Cultural Antecedents and Performance Consequences of Open Communication and Knowledge Transfer in Multicultural Process-Innovation Teams

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CULTURAL ANTECEDENTS AND PERFORMANCE CONSEQUENCES OF OPEN COMMUNICATION AND KNOWLEDGE TRANSFER IN MULTICULTURAL PROCESS-INNOVATION TEAMS

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ABSTRACT

Processes in multinational corporations (MNCs) have to be configured with regard to the challenges of a permanently evolving environment. Process-innovation teams are considered to be powerful tools inside organisations to cope with this necessity. Their performance is of major importance for most MNCs. As a response to the increasing internationalization and globalization of markets, these teams show a growing culturally diverse composition. This article focuses on two major processes that are discussed to decide about a positive or a negative performance of a team: intra-team communication style and knowledge transfer. Explicitly, this article a) tests for the influence of cultural diversity on intra-team communication and knowledge transfer, and b) empirically examines the impact of the openness of intra-team communication and knowledge transfer on the performance of multicultural teams. A quantitative empirical survey among 84 team-members of 20 culturally diverse teams within a German sportswear company is used to test the relationships. Findings reveal that national cultural diversity has no significant impact on intra-team communication and knowledge transfer but both of them have significant influences on different measures of performance.
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INTRODUCTION

Changing economic conditions force organizations to apply new structural forms designed to reduce costs while simultaneously maximizing flexibility and responsiveness to customer demands (see, for example, Bartlett & Ghoshal, 1989 or White & Poynter, 1990). Within these flatter, more decentralized organizations, teams play a major role and are often discussed as critical factors for their success (Govindarajan & Gupta, 2001; Nohria, 1991). In addition, due to the increase in the internationalization of companies and the globalization of markets, worldwide economic and thereby personnel linkages arouse that make the joint work between employees from different cultures and countries necessary (Holtbrügge & Puck, 2003).

This article focuses on a special type of teams: process-innovation teams. Process-innovation teams are composed of members with different functional backgrounds and set up to evaluate existing intra-firm processes and to propose solutions for insufficient processes within the company. Their implementation is based on the assumption, that change is achieved largely through the work of teams (West et al., 2004). Thus, in many cases teams constitute the organizing principle in modern innovation activities (Kratzer et al., 2004; Lovelace et al., 2001).

While functional diversity in teams is seen as leading towards higher innovativeness on the one hand, process difficulties are frequently mentioned on the other hand (see, for example, Ancona & Caldwell 1992a; Kanter, 1988; Jehn, 1997). Bettenhausen (1991) even concluded in a review that the overall effect of diversity is negative, since the advantages in creativity are often offset by problems creating consensus. Cultural diversity between the members, if existent, additionally increases the managerial complexity within process-innovation teams: A large quantity of both conceptual and empirical studies was conducted, trying to explore the impact of national and/or cultural diversity on team processes and/or performance (e.g., Cox, Lobel, & McLeod, 1991; Distefano & Maznevski, 2000; Earley & Mosakowski, 2000; Elron, 1997; Hambrick, Davison, Snell, & Snow, 1998; Jackson, May, & Whitney, 1995). As positive outcomes of cultural diversity, researchers found and/or proposed, for example, more creative problem solutions (e.g., Jackson et al., 1995; Maznevski, 1994; Simons, Pelled, & Smith, 1999),
more and better alternatives to a problem and criteria for evaluating those alternatives (McLeod & Lobel, 1992), accelerated individual and organizational learning processes (e.g., Herriot & Pemberton, 1995) or a better fulfilment of market requirements in heterogeneous markets due to the incorporation of diversity (Holtbrügge, 2001). Overall, the benefits of cultural diversity are mainly attributed to the greater variety of perspectives, skills, values, and attributes in diverse teams compared to homogeneous teams (Maznevski, 1994; McLeod, Lobel, & Cox, 1996).

Nevertheless, existing research has also found and/or proposed negative outcomes of cultural diversity. Applying the model of Tuckmann (1965), which divided the team-building process in four phases (forming, storming, norming and performing), culturally diverse teams need longer to get to the performing phase than homogeneous teams (Earley & Mosakowski, 2000). Existent research explains this fact, for example, with process problems, e.g. a more difficult verbal and non-verbal communication between the team-members, a decrease of group cohesion, job satisfaction wane and increasing stress, mistrust and conflicts (e.g., Adler, 2002; O’Reilly, Caldwell, & Barnett, 1989; Phillips, 1994).

Among intra-team processes, knowledge transfer and open communication can be seen as critical processes for process-innovation teams, since team-members with different functional backgrounds have to communicate and to transfer knowledge to be productive (see, for example, Lovelace et al., 2001). Anyhow, while the effects of cultural diversity on communication and knowledge transfer in teams have been tested before, they have, to the best knowledge of the authors, never been tested for process-innovation teams. Existent research mainly focuses on student or top management teams as research objects. Since this article focuses on on-going organizational teams with complex and less structured tasks instead of one-time laboratory groups with simple and set tasks (Ancona & Caldwell, 1992b), the results can be expected to contribute to our knowledge of team functioning. In addition, the contrary results of the existent studies show that they can hardly be transferred to other contexts. Thus, this article a) tests for the influence of cultural diversity on intra-team communication and conflict, and b) empirically examines the impact of the openness of intra-team communication and the intensity of knowledge transfer on the performance of multicultural process-innovation teams. A quantitative empirical survey among 84 team-members of 20 culturally diverse process-innovation teams within a German sportswear company is used to test the relationships.

The remainder of this article is structured as follows. At first, the task and context of the teams in our study is presented. Next, hypotheses about the influence of cultural diversity on intra-team
communication and knowledge transfer, and the impact of knowledge transfer and communication (processes) on performance (output) are developed. This part is followed by the description of the research design and measures. Afterwards, the hypotheses are tested against the empirical data and the results are discussed in comparison with those of other studies. Finally, we present the theoretical and practical implications of our contribution as well as implications for future studies on this topic.

CULTURALLY DIVERSE PROCESS-INNOVATION TEAMS

When referring to culturally diverse process-innovation teams, at first a definition and description of this phenomenon is necessary. Referring to McGrath (1991: 151), teams in an organizational context can be defined as "complex, intact social systems that engage in multiple, concurring projects, while partially nested within, and loosely coupled to, surrounding systems". Thus, teams are multifunctional, contributing to the organization on three levels: (a) to systems in which they are embedded (e.g. a company, a company's sub-division), (b) to their members, and (c) to the group itself as a complex social structure (McGrath, 1991). Furthermore, teams are partially nested and loosely coupled to surrounding systems, meaning that an individual is usually not only member of one but of multiple groups (e.g. family, work, sports, etc.).

The process-innovation teams in our study were placed in a large sportswear company located in the south of Germany. The company was founded in 1949, had (by the time of the survey) net sales of about € 6.5 billion and a net income of about € 310 million, employing about 14,250 workers worldwide. Main products of the company are sport shoes, sport clothes, sport supplies, bags and balls. Due to the high degree of internationalization, the internal company language is English. Overall 20 process-innovation teams with 237 members were implemented to sustain a collaborative, employee-based and permanent process improvement based on a top management decision. The members of the teams had different functional backgrounds but were all on the same hierarchical level and the teams got together about once a month during their working time. All teams had one internal leader who moderated the meetings and was specially trained for this purpose. Besides that, all teams worked absolutely autonomously, receiving no direct orders about the topics they had to discuss or how to discuss them, since top and middle management wanted to enhance the entrepreneurial thinking of the team-members. The ideas and solutions of the teams were categorized into three groups: ideas that affect one department (A-topics), some departments (B-topics) and all departments (C-topics). While
middle management was responsible to realize A-topics, top management was responsible for
the realization of B- and C-topics.

The organizational context of the teams was designed to promote the relevance of the process-
innovation teams to the whole company and to enhance the possibilities of relatively
autonomous teamwork: all teams had a budget to invite internal and/or external experts to gain
deeper insights into the problems they were discussing; the middle management was instructed
by the top management to give the team-members enough time for the work in their teams; a
steering committee was created at the top hierarchical level to promote the importance of the
teams and to allow for a fast realization of their suggestions; and proposed changes were
intended to be realized as fast as possible to demonstrate the power of the teams for both team-
members and externals.

Since the employee structure of the company is very international, all teams had a strong
degree of cultural diversity. We consider teams as culturally diverse when they fit in the above
given definition of teams and furthermore are composed of members from different cultures. We
define culture according to (Hofstede, 2001: 9) as "the collective programming of the mind that
distinguishes the members of one group or category of people from another", with
"programming of the mind" combining the values, rituals, heroes and symbols embedded in a
culture. This definition is in line with the definition of Adler (2002), explaining culture as a pattern
of deep level values and assumptions concerning societal functioning, which is shared by an
interacting group of people.

RESEARCH FRAMEWORK AND HYPOTHESES

Consequences of Cultural Diversity
A tremendous amount of studies discussed the influences of cultural diversity on different areas
of international management. Starting with Bartlett & Ghoshal (1989), Chevrier (2003), or Kedia
& Mukherji (1999) using the angle of multinational enterprise management, to Cateora & Ghauri
(2000) or Hamel & Prahalad (1994) taking a global economics perspective, and Cox, Lobel, &
influences on individual or team level, to name just a few. Accumulating the results leads to the
awareness that major differences exist between work-behaviors of members of different
cultures. Anyhow, these differences do not offer a systematic exploration of what happens when
members of different cultures interact. From a team perspective, team-members from different
cultures remain tied to their culture-specific behaviors and norms to quite some extent which
can be assumed to have an effect on the interaction in their work-teams. Adopting this to a group level it can be assumed that each member of a team affects to some extent the cooperation within the team (Earley & Mosakowski, 2000; Kirkman & Shapiro, 2005). As a result, intra-team interactions could either be seriously hampered and negatively affect team processes or teams could benefit from the heterogeneous frames of reference of their members. Implications from theoretical models and empirical studies are twofold and deliver divergent results with regard to the effects of cultural diversity. One the one hand, theoretical models like the similarity-attraction theory (Byrne, 1971) the selection theory of Chatman (1991) or the socialization theory of Van Maanen & Schein (1979) promote that a similarity in values, cognitive schemata, behavior and language are the basis for maintaining effective work environments. On the other hand, diversity theorists (Jackson, 1992; Williams & O’Reilly, 1998) or creativity theorists (Oldham & Cummings, 1998) predict positive consequences of diversity. Empirical studies presented diverse results as well: While negative impacts of cultural diversity caused by conflicting behaviors, expectations or values may lead to frustration, fear, and disorientation, and therefore may decrease performance (Settle-Murphy, 1996; Schomer, 2000), positive impacts may be, for example, enhanced creativity or a larger amount of problem solving strategies, and therefore may increase performance (Jackson, May, & Whitney, 1995; Maznevski, 1994).

As a consequence of previous results, it may be assumed, that the cultural diversity of teams also has an effect on the team’s communication style and knowledge transfer. Taking the special context of the teams in our study into account, we expect a negative influence of a team’s cultural diversity on open intra-team communication and intra-team knowledge transfer. This can be proposed for the following reasons: As it takes time and patience to adapt to different communication styles and conditions (Grosse, 2002), team-members might act with restraint and are likely to adopt a wait-and-see policy which leads to less open communication. Since a common language has to be employed as a prerequisite for communication to take place, at least some of the team-members cannot communicate in their native language and have to adjust to the team language. Even though the company language in our sample is English, fluency in this language is not to be expected to be at the same level as the fluency in the individual team-member’s native tongue (McDaniel, Samovar, & Porter, 2005). As a consequence, their task-related communication skills as well as their intent to articulate themselves might be reduced. Furthermore, their thoughts about an appropriate intra-team communication and knowledge-transfer may differ due to their cultural background. Thus, we hypothesize the following:
Hypothesis 1: A higher degree of cultural diversity within a team leads towards a less open intra-team communication.

Hypothesis 2: A higher degree of cultural diversity within a team leads towards a less intense intra-team knowledge transfer.

Communication openness and team performance

The communication between individuals is one of the main research topics of interpersonal interaction (Brannick, Roach, & Salas, 1993) – but not a new one. Half a century ago, Marschak (1955) concluded that the major problem of team work is “[to] find the best communication system and the best decision rules”. In a recent article on entrepreneurial teams in Germany, Bouncken (2004) also concludes that „communication played a dominant role on the cultural diverse team performance“. Defining intra-group communication, Thompson and Fox (2001) underline the immanent relevance of open communication for effective teamwork. Following their argumentation, each individual member of the group is in possession of information that can only be used by other persons if they are exchanged in a consistent and coherent way. Thus, missing knowledge about different communication styles impedes effective communication.

Communication styles therefore are an important variable in the research on team communication. Empathy and trying to understand one another are critical aspects of a communication that lead to higher effectiveness (Wellins, Byham, & Wilson, 1991). As existent research shows, destructive and trustless communication has a negative impact on team performance (Earley, Mosakowski, 2000; Gladstein, 1984). One possible positive dimension is the openness of communication. Openness is a widely examined phenomenon in organizational research (Burke & Wilcox, 1969; Eisenberg & Witten, 1987; Hill & Baron, 1976; Myers, Knox, Pawlowski, & Ropog, 1999). According to Rogers (1987: 53), research has shown that openness “as one of the essentials of an effective organization” is positively related with job satisfaction, role clarity, information adequacy, and organizational performance. As a consequence, it may be assumed that communication openness also has a positive effect on performance in a team-context. Amason et al. (1995: 28) confirm this assumption: “Effective teams enjoy a culture that allows their members to speak freely and challenge the premise of other members’ viewpoints, without the threat of anger, resentment, or retribution. Open communications are central to getting sincere involvement from team-members, which
enhances decision quality and reinforces team consensus and acceptance. (...) Team-members overcome (..) differences by asking one another questions and challenging one another's assumptions."

Thus, open communication minimizes the lack of understanding and helps to avoid errors in reasoning and misinterpretations (Lawler, 1992). Following Gudykunst & Nishida (2001), stating that “communication is effective to the extent that we are able to minimize misunderstandings” communication openness increases the effectiveness of communication and therefore is supposed to have a positive effect on team performance. This leads to the following hypothesis:

Hypothesis 3: Open Communication within a multicultural team has a positive impact on its performance.

Knowledge transfer and team performance
According to current literature, knowledge is not information, nor is it data, but it is comprised of them both (Davenport & Prusak 2000; Spiegler 2000; Tuomi 2000). “Data is commonly defined as facts at the atomic level, devoid of both structure and context, or stripped of previously existing structure and context. Information is commonly defined as data endowed with meaningful structures. Knowledge, on the other hand, is information endowed with context.” (Ladd & Heminger 2003: 2).

One of the phenomena related to knowledge is that, unlike material assets, which decrease as they are used, knowledge assets increase with use: ideas breed new ideas, and shared knowledge stays with the giver while it enriches the receiver (Davenport & Prusak 2000). Knowledge transfer, then, is a corollary to knowledge creation. Once knowledge is created, it acts as an economy of scale as it is shared - both because more than one individual can use knowledge at the same time, and because shared knowledge stimulates the creation of new knowledge. Further, knowledge transfer appears to reduce overall organizational costs by preventing a second group of individuals from repeating the mistakes of a first group (Ladd & Heminger 2003; Gruenfeld, Martorana & Fan 2000). In fact, it appears that increased knowledge transfer contributes to overall organizational success (Baum & Ingram 1998). For these reasons, knowledge transfer is every bit as important as knowledge generation. Therefore, knowledge, while being comprised of data or information, is something more. Additionally, many definitions of knowledge add that it must be in the mind of a human (Davenport & Prusak 2000;
Polanyi 1958). “In other words, whereas a computer can store and transmit both data and information, only a human can store and transmit knowledge” (Ladd & Heminger 2003: 2).

Therefore transfer of knowledge from one set of individuals to another has been a key area of interest for knowledge management researchers. Alavi (2000) highlights the importance of knowledge transfer by suggesting that for superior performance of a social entity, knowledge generation and its successful transfer needs to take place. Cross, Parker, Prusak and Borgatti (2004: 62) also posit the value of knowledge sharing in today's economy, "where collaboration and innovation are increasingly central to organizational effectiveness". Researchers on intra-organizational teams also emphasize the importance of knowledge transfer among members (Sarker 2005; Carmel, 1999; Curtis et al., 1988).

Contrary to communication openness which does not refer to routine orders, instructions, or reports (Rogers, 1987), intra-team knowledge transfer is based on the content. Especially in self-managed teams intra-team knowledge transfer is found to be a key factor for the performance of the team (Cabrera & Cabrera, 2002; Moravec, Johannessen, & Hjelmas, 1997). These results are based on the assumption that only interpersonal knowledge sharing can let new knowledge evolve. Especially in the case of teams working on very creative and innovative tasks this kind of knowledge generation is of paramount importance (Zárraga & Bonache, 2003; Paulus, Larey, & Dzindolet, 2001): As a basic principle, everybody owns mental commodities that only in combination with others combine to an extraordinary result or idea. Strasser, Taylor & Hanna (1989) put emphasis on the fact that this is a hard but performance-critical moment for a team. Cabrera & Cabrera (2002) highlight that for knowledge-sharing in groups, a good atmosphere between the team-members is necessary. Overall, this leads to the following hypothesis:

**Hypothesis 4:** Knowledge transfer within a team has a positive impact on its economic performance.

Figure 1 presents an overview of the tested relationships.
SAMPLE

As explained above, the sample consists of twenty process-improvement teams implemented at a large multinational sportswear company from Germany. Overall, 237 members of those teams were asked to participate in our study, returning 84 usable questionnaires (return-rate: 35.15%). Most of the respondents are female (71.4%), with an average age of 31. The team-members have been an average of 73 months with the company. 72% of the respondents are Germans, followed by Asians and North-Americans. In addition, 16 out of 20 team-supervisors participated in our study and evaluated the performance of their team.

MEASURES

Cultural Diversity

While some researchers apply, for example, broader, structured or personality based measures of diversity (see, for example, Jehn, Northcraft & Neale, 1999 or Caligiuri 2000a, 2000b) or focus on national/ethnical diversity determined by the number of different nationalities or ethnics within the team (see, for example, McLeod, Lobel & Cox, 1996), the focus of our study is on the effects of cultural diversity, applying culture as defined by Hofstede (2001). Thus, we measured cultural diversity as proposed by Neyer, Puck & Kölling (2004) and used the following cultural diversity index based on the cultural distance measure of Kogut & Singh (1988) and the data of Hofstede (2001):

\[
\sum_{i=1}^{n} \left( \left( \sum_{j=1}^{4} \left( I_{jk} - I_{jl} \right)^2 / V_i \right) / 5 \right) + \left( \sum_{j=1}^{5} \left( I_{jk} - I_{jl} \right)^2 / V_i \right) / 5 + \cdots + \left( \sum_{j=1}^{4} \left( I_{jk} - I_{jl} \right)^2 / V_i \right) / 5 \right) / n! 
\]

In this index, each member’s cultural distance, as measured by the index of Kogut & Singh (1988), to every other member is divided by the number of cultural distances (n-1!) within the team. The use of this simple modification presents a metric scaled measure of cultural diversity within a team and therefore overcomes problems of the often applied nominal scaled constructs of nationality as a surrogate for culture.

Some researchers argue that the etic concept of Hofstede has only a limited predictive value for the ability of individuals to cope with difficulties in cross-cultural encounters (Caligiuri, 2000b, 2000a; Ward, Bochner, & Furnham, 2001). Anyhow, his study continues to be the largest
empirical study connecting cultural orientation with observable institutional differences between countries within a single framework. In addition, the framework has successfully been used in similar studies before (see, for example, Snape et al., 1998; Ryan et al., 1999; Newman & Nollen, 1996; Puck et al., 2004). Thus, data from Hofstede’s study will be applied in this study.

**Communication Openness**

The basic question on communication openness focuses on the way people communicate. The measure for the extent of open intra-team communication was adopted from the study of Earley & Mosakowski (2000) on transnational team functioning: The construct is based on the agreement upon statements such as “Team-members have an open and honest communication during the meetings” or “Team-members really listen to one another and try to understand each other’s feelings and points of view”. All items were measured on 7-point Likert-scales showing a good internal reliability (Cronbach’s \( \alpha = .77 \)). The values of each team-member were accumulated and divided by the number of team-members to present a team-value of communication.

**Intra-Team Knowledge Transfer**

Intra-team knowledge transfer was measured adopting the items of Zárraga & Bonache (2003) to the context of our study. Some examples of questions asked were “From my team-colleagues I have learnt things that were only of internal talent of them” or “If anyone contributes an idea, we find related ideas and go on to develop them instead of just accepting it”. Again, all questions were measured on 7-point Likert-scales, showed a good internal reliability (Cronbach’s \( \alpha = .75 \)) and were cumulated as above.

**Team Performance**

As team performance cannot be seen as a simple, unidimensional construct (Ancona & Caldwell 1992b) we used three different approaches to evaluate the performance of each team. First, the members of the teams were asked for a self evaluation of their team’s performance. This self evaluation was measured with 7 items on 7-point Likert-scales derived from existing research (Campion, Papper, & Medsker, 1996; Hyatt & Ruddy, 1997) and based on the aims of the teams as constituted by the management of the company. The items included questions such as “In my eyes we created convenient topic suggestions”, “I would say, our improvement activities are creative and of business relevance” or “Through our activities some processes have become more efficient”. To present a team value, all items were accumulated as above. The internal reliability of the construct was very high (Cronbach’s \( \alpha = .94 \)), delivering strong support for our measures. In a second step, the team supervisors were asked the same
questions to avoid a common method bias. Thirdly, we used two objective measures of performance. Since all meetings were journalized, we included the activities per meeting of each team and the activities per member of each team to further enhance the objectivity of our study.

Control Variables

Diversity is not bound exclusively to cultural differences. Beyond the cultural dimension of diversity other categories of human variation can be put forward. According to Ting-Toomey (1999) referring to Loden & Rosener (1991), two sets of dimensions exist that focus on how groups of people differ from each other within any culture. The primary dimension refers to inborn differences that are hardly to be varied by the individual. A commonly used item is age and it is to be expected that teams may differ regarding their members’ ages. Therefore age is employed as a control variable in this study. The secondary dimension of diversity refers to conditions that can be changed more easily. Tenure is such a dimension of diversity. It leads to different degrees of firm-specific and task-specific knowledge; therefore different levels of team-members’ tenure equal a higher degree of diversity. Therefore tenure is used as another control variable in this study.

RESULTS AND DISCUSSION

Descriptive Results and Correlates

Table 1 presents the arithmetical means and correlations of the variables. As can be seen from the results, there are no major differences in the means of the self reported and the supervisor reported performance measures. In addition, it can be seen that the means of open communication and knowledge transfer differ strongly and are correlated at a very low level only, thus providing support for our view that both are unique concepts.

====== TABLE 1 ABOUT HERE ======

Regression Analyses

Since correlation analysis doesn’t allow for a causal interpretation, we computed regression analyses. Although there are significant inter-variable correlations among the independent
variables, none of the coefficients exceeds .40. Due to these low levels of inter-variable correlation multicollinearity does not appear to be a serious problem. Table 2 presents the results of the regression analysis for Hypotheses 1 and 2.

======== TABLE 2 ABOUT HERE ========

While the regression itself is significant and provides a fair R^2, none of the variables included has a significant input. Thus, Hypotheses 1 and 2 cannot be supported by our data. In a next step, we used regression analysis to analyze the influence of knowledge transfer on team performance.

======== TABLE 3 ABOUT HERE ========

As the results of the regression show, the impact of communication and knowledge transfer on performance is inconsistent. While knowledge transfer has a strong impact on the performance measured by the team itself, communication significantly impacts the performance measured by the supervisors. Overall, the data delivers only limited support for our Hypotheses 3 and 4.

Discussion

At a first view, the results for Hypotheses 1 and 2 look surprising. Anyhow, the results might be explained by different factors. At first, it seems possible that the influences of the team-members’ national cultural background might be superposed by the leveraging influences of corporate culture (Lueke & Svyantek, 2000). Since the company in which we settled our research is seen to have a very strong corporate culture, it may lead towards an adjustment of the team-members to this culture and therefore overrule the influences of national culture. Secondly, since the corporate language of the company is English, it seems possible that cultural influences especially on communication are alleviated. Thirdly, our measure of cultural distance, based on the data of Hofstede, may not reflect the actual cultural distances for some reasons: to name just a few, the data was collected more than 30 years ago, the etic approach of Hofstede’s study was often criticized in the literature, and all the data was collected at a single company (see, for example, Erez & Early, 1993 for a summary of criticisms on Hofstede’s study).
Looking at the results for Hypotheses 3 and 4, the statistical results support that knowledge transfer has a highly significant positive influence on perceived performance, open communication has a moderately significant influence on performance as perceived by the teams’ supervisors and both have no significant influences on the “objective” measures. The latter might be explained by the fact that these measures only present a quantitative performance measure and don’t test for the quality of the teams’ actions. Since the teams were implemented to find innovative processes within the company, a pure quantitative measure may not reflect the performance of the teams because some teams may have concentrated on special processes instead of looking at many different.

The result that knowledge transfer and communication openness have significant influences on different performance measures may be explained by the fact that performance was perceived differently by the team-members and their supervisors. It seems possible that the team-members implicitly perceive the knowledge transfer as the most important driver of team performance since their different functional backgrounds may have delivered new insights into the company’s processes. In addition, since the company has a very open communication policy, the impact of communication may have been seen as relatively low since it is perceived as usual within the company. Contrary to that, the team supervisors rated teams with a more open communication as more successful. This might be explained by their role as moderating team supervisors. Because they only participated as moderators in their teams’ meetings and all have been new in their role as team leaders, they may have perceived the amount of communication higher than the amount of knowledge transfer.

**IMPLICATIONS AND LIMITATIONS**

From a theoretical point of view, this study contributes to the state of knowledge in different ways. First, it shows that the influences of both input and performance variables seem to change for different contexts. Thus, future studies have to take an intense look at the context in which their research takes place (see, for an overview of possible contextual influences, Jelinek & Wilson, 2005). Second, results of Hypotheses 1 and 2 were, at a first view, extremely surprising. Thus, the consequences of cultural diversity in teams have to be tested in a more detailed way. For example, different (maybe subjective) measures have to be applied as proposed by Neyer, Puck & Kölling (2004). Thirdly, our research shows that results differ significantly between the performance measures. Thus, future studies need to be extremely cautious with their measures of performance, and there is an urgent need to evaluate a team’s performance in more than one way.
From a practitioner’s view, this study shows that intra-team knowledge transfer and open communication are important for the performance of a team. Thus, it seems necessary for the management to closely watch these processes and support teams where is required. Help may include, for example, the implementation of team trainings or coaching.

Considering the results of this study, some limitations should be taken into account. Firstly, the survey was based on a relatively small sample (84 members, 20 teams). Secondly, the caveats associated with Hofstede’s model (as mentioned above) have to be borne in mind, and future research might use different conceptualisations of cultural diversity within a team. Finally, the canon of control variables (average age, average time at the company) could be extended to better explain variances in the performance of multicultural teams. Fourthly, the special context (MNC with highly multicultural staff) has to be taken into account when interpreting the results.

REFERENCES


Figure 1: Research Model

- Cultural Diversity
- Open Communication
- Knowledge Transfer
- Performance
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<td>1</td>
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<tr>
<td>4 Average Age of Team</td>
<td>32.31</td>
<td>3.63</td>
<td></td>
<td>.179</td>
<td>.309**</td>
<td>-.126</td>
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<td>5 Average Tenure</td>
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<td>39.43</td>
<td></td>
<td>.261*</td>
<td>.333**</td>
<td>-.222*</td>
<td>.180**</td>
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<td>6 Performance Self</td>
<td>4.36</td>
<td>1.34</td>
<td></td>
<td>.196</td>
<td>.447**</td>
<td>-.081</td>
<td>.287*</td>
<td>.439**</td>
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<tr>
<td>7 Performance Supervisor</td>
<td>4.23</td>
<td>0.92</td>
<td></td>
<td>.371**</td>
<td>.204</td>
<td>.527**</td>
<td>.168</td>
<td>.336*</td>
<td>.471**</td>
<td>1</td>
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<tr>
<td>8 Activities per Meeting</td>
<td>4.99</td>
<td>2.03</td>
<td></td>
<td>.062</td>
<td>.142</td>
<td>.451**</td>
<td>-.225*</td>
<td>-.137</td>
<td>.086</td>
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<td>9 Activities per Member</td>
<td>0.67</td>
<td>0.25</td>
<td></td>
<td>.029</td>
<td>.047</td>
<td>-.328*</td>
<td>-.251*</td>
<td>-.224*</td>
<td>-.037</td>
<td>-.084</td>
<td>.770**</td>
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</table>

N=20, ** p ≤ .01; * p ≤ .05

Table 1: Descriptives and Correlates
Table 2: Regressions on Communication and Knowledge Transfer

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<tr>
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<th>Communication</th>
<th>Knowledge Transfer</th>
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<td>Cultural Diversity</td>
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<td>-.102</td>
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<td>.015</td>
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<tr>
<td>Average Time at Company</td>
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<td>.235</td>
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<tr>
<td>R²</td>
<td>.148</td>
<td>.082</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.115</td>
<td>.047</td>
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</tbody>
</table>

N=20; ** p≤.01; * p≤.05; standardized coefficients shown
<table>
<thead>
<tr>
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<th>Performance Self</th>
<th>Performance Supervisor</th>
<th>Activities per Member</th>
<th>Activities per Meeting</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.276†</td>
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<tr>
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<td>.162</td>
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<td>.194</td>
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<td>$R^2$</td>
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<tr>
<td>Adjusted $R^2$</td>
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<td>.104</td>
<td>-.019</td>
<td>.002</td>
</tr>
</tbody>
</table>

N=20; ** p≤.01; * p≤.05; † p≤.1 standardized coefficients shown

Table 3: Regressions on Performance