management or resolution methods, as illustrated in figure 1. Cross-cultural conflicts in global project teams, unless prevented or properly managed, may have severe consequences, frequently threatening the success of a project. On the other hand, some conflicts can have a positive impact on the performance of the project team. For example, different understandings of a task may lead to better or more innovative solutions, because the task is viewed from different angles. Recognizing which potential conflicts could negatively influence the team's performance, and which ones could do so positively, is a challenge the project manager is facing. Conflicts leading to negative consequences should be prevented as early as possible.

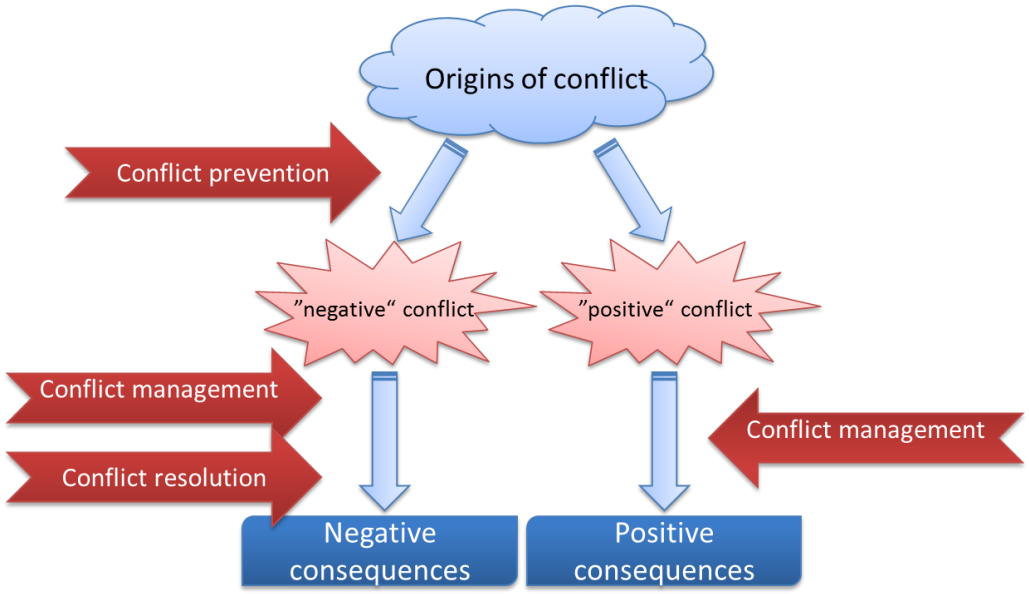

Figure 1. Conflict occurrence

In this section, we present some conclusions drawn from our structured systematic review. The origins of conflict, conflict consequences, and conflict management methods discussed subsequently were derived from the articles presented in table 2. First, we discuss factors that may potentially lead to conflicts in global project teams. Subsequently, an overview of conflict consequences is given, followed by established conflict-management strategies. Finally, we propose a new framework for a conflict prevention process and outline specific prevention methods that are used in practice, taken from empirical studies.

Origins of Conflict

In order to understand the presence of a conflict in a cross-cultural global project team and to evaluate how the conflict can be mitigated, the first step is to study the origins of the conflict. One of the most often mentioned factors leading to conflicts in dispersed project teams is the strong dependence of the team members on technology, which frequently results in communication problems. For instance, a technical problem occurring in one project site (e.g. unexpected network failure or power cut) can increase the anxiety at another project site where a subteam is waiting for deliverables, but is not aware of the power problem. Team members at that site may think that the other members are not fulfilling their assignments within the deadline, thus creating an interpersonal conflict. Researchers have indicated that geographically distributed teams are more prone to conflicts than collocated teams (Behfar et al.,

2008; Kankanhalli et al., 2007) and that clarifying misunderstandings is often more challenging (Mortensen and Hinds, 2001).

Furthermore, Kankanhalli et al. argue that task conflicts resulting from technology-related issues are more detrimental for virtual teams than for collocated teams (Kankanhalli et al., 2007). They recognized the roots of communication problems in:

- the geographic distribution of team members,
- the information load (the risk of overseeing important information is high when e-mail exchange is heavy, especially when people not related to the issue are involved,
- slow or delayed feedback due to the communication media. Particularly problematic is the lack of immediate response or feedback on urgent matters, such as problem solving and decision making (Kankanhalli et al., 2007).

Due to their strong reliance on technology and communication media, global project teams often lack activities that consolidate the team and foster interpersonal relationships among team members. This leads to weak interpersonal bonds, unshared context and poor information sharing (Hinds and Bailey, 2003; Hinds and Mortensen, 2005; Mortensen and Hinds, 2001). Poor information sharing is often the cause of increased task conflict (Mortensen and Hinds, 2001). When intragroup relationships are not properly cultivated, team cohesion is in danger. Likewise, team goals may negatively influence team cohesion and performance unless understood and shared (Parolia et al., 2008; Parolia et al., 2010).

Globally dispersed project teams are often characterized by internal complexity, which is partially due to divergent goals and motivations of the team members, but also due to multifaceted tasks and diverse knowledge and functional background (Kankanhalli et al., 2007; Paul et al., 2005; Vogt et al., 2010) as well as beliefs and culture of the team members (Kankanhalli et al., 2007; Leidner and Kayworth, 2006; Mortensen and Hinds, 2001; Vogt and Beck, 2008; Vogt et al., 2010; von Stetten et al., 2012). Other scholars also pointed out that discrepant functional background of virtual team members causes task conflict (Pelled et al., 1999).

Boundary objects, i.e. information used in different ways by different people, may have substantial influence on conflict and conflict management (Star and Griesemer, 1989). Boundary objects are linked to conflict occurrence by the task. Their importance for conflict management is connected with different perceptions of management measures. The same information provided to one team may result in conflict resolution and when provided to another party may result in conflict escalation, due to different ways of adopting the information (or in this context – the conflict management method).

Conflict Consequences

Although conflicts in cross-cultural globally dispersed project teams may sometimes be beneficial to the project team, as mentioned in figure 1, empirical evidence shows that they are more likely to have a negative impact on team performance (Furumo, 2009; Hinds and Bailey, 2003; Hinds and Mortensen, 2005; Kankanhalli et al., 2007; Montoya-Weiss, Massey and Song, 2001; Vogt and Beck, 2008; von Stetten et al., 2012). Furthermore, unresolved conflict can strain relationships and reduce trust between parties (Gill and Butler, 2003; Parolia et al., 2008).

Nowadays, global project teams are often involved in offshoring projects. With the expansion of offshoring, the service providers' countries have developed at a fast pace, leading to greater competition for resources. Increased competition on the labor markets results in higher turnover rates, negatively affecting resource stability and continuity in offshoring projects (Vogt and Beck, 2008). We argue that conflicts in cross-cultural offshoring teams increase staff turnover rates, further impacting project team stability in a negative way. However, an empirical study is required to verify this hypothesis.

Conflicts can be positive or negative (e.g. task conflict enhances team performance, while emotional conflict diminishes team performance (Pelled et al., 1999)). Either way, conflicts should be appropriately managed or resolved in order to derive potential benefits from them and avoid or reduce negative consequences.

Conflict Management Measures

Conflict management is widely recognized as a significant success factor for relationship quality in global teams (Kankanhalli et al., 2007; Lee and Kim, 1999; Parolia et al., 2008; Saunders, 2000; Zhou, 2011). With the globalization of work, this field of study became particularly challenging, as identical conflict situations may be perceived differently depending on the cultures (Gibson and McDaniel, 2010) and on the type of team (Paul et al., 2005) involved. This means that each conflict must be dealt with individually. Practitioners should analyze the circumstances of each of the parties involved in the conflict and identify the most compatible management strategy.

Different cultures require different conflict management methods. While a certain strategy appears to be effective and resolves the conflict in one situation, it can yield the opposite outcome when applied to a different team struggling with the same or a similar problem. The reason for this is often grounded in cultural issues and perceiving the same situation in different ways. For example, the salience of the power distance (Hofstede, 1980) differs across cultures. This influences both the nature of the conflict process and the conflict resolution strategies applied (Zhou, 2011). The more experienced a project manager or team leader is, the less challenging it is to identify the proper conflict management strategy (Vogt and Beck, 2008, p. 158; Vogt et al., 2010, p. 5). Once selected, the right strategy must also be applied correctly. Vogt and Beck (2008) recognize the necessity of formalized conflict resolution routines.

Although our study showed that researchers have adopted different conflict management approaches in their studies, most of them applied the Thomas-Kilmann Conflict Mode Instrument, sometimes with slight adaptations. Thomas and Kilmann identified five conflict management approaches (Thomas and Kilmann, 1974):

- Competing – an individual is assertive and uncooperative and pursues solely their own concerns
- Accommodating – an individual is unassertive and cooperative to the extent that they neglect their own concerns to satisfy the other person's concerns
- Avoiding – an individual is unassertive, but also not cooperative and as a result, not addressing the conflict
- Collaborating – an individual is both assertive and cooperative and searches for a solution that fully satisfies both parties
- Compromising – an individual falls in the middle of the spectrum between assertiveness and cooperativeness, pursuing a mutually acceptable solution that may partially satisfy both parties

Research evidence has indicated that teams relying more on technology and communication media experience more task conflict than relationship conflict, and thus, they adopt the collaborative conflict resolution approach more often than collocated teams (Miranda and Bostrom, 1994). Follet argued in 1940 already that the collaborative style stabilizes the conflict in a team, whereas the compromising style may result in an initially resolved conflict reemerging later in another form (Follett, 1940).

Conflict Prevention Measures

Conflict occurrence and resolution may result in cultural changes over time (Leidner and Kayworth, 2006, p. 380). This may have a positive impact on the performance of a global project team, as it strengthens cultural awareness among the team members. It may, however, also negatively influence project teams, as their members are more exposed to the "cultural disorder". By "cultural disorder" we mean loss in cultural differences and adaptation to other cultural styles.

Assume a global virtual project team consists of Indian members located in Pune and German members located in Munich. The cultural distance between the two groups is substantial, but both parties are aware of the other's cultural style. In order to avoid unnecessary conflicts, the German part of the team partially adopts the Indian etiquette. However, the Indian part of the team, being aware of the German way of working, applies some of the German business behavior. Such disarrangement will potentially lead to even more serious conflicts and will negatively influence the overall team performance. Therefore, cultural change, be it national or organizational, must also be properly managed and the parties involved must be aware of the change. Controlled cultural adaptation

(called “cultural intelligence”) is strongly recommended in global project teams. It encompasses a cognitive, a motivational and a behavioral level of culture, describing the capability of an individual to "adapt to new cultural contexts" (Earley, 2002).

Prior research reports that conflict management or resolution does not always cure the situation among global team members. Some scholars evidenced negative consequences of interpersonal conflict remaining, even after the effects of conflict management and satisfactory conflict resolution were observed (Barki and Hartwick, 2001, p. 218). Thus, we argue that conflict management and conflict resolution are not sufficient. They must be complemented by conflict prevention. We strongly emphasize this aspect of our research and recommend practitioners to also focus more on conflict prevention styles. Therefore, the goal of this subsection is to structure the available approaches to cross-cultural conflict prevention.

Timely intervention can undoubtedly help mitigating both relationship and task conflicts in globally distributed project teams. The first step in identifying potential areas of conflict is to look for institutional mismatches (Mahalingam and Levitt, 2007, p. 526). After identifying potential future conflicts, several organizational alignments are possible, e.g. redesigning the project organization, providing appropriate intercultural training and awareness programs to improve responsiveness to cross-cultural differences, and using professional mediation services (Mahalingam and Levitt, 2007; Vogt et al., 2010, von Stetten et al., 2012).

Since task conflicts are prevalent in global virtual teams, other authors recommend focusing on conflict prevention in order to eliminate this type of conflict (Hinds and Mortensen, 2005, p. 303). Furthermore, shared identity is seen as a method to mitigate conflicts. In particular, interpersonal conflict is reduced when team members share a strong sense of unity and team identity (Hinds and Mortensen, 2005; Mortensen and Hinds, 2001). We view shared identity, shared context and shared IT values as significant preventive measures for cross-cultural conflicts in globally distributed project teams (Hinds and Mortensen, 2005; Leidner and Kayworth, 2006).

Another influential conflict prevention method is to popularize and support face-to-face meetings and off-the-job activities to bring together dispersed team members (Maznevski and Chudoba, 2000; von Stetten et al., 2012). Project managers and team leaders are advised to organize as many team-building meetings as possible, despite the high cost involved. Over the long term, this strategy appears to be rewarding, since it allows team members to build trust in each other and to break through interpersonal borders. Knowing other members personally – instead of just perceiving them as communication nodes to interact with through technology – encourages more frequent and better communication.

Since information sharing in virtual teams has been identified as troublesome and is one of the common sources of conflict, regular communication between locations will prevent potential conflicts (Hinds and Mortensen, 2005, p. 304; von Stetten et al., 2012, p. 145). Moreover, globally dispersed teams will be better informed about the current status of work.

The behavior of team members will be better understood if the project involves on-site coordinators (expatriates). These coordinators are also called "bridgeheads", as they serve as a bridge between dispersed subteams (von Stetten et al., 2012). On-site coordinators can more easily identify project risk factors and potential conflict areas, helping to mitigate problems in a timely manner. They can also motivate team members to spontaneously communicate, which has been demonstrated to be a powerful tool for better team performance and reduction of conflict incidents (Hinds and Mortensen, 2005, p. 302).

Based on the research, the main phases of a conflict prevention process for global project teams can be identified as illustrated in figure 2. This conflict prevention model is grounded on Deming's PDCA (Plan-Do-Check-Act) cycle (Deming, 1986). The first phase is to recognize potential conflict areas. This phase is strongly connected with observation and analysis of the project environment. The factors that possibly lead to a conflict were described in section “Origins of Conflict” in more detail. When it is recognized that the project environment became more prone to the occurrence of a conflict, plans for reducing or resolving the causes of potential future conflicts are made (step 2 in the conflict prevention model: Plan). The methods devised in the planning phase are then implemented in the intervention phase. As pointed out in the section “Conflict Management Measures”, different cultures require different conflict management methods. The same applies to conflict prevention techniques, as some techniques can be negatively interpreted in some cultures, leading to conflict occurrence instead of conflict prevention. Finally, the

effects of intervention must be studied and, if necessary, improvements to the intervention methods must be made during the "check" phase.

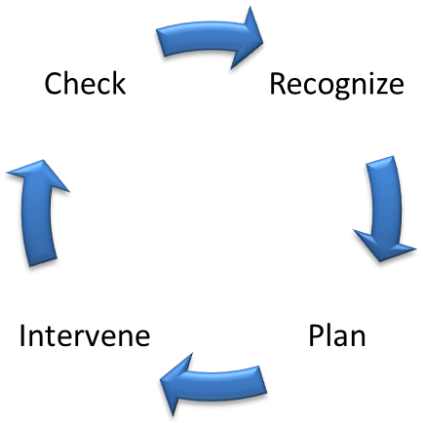

Figure 2. Conflict prevention model

While this model is intuitive, it still requires validation in future research. An empirical study of the model's adoption in practice will help to assess whether it is suited for global project management.

CONCLUSION

This paper makes two main contributions: firstly, to our knowledge, it is the first comprehensive structured literature review in the field of cross-cultural conflicts in globally distributed project teams. Secondly, it deductively develops a set of conflict prevention methods, including a high-level model of the conflict prevention process.

The paper attempts to structure conflict emergence, conflict management and resolution as well as conflict prevention in cross-cultural globally distributed project teams. Conflict management has been widely studied and is recognized as a significant success factor in global teams. Consequently, we have identified a large number of studies and papers that focus on this topic. Conflict prevention, however, has been frequently neglected by the researchers. Since previous studies so far have only marginally dealt with conflict prevention, our findings were derived not only from the available empirical research, but also from recommendations by practitioners.

Based on prior work we found that different conflict management strategies achieve different results when implemented with varying types of teams or across diverse cultures. Conflict prevention and management strategies across cultures is a field that would benefit from a comprehensive investigation in future research.

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