Team Creativity/Innovation in Culturally Diverse Teams: A Meta-Analysis

Wang, J., Cheng, G.H.L., Chen, T., Leung, K.

University of Nottingham Ningbo China, 199 Taikang East Road, Ningbo, 315100, Zhejiang, China.

First published 2019

University of Nottingham
UK | CHINA | MALAYSIA

Team Creativity/Innovation in Culturally Diverse Teams: A Meta-Analysis

Keywords: cultural diversity, surface- versus deep-level, team creativity, team innovation, meta-analysis

Abstract

This meta-analysis investigates the direction and strength of the relationship between diversity in culturally diverse teams and team creativity/innovation. We distinguish the effects of two diversity levels (i.e., surface- versus deep-level) in culturally diverse teams and examine the moderators suggested by the socio-technical systems framework (i.e., team virtuality and task characteristics in terms of task interdependence, complexity, and intellectiveness). Surface-level diversity in culturally diverse teams is not related to team creativity/innovation, while deep-level diversity in culturally diverse teams is positively related to team creativity/innovation. Moreover, surface-level diversity in culturally diverse teams and team creativity/innovation are negatively related for simple tasks, but unrelated for complex tasks. Deep-level diversity in culturally diverse teams and team creativity/innovation are positively related for collocated teams and interdependent tasks, but unrelated for non-collocated teams and independent tasks. We discuss the theoretical and practical implications.

Team Creativity/Innovation in Culturally Diverse Teams: A Meta-Analysis

The globalization of business has led to rising cultural diversity in the workplace in many regions of the world. Multicultural teams, in which members come from different countries or ethnic groups with differences in mental models, modes of perception, and approaches to problems (Stahl, Maznevski, Voigt, & Jonsen, 2010), have become prevalent. Cultural diversity is regarded as a mixed blessing for teams (van Knippenberg, De Dreu, & Homan, 2004). Multicultural teams can achieve high team performance mainly through enhancing team creativity/innovation—the only positive immediate team outcome of cultural diversity proposed in Stahl et al.'s (2010) meta-analysis. Cultural diversity provides diverse information that is a key ingredient for team creativity/innovation (Adler, 1986; Stahl et al., 2010), which is "the process, outcomes, and products of attempts to develop and introduce new and improved ways of doing things" by a team of employees (Anderson, Potočnik, & Zhou, 2014, p. 1298). This possible strength of cultural diversity is a chief reason that many multinationals utilize multicultural teams (Gibson, Huang, Kirkman, & Shapiro, 2014; Hajro, Gibson, & Pudelko, 2017; Lisak, Erez, Sui, & Lee, 2016). However, cultural diversity also incurs social costs such as cultural identity problems and difficulties in intercultural interaction (Leung & Wang, 2015), which may offset the creative potential of diverse groups (Giambatista & Bhappu, 2010). Therefore, the effect of cultural diversity on team creativity/innovation must be investigated to understand how to leverage cultural diversity.

The association between cultural diversity and team creativity/innovation has attracted considerable research attention. Primary studies have reported varied correlations for this relationship (e.g., Gibson & Gibbs, 2006; Li, Lin, Tien, & Chen, 2017; Schilpzand, Herold, & Shalley, 2011; Stringfellow, 1998). Prior meta-analytic reviews, which are based on limited

samples ($k \leq 8$), have also reported mixed findings, with pooled effect sizes ranging from −.18 to .16 (Bell, Villado, Lukasik, Belau, & Briggs, 2011; Stahl et al., 2010; van Dijk, van Engen, & van Knippenberg, 2012). These observations indicate a strong need to investigate the moderators that affect the direction and strength of this relationship (van Knippenberg & Mell, 2016).

The current meta-analysis examines the direction and strength of the association between diversity in culturally diverse teams and team creativity/innovation with a larger database (47 samples). We consider the surface- versus deep-level distinction of diversity in culturally diverse teams and examine how both diversity levels are associated with team creativity/innovation. Moreover, on the basis of the socio-technical systems framework for cultural diversity and team creativity (Leung & Wang, 2015), we investigate the moderating effects of team virtuality and task characteristics (task interdependence, complexity, and intellectiveness) on the associations of surface- and deep-level diversity in culturally diverse teams with team creativity/innovation. We thus provide a nuanced picture of how the association between diversity in multicultural teams and team creativity/innovation varies.

Theory Development and Hypotheses

Team Creativity/Innovation in Culturally Diverse Teams

Culture is "the collective programming of the mind which distinguishes the members of one human group from another" (Hofstede, 1980, p. 25). It includes a set of motives, values, beliefs, and identities that guide how its members should or should not behave (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Culture can be viewed as a multilevel system, ranging from team culture, to organizational culture, and to national culture (Erez, 2011), and a source of social identity for its members (Leung & Bond, 2004). This study focuses on national culture, which is based on countries or ethnicities, because many countries nowadays have several ethnic

cultures, and many ethnic cultures span across more than one country (Leung, Bhagat, Buchan, Erez, & Gibson, 2005; Tung, 1993). Moreover, the shared elements (e.g., language, historic period, and geographic location) can provide standards for perceiving, believing, evaluating, and acting among people in the same country or ethnic group (Triandis, 1996). Thus, the term *cultural diversity* is concerned with surface-level differences in country- and ethnicity-based cultural backgrounds, as well as deep-level differences in values, perspectives, and cognitive frameworks possessed by people from different countries/ethnicities. Thus, this term includes surface- and deep-level diversity in culturally diverse teams.

Following previous meta-analyses (e.g., Byron & Khazanchi, 2012; Byron, Khazanchi, & Nazarian, 2010), we include team creativity and innovation studies. Creativity is concerned with idea generation, whereas innovation involves idea generation and its subsequent implementation (Anderson et al., 2014; Hughes, Lee, Tian, Newman, & Legood, 2018). While innovation involves a convergent process of idea implementation, both creativity and innovation emphasize a divergent process of idea generation that can benefit from a broad pool of perspectives supplied by diversity in multicultural teams. Despite their differences, creativity and innovation have been regarded as two closely related and overlapped concepts. Researchers have argued that their conceptual boundaries are unclear (Anderson et al., 2014). Many empirical studies that have distinguished creativity and innovation end up combining them because of their high correlations (van Knippenberg, 2017). Therefore, our meta-analysis does not distinguish them but treats team creativity/innovation as the exclusive focal dependent variable.

According to the categorization–information elaboration model (CEM) (van Knippenberg et al., 2004), diversity in multicultural teams has negative and positive effects on team creativity/innovation. CEM cautions that multicultural teams may not leverage diversity due to

the negative social dynamics set into motion by diversity—known as the social categorization perspective (Williams & O'Reilly, 1998). People may view team members of different cultural backgrounds as out-group members and exhibit negative biases against them. Consequently, team members may feel their cultural identity being threatened and/or a lack of a common cultural identity in the team, which results in low team identity. Moreover, members with different cultural backgrounds may have incompatible assumptions, values, preferences, and behaviors, and are thus likely to experience difficulties in intercultural interaction. Cultural identity problems and difficulties in intercultural interaction are negative social processes or social costs that suppress team creativity/innovation (e.g., Dahlin, Weingart, & Hinds, 2005; van Knippenberg et al., 2004).

CEM also argues that diversity in multicultural teams offers diverse perspectives and knowledge that enhance team creativity/innovation (Adler, 1986)—known as the information/decision-making perspective on diversity (Williams & O'Reilly, 1998). By offering a great pool of information, such diversity has the potential of inducing information elaboration, which is defined as "members' exchange, discussion, and integration of ideas, knowledge, and insights relevant to the group's task" (van Knippenberg et al., 2004, p. 1010). The possible informational benefits explain why diversity in multicultural teams enhances team creativity/innovation. In summary, the social categorization and information/decision-making perspectives predict opposite directions of the relationship between diversity in multicultural teams and team creativity/innovation. Taking these perspectives together, we may explain the mixed findings in previous primary and meta-analytic studies.

Note that the antecedent-benefit-cost (ABC) framework (Busse, Mahlendorf, & Bode, 2016) can help understand the relationship between diversity in multicultural teams and team

creativity/innovation. The ABC framework highlights the importance of considering costs and benefits in an antecedent–outcome relationship. The framework suggests that the direction and strength of the relationship depend on the marginal effects of costs and benefits. In our study, whether social costs or informational benefits function more prominently determines the direction and strength of the relationship between diversity in multicultural teams and team creativity/innovation. Hence, we examine the moderators that may affect the relative prominence of social costs versus informational benefits caused by diversity in multicultural teams.

Surface- Versus Deep-Level Diversity in Culturally Diverse Teams

Before detailing moderating effects, we distinguish two diversity levels in culturally diverse teams—surface versus deep—which may have differential main effects on team creativity/innovation. Surface-level diversity, which is also termed social category diversity (Jehn, Northcraft, & Neale, 1999), involves readily detectable demographic attributes that explicitly differentiate social category membership (Harrison, Price, & Bell, 1998; Jackson, May, & Whitney, 1995). For surface-level diversity in culturally diverse teams, the most commonly examined attributes are nationality and racio-ethnicity (Stahl et al., 2010). Deep-level diversity involves unobservable attributes, including personalities, values, and attitudes (Harrison et al., 1998; Stahl et al., 2010). For deep-level diversity in culturally diverse teams, we refer it to the differences in these deep-level attributes among team members with different demographic cultural backgrounds (i.e., nationality and/or race) (Stahl et al., 2010). Literature has adopted different theoretical perspectives to account for the different effects of surface- and deep-level diversity.

The cultural diversity literature has mainly adopted the social categorization perspective to account for the effects of surface-level diversity (Jehn et al., 1999; van Dijk et al., 2012). In

multicultural teams, surface-level cultural attributes provide clear signals about cultural identity, thereby resulting in identity threat and fragmentation (Leung & Wang, 2015), as well as intergroup conflict and withdrawal behavior (Stahl et al., 2010). Surface-level differences in nationality and racio-ethnicity among team members in culturally diverse teams do not necessarily imply greater diversity in knowledge and perspectives than culturally homogeneous teams. A team in a U.S. multinational may include non-American members, who may be acculturated to the U.S. culture (e.g., Rebhun & Waxman, 2000). The diversity of knowledge and perspectives in such a team may not differ from that in a counterpart composed of Americans with the same ethnic background. The informational benefits for team creativity/innovation are thus not necessarily pertinent to multicultural teams characterized by surface-level diversity, leading to the relative prominence of social costs in such teams.

According to the information/decision-making perspective (Jehn et al., 1999), while deep-level diversity in culturally diverse teams can induce social costs, such as difficulties in intercultural interaction, due to incompatible values and behaviors (Leung & Wang, 2015), its informational benefits for team creativity/innovation are relatively prominent and may outweigh the social costs. Differences in deep-level attributes in multicultural teams, accompanied by divergent assumptions, preferences, values, and problem-solving styles, broaden their range of knowledge and perspectives and generate novel ideas and problem solutions (e.g., Stahl et al., 2010; van Knippenberg et al., 2004). Supporting this argument, Jehn et al. (1999) found that informational and value diversity in teams lead to team task conflict, which may benefit team creativity/innovation (e.g., de Wit, Greer, & Jehn, 2012). Similarly, Stahl et al. (2010)'s meta-analytic review corroborated that team creativity is the only positive outcome of cultural diversity. The authors explained that this positive effect owes to deep-level diversity in culturally

diverse teams. The informational benefits offered by deep-level diversity in culturally diverse teams outweigh its social costs in positively influencing team creativity/innovation.

As surface-level diversity in culturally diverse teams incurs higher social costs than informational benefits, it should obstruct team creativity/innovation. By contrast, deep-level diversity in culturally diverse teams involves more informational benefits than social costs and thus should facilitate team creativity/innovation. From the perspective of the ABC framework (Busse et al., 2016), we advance the following hypotheses.

Hypothesis 1a: Surface-level diversity in culturally diverse teams is negatively associated with team creativity/innovation.

Hypothesis 1b: Deep-level diversity in culturally diverse teams is positively associated with team creativity/innovation.

Moderators of the Diversity in Culturally Diverse Teams–Team Creativity/Innovation Relationship: The Socio-Technical Systems Framework

In line with Leung and Wang (2015), we draw on the socio-technical systems theory (Trist & Bamforth, 1951) to explore moderators for the relationship between diversity in culturally diverse teams and team creativity/innovation. The central tenet of this theory is that a social structure (social side) interacts with technology (technical side) to affect team outcomes. Multicultural teams pertain to a social system in which members are embedded and connected to each other. They leverage each other's information and may also encounter identity and interaction problems. The effects of cultural diversity on team outcomes are contingent on technical factors that may affect the marginal effects of its informational benefits and social costs (Leung & Wang, 2015). Early studies on technical systems focus on equipment, technology, and operation methods that transform raw materials into products, whereas recent literature pays

attention to task environment due to the changing nature of work (Davis, Challenger, Jayewardene, & Clegg, 2014; Stewart & Barrick, 2000). This theory argues that teams use technology in a task environment to fulfill task requirements—the ultimate goal of socio-technical systems (Fox, 1995). In line with the socio-technical systems theory, the diversity literature highlights that task environment is a key category of the moderators of diversity effects (Guillaume, Dawson, Otaye-Ebede, Woods, & West, 2017).

Here, we explore two groups of moderators: technology and task characteristics. For technology, Leung and Wang (2015) highlighted the importance of team virtuality. For task characteristics, they focused on task interdependence, complexity, and intellectiveness. The selection of these three task characteristics is in line with Cummings (1978), who affirmed that task design in groups should consider the extent to which tasks are independent, complex, and have complete knowledge to produce desired outcomes. The diversity literature concurs that the technological factor of team virtuality and the task characteristics, such as task interdependence and complexity, are important moderators for the diversity effects (Guillaume et al., 2017; Jehn et al., 1999; van Dijk et al., 2012). Considering these streams of research, we focus on technology and task characteristics that are relevant to the social interactions in multicultural teams. As theorized below, these moderators affect the relative prominence of social costs and informational benefits incurred by diversity in culturally diverse teams.

Team virtuality. Team virtuality is concerned with "the degree to which team members do not work in either the same place and/or at the same time" (De Jong, Dirks, & Gillespie, 2016, p. 1136). Collocated teams collaborate face-to-face, whereas non-collocated teams rely on technology-mediated communication (Wildman et al., 2012). With the rapid advancement in information and communication technology, multinational corporations increasingly use non-

collocated virtual teams (Connaughton & Shuffler, 2007; Hinds, Liu, & Lyon, 2011; Leung & Peterson, 2011). Technology-mediated communication helps multicultural teams in which members are sometimes geographically dispersed collaborate. Nevertheless, whether team virtuality facilitates multicultural teams to benefit from diversity in multicultural teams is questionable.

Literature has documented conflicting perspectives on the significance of team virtuality in social costs associated with diversity in culturally diverse teams. One perspective argues that non-collocated multicultural teams have less conflict and enjoy more social integration than collocated teams (Stahl et al., 2010) because team members have little chance to experience value incongruence. However, Leung and Wang (2015) argued that team virtuality accentuates the negative social dynamics induced by cultural diversity. Physical proximity is conducive to positive group dynamics, such as mutual understanding, interpersonal liking, and group identification (for a review, see MacDuffie, 2007). A lack of physical contact in non-collocated teams hinders the establishment of cooperative relationships (Kiesler & Cummings, 2002; Martins, Gilson, & Maynard, 2004), the development of group identity (McGrath & Hollingshead, 1994), and the effective management of conflict (Hinds & Bailey, 2003; Thompson & Nadler, 2002). Multicultural virtual teams with minimal face-to-face contact are aggressive but not that accommodative, thereby making interactions among members difficult. Proximal separation and cultural differences may also increase the salience of social categorizations, which are disruptive to group functioning according to CEM (van Knippenberg et al., 2004).

With regard to informational benefits, team virtuality can restrict teams from benefiting from communication and information sharing (Marlow, Lacerenza, Paoletti, Burke, & Salas,

2018). Limited non-verbal communication and the resulted low communication clarity, communication delay, and misinterpretation in virtual teams are the possible reasons. In multicultural teams where intercultural communication is complex and difficult, team virtuality adds challenges for such teams to effectively share and integrate information, thereby restraining the informational benefits of cultural diversity (Stahl et al., 2010). Team members must engage in discussions, exchanges, and the integration of ideas to make diverse knowledge and perspectives useful to team creativity/innovation. However, knowledge, ideas, and perspectives may be abstract, tacit, and more difficult to communicate in a virtual than in a collocated context (e.g., Cramton, 2001; Gibson & Gibbs, 2006; Kumar, van Fenema, & von Glinow, 2009). Diversity in culturally diverse teams cannot benefit team creativity/innovation without effective sharing and integrating diverse knowledge and perspectives. By contrast, members of collocated teams have many opportunities to share different opinions and give feedback to each other. As face-to-face feedback is usually more positive than the feedback provided by e-mail (McKenna & Bargh, 2000; Sussman & Sproull, 1999), feedback in collocated teams is well utilized to improve existing ideas and perspectives. Thus, collocated teams have fewer communication problems and can better utilize diverse knowledge and perspectives than non-collocated teams.

In summary, social costs are relatively prominent in non-collocated teams, whereas informational benefits are relatively prominent in collocated teams. On the basis of the ABC framework (Busse et al., 2016), we predict that team virtuality can moderate the relationships of surface- and deep-level diversity in culturally diverse teams with team creativity/innovation. As argued, surface-level diversity in culturally diverse teams has a negative relationship with team creativity/innovation because of its social costs. This negative association should be stronger in non-collocated teams in which members experience more interaction problems and more salient

social categorizations than in collocated teams. On the contrary, deep-level diversity in culturally diverse teams has a positive relationship with team creativity/innovation because of its informational benefits. This positive association should be stronger in collocated teams in which members can benefit more from diverse knowledge and perspectives than in non-collocated teams.

Hypothesis 2a: The negative relationship between surface-level diversity in culturally diverse teams and team creativity/innovation is moderated by team virtuality, such that this negative relationship is stronger for non-collocated teams than for collocated teams.

Hypothesis 2b: The positive relationship between deep-level diversity in culturally diverse teams and team creativity/innovation is moderated by team virtuality, such that this positive relationship is stronger for collocated teams than for non-collocated teams.

Task interdependence. Task interdependence describes the extent to which team members must rely on one another for input and resources, such as materials, information, and expertise to perform a team task (Cummings, 1978). Leung and Wang (2015) contended that independent task may heighten the negative influence of cultural diversity on team social processes. Independent tasks demand little communication and interaction among members to complete the job, thereby providing few opportunities to develop cooperation and trust within a team (e.g., Kelley, 1979; Sheppard & Sherman, 1998). By contrast, the cooperation and trust induced by interdependent tasks can buffer against the social costs caused by diversity in culturally diverse teams (e.g., reduced team identity and increased interactional difficulties), thereby mitigating the negative effects of such diversity on social processes.

For informational benefits, task interdependence is a critical boundary condition for teams to reap such benefits (Marlow et al., 2018). Focusing on multicultural teams, Leung and

Wang (2015) argued that interdependent tasks induce a great need for intercultural communication and collaboration, thereby increasing information sharing and learning about the different knowledge and perspectives from varied cultures. High exposure to other cultures' knowledge and perspectives and the sharing and learning processes are beneficial for team creativity/innovation (Ancona & Caldwell, 1992; De Dreu & West, 2001). Therefore, the informational benefits of diversity in culturally diverse teams are salient for teams engaging in interdependent tasks. For independent tasks, team members have a low need to work together and share diverse information and knowledge. The informational benefits of diversity in multicultural teams are thus limited. Worse, the potential informational resources embedded in multicultural teams engaging in independent tasks may not be appreciated. Hence, communication and collaboration across cultural boundaries may be discouraged, thereby hindering the sharing and integration of diverse knowledge and perspectives and subsequent team creativity/innovation.

Thus, social costs may play a dominant role for independent tasks, whereas informational benefits may play a dominant role for interdependent tasks (Busse et al., 2016). Task interdependence may play a moderating role in determining the associations of surface- and deep-level diversity in culturally diverse teams with team creativity/innovation. The negative effect of surface-level diversity in culturally diverse teams is due to its social costs; thus, this negative relationship should be stronger for independent than dependent tasks. By contrast, the positive effect of deep-level diversity in culturally diverse teams is due to its informational benefits; thus, this positive relationship should be stronger for interdependent than dependent tasks.

Hypothesis 3a: The negative relationship between surface-level diversity in culturally

diverse teams and team creativity/innovation is moderated by task interdependence, such that this negative relationship is stronger for independent tasks than for interdependent tasks.

Hypothesis 3b: The positive relationship between deep-level diversity in culturally diverse teams and team creativity/innovation is moderated by task interdependence, such that this positive relationship is stronger for interdependent tasks than for independent tasks.

Task complexity. Tasks differ in the degree of complexity, ranging from less structured, less routine, and more ambiguous tasks to more routine and simpler counterparts (McGrath, 1984). Task complexity may play mixed roles in the social processes associated with diversity in culturally diverse teams (Leung & Wang, 2015). Complex tasks demand frequent and in-depth discussions, exchanges of ideas, and coordination among team members for task accomplishment (Stahl et al., 2010). Such a demand should reduce the negative effect of diversity on social processes in multicultural teams. However, disagreements, arguments, and criticisms may occur during the problem-solving process, especially when ambiguous, unstructured problems are involved. This occurrence may accentuate the interpersonal tension and difficulties induced by diversity in multicultural teams, which counteract the buffering effect of complex tasks on the basis of an increased need to communicate and coordinate. Supporting this view, Stahl et al. (2010) did not find a moderating effect of task complexity on the relationship between cultural diversity and social integration, which is a broad construct including group cohesion, group commitment, and common identity.

Task complexity is a critical contingency for teams to reap the informational benefits from diversity as found in previous meta-analyses (Bowers, Pharmer, & Salas, 2000; van Dijk et

al., 2012). Complex tasks commonly require a wide range of knowledge and perspectives for task completion. Team members who engage in complex tasks are motivated to pay attention to diverse knowledge and perspectives offered in multicultural teams, thereby facilitating team creativity/innovation (Leung & Wang, 2015). By contrast, when performing simple tasks, team members have a low need to attend to one another's knowledge for resolving task problems (van Knippenberg et al., 2004). The informational benefits brought by diversity in culturally diverse teams are not that pronounced for simple, routine tasks (van Knippenberg et al., 2004). In addition, information processing, such as task-related debates in the teams working on simple tasks, is unnecessary and may be detrimental and counterproductive (Jehn et al., 1999). Such debates may direct team members' attention to identity differences and intercultural difficulties.

Therefore, for teams engaging in simple tasks, informational benefits are not that prominent and team dynamics are likely dominated by social costs. On the contrary, informational benefits should be relatively prominent for teams working on complex tasks. The association between surface-/deep-level diversity in culturally diverse teams and team creativity/innovation may thus vary as a function of task complexity according to the ABC framework (Busse et al., 2016). Specifically, the negative effect of surface-level diversity in culturally diverse teams due to its social costs should be stronger for simple than complex tasks, whereas the positive effect of deep-level diversity in culturally diverse teams due to its informational benefits should be stronger for complex than simple tasks. Jehn et al. (1999) found that informational diversity (i.e., different knowledge and perspectives brought by team members) improves team performance when tasks are complex.

Hypothesis 4a: The negative relationship between surface-level diversity in culturally diverse teams and team creativity/innovation is moderated by task complexity, such that

this negative relationship is stronger for simple tasks than for complex tasks.

Hypothesis 4b: The positive relationship between deep-level diversity in culturally diverse teams and team creativity/innovation is moderated by task complexity, such that this positive relationship is stronger for complex tasks than for simple tasks.

Task intellectiveness. Task intellectiveness is also important in multicultural teams because of its relevance to the prominence of informational benefits and social costs in such teams (Leung & Wang, 2015). An intellective task refers to "a group problem or decision for which there exists a demonstrably correct solution within a conceptual system" (Laughlin & Adamopoulos, 1980, p. 941), such as mathematics or formal logics (e.g., engineering and accounting problems). Conversely, a judgmental task (i.e., a task low in intellectiveness, such as making commercial advertisements) is based on individual preferences and social consensus. When performing intellective tasks, the presence of demonstrably correct decisions and solutions can reduce negative interpersonal dynamics in multicultural teams. Miscommunication and misunderstanding can be avoided given an objective framework to guide task performance. Intellective tasks enable progress toward task accomplishment to become self-evident, which helps resolve disagreements (Leung & Wang, 2015). Taking the task of designing a new way to build a tall building as an example, many widely accepted standards exist to evaluate the safety of a design. Thus, most team members should recognize and accept correct ideas while realizing and rejecting erroneous ideas. Doing so can objectively settle disagreements and arguments and encourage team members to work together to accomplish the task. Therefore, culturally diverse team members can focus on task accomplishment while paying little attention to negative social processes. On the contrary, multicultural teams may suffer from social costs when performing judgmental tasks because of a lack of objective frameworks for resolving disagreements and high

reliance on members' individual and cultural preferences. In summary, task intellectiveness reduces negative interpersonal dynamics in multicultural teams.

Performing intellective tasks is also conducive to the sharing and integration of diverse knowledge and perspectives in multicultural teams. Collective information processing is effective in teams performing intellective tasks (Laughlin, Hatch, Silver, & Boh, 2006). Task-related information exchange for intellective tasks should be easier than for judgmental tasks because correct solutions reduce misinterpretation and misunderstanding. Team members do not likely argue with one another for the best decisions and solutions because they are guided by a conceptual system. They can understand and exploit different ideas well without being distracted by different opinions and personal preferences. By contrast, multicultural teams do not likely reap informational benefits when performing judgmental tasks because integrating opposing opinions is difficult without objective frameworks for resolving disagreements. Team members must argue for the best solutions by criticizing and attacking each other's opinions, and they are likely distracted by personal and cultural preferences. With less effective information integration, multicultural teams' informational benefits are hampered.

Social costs are relatively salient in multicultural teams doing judgmental tasks, whereas informational benefits are relatively salient in multicultural teams doing intellective tasks. Extrapolating from the ABC framework (Busse et al., 2016), we argue that task intellectiveness may moderate the relationships between surface-/deep-level diversity in culturally diverse teams and team creativity/innovation. The negative effect of surface-level diversity in culturally diverse teams due to its social costs should be stronger for judgmental than intellective tasks. On the contrary, the positive effect of deep-level diversity in culturally diverse teams due to its informational benefits should be stronger for intellective than judgmental tasks.

Hypothesis 5a: The negative relationship between surface-level diversity in culturally diverse teams and team creativity/innovation is moderated by task intellectiveness, such that this negative relationship is stronger for judgmental tasks than for intellective tasks.

Hypothesis 5b: The positive relationship between deep-level diversity in culturally diverse teams and team creativity/innovation is moderated by task intellectiveness, such that this positive relationship is stronger for intellective tasks than for judgmental tasks.

Method

Literature Search

We employed an extensive search strategy to locate relevant published and unpublished studies, with the time frame from 1985 to March 2018. For published works, we conducted a computer search on the following six databases (Stahl et al., 2010): PsycINFO, ABI/INFORM, Social Sciences Citation Index, Business Source Premier, EconLit, and Science Direct. We used combinations of keywords, including *cultural* (and the related terms *race*, *racial*, *ethnic*, *ethnicity*, *nationality*, *value*, *cognitive*, *attitude*, and *deep-level*), *diversity* (also *composition*, *homogeneity*, *heterogeneity*, *similarity*, and *dissimilarity*), *team* (also *group*, *board*, *organization*, *company*, and *firm*), and *creativity* (also *innovation, innovativeness*, *novelty*, *idea generation*, and *research and development [R&D]*). Manual search was conducted in the following 14 academic journals: *Academy of Management Journal*, *Administrative Science Quarterly*, *Creativity and Innovation Management*, *Creativity Research Journal*, *Journal of Applied Psychology*, *Journal of Creative Behavior*, *Journal of Cross-Cultural Psychology*, *Journal of International Business Studies*, *Journal of Management*, *Journal of Organizational Behavior*, *Organization Science*, *Organizational Behavior and Human Decision Processes*, *Small Group Research*, and *Strategic Management Journal*.

For unpublished works, dissertations and working papers were searched on ProQuest Dissertations & Theses and SSRN Working Paper Series, respectively. We also conducted a manual search of conference proceedings of the Academy of Management, Society for Industrial and Organizational Psychology, and Interdisciplinary Network of Group Research. In addition, we contacted researchers who were active in the areas of cultural diversity and team creativity/innovation for unpublished/working papers.

Our searches identified several relevant papers that did not report information essential to meta-analysis, and we contacted the authors for those pieces of information. Moreover, we examined the reference lists of the identified articles and the review papers on diversity in multicultural teams and team outcomes to locate additional studies.

Inclusion Criteria

To be included in the present analysis, samples of studies must include teams with members from different countries and/or ethnicities. These studies must also report a zero-order correlation between diversity in culturally diverse teams and team creativity/innovation, or statistics that can be transformed into a correlation coefficient (Lipsey & Wilson, 2001). For papers based on the same or overlapping samples (Wood, 2008), inclusion preference (in descending order) was given to the sample with further information for testing moderating effects, with a larger sample size, and that has been recently published (Cheng & Chan, 2008). In our literature search, we included the keywords *organization*, *company*, and *firm* because team creativity/innovation might be reported as supplementary information in studies that focused on firm creativity/innovation. However, in our analysis, we did not include studies that reported only firm creativity/innovation and did not use firm creativity/innovation as a proxy for team creativity/innovation (Klein, Dansereau, & Hall, 1994). After applying these criteria, we found

44 studies (35 published, nine unpublished) that yielded 47 samples. The included studies are highlighted by an asterisk in the reference list.

Coding Scheme

Two authors coded the samples in terms of the number of teams (sample size), uncorrected effect size(s) for the relationship between diversity in culturally diverse teams and team creativity/innovation, diversity level, reliability information, and moderating variables. The overall inter-coder agreement was 94%, and discrepancies were resolved through a discussion with a third author. Appendix 1 shows the coding protocol for diversity and moderator level. Appendix 2 displays the information recorded for each sample. Appendix 3 reports the correlation between the moderators.

Meta-analysis provides a weighted average of effect sizes based on sample size (Hunter & Schmidt, 2004). One sample (Jang, 2017) had a much larger sample size than the rest and could dominate the results. Following a common practice to avoid such a bias, we replaced its sample size with the value (148) by using three standard deviations above the mean of the remaining sample sizes (i.e., Winsorization, see Aguinis, Gottfredson, & Joo, 2013; Lipsey & Wilson, 2001). Two samples (Huang, Gibson, Kirkman, & Shapiro, 2017, Study 2; Li et al., 2017) appeared as effect size outliers on the upper level, with their sample-adjusted meta-analytic deviance (Beal, Corey, & Dunlap, 2002; Huffcutt & Arthur, 1995) higher than the cutoff of four (Blume, Ford, Baldwin, & Huang, 2010; Steel, 2007). We Winsorized these effect sizes to the nearest value of $r = .54$ (Degner & Dalege, 2013). The analyses reported below involved all 47 samples (18 employee samples, 27 student samples, and two samples that involved employees and students), with a total of 2,832 teams (after Winsorization). On average, a team involved 5.27 individuals, and team tenure was 9.51 months. Appendix 4 shows the findings involving

outliers.

Meta-Analytic Procedures

We used random-effects model of meta-analysis (Hunter & Schmidt, 2004; Schmidt & Hunter, 2014) to estimate the mean Pearson's correlation coefficients. Effect sizes, such as the *t* value, were transformed into Pearson's correlation coefficients (Lipsey & Wilson, 2001). Establishing an independent effect size for each sample (Geyskens, Krishnan, Steenkamp, & Cunha, 2009) is crucial. When the analysis involved samples that reported multiple associations between diversity in multicultural teams and team creativity/innovation, we computed a single composite estimate based on intercorrelations and standard deviations (Hunter & Schmidt, 2004; Schmidt & Hunter, 2014). A simple average was used as a substitute when such information was unavailable (Cheng & Chan, 2008).

In addition to uncorrected sample-size weighted mean correlations, we also reported estimated true (corrected) mean correlations. Specifically, we corrected the measurement errors in diversity in multicultural teams (independent variable) and team creativity/innovation (dependent variable). Information on the unreliability of diversity in multicultural teams and team creativity/innovation was missing in many included samples. Therefore, we performed the correction using artifact distribution approach (Hunter & Schmidt, 2004; Schmidt & Hunter, 2014). We focused on the *ICC*(2) coefficient, which has been recommended for correcting team-level data (De Jong et al., 2016)[1]. Some samples reported *ICC*(1) or *F*-value, and we transformed such information into *ICC*(2). When diversity in multicultural teams or team creativity/innovation was measured objectively, we assumed perfect reliability and used the reliability value of 1. When we combined multiple correlations to produce a single composite score for a sample, we accordingly combined the relevant *ICC*(2)s using Mosier's composite

reliability formula. The mean and variance of the overall attenuation factor were estimated to be .91 and .01, respectively.

To evaluate whether a corrected correlation significantly differed from zero, we referred to its 95% confidence interval (CI). An effect size is significantly different from zero when its 95% CI does not include zero. To test the moderating effects, we conducted subgroup analysis and referred to the overlap in confidence level of effect sizes across subgroups (Astill, Van der Heijden, Van IJzendoorn, & Van Someren, 2012; van IJzendoorn, Juffer, & Poelhuis, 2005). In subgroup analysis, we referred to 84% CIs. Non-overlapping 84% CIs indicate that the corresponding effect sizes of subgroups significantly differ from one another (Goldstein & Healy, 1995; MacGregor-Fors & Payton, 2013)[2], thereby providing evidence for moderating effects. For reliable analysis, we focused on the estimates of a subgroup which involved at least three samples (Choi, Oh, & Colbert, 2015; Stahl et al., 2010).

We reported two pieces of information to show the heterogeneity of an effect size and the presence of moderators (Geyskens et al., 2009): 80% credibility interval (CV) (Hunter & Schmidt, 2004; Schmidt & Hunter, 2014) and the I^2 value (Higgins, Thompson, Deeks, & Altman, 2003). The I^2 value is recommended over the Q-value because the I^2 value is less biased than the Q-value (Borenstein, Hedges, Higgins, & Rothstein, 2009; Burnette, O'Boyle, VanEpps, Pollack, & Finkel, 2013). Specifically, a wide CV (which particularly includes zero) and an I^2 value $\geq$ 25% suggest a heterogeneity of an effect size.

To test publication bias, we adopted trim and fill method (Duval & Tweedie, 2000a, 2000b) and test of the intercept (Egger, Smith, Schneider, & Minder, 1997; Sterne & Egger, 2005)[3] using the *Metatrim* and *Metabias* packages of Stata, respectively. Both methods indicated an absence of publication bias for the association between surface-level diversity in culturally

diverse teams and team creativity/innovation. For the association between deep-level diversity in culturally diverse teams and team creativity/innovation, test of the intercept indicated that β_0 was significant (p = .043), but trim and fill method revealed that study imputation was not necessary. Overall, publication bias did not appear as a serious concern in the present meta-analysis and confound our conclusions.

Results

Surface- Versus Deep-Level Diversity in Culturally Diverse Teams

The association between surface-level diversity in culturally diverse teams and team creativity/innovation was virtually zero (r_c = −.02, CI_{95} = −.11, .06) (Table 1), failing to support Hypothesis 1a. The correlation estimate was positive for the association between deep-level diversity in culturally diverse teams and team creativity/innovation (r_c = .16, CI_{95} = .06, .25) (Table 2), supporting Hypothesis 1b.

Insert Table 1 & 2 about here

The Moderators based on the Socio-Technical Systems Framework

The relationship between surface-level diversity in culturally diverse teams and team creativity/innovation. This relationship was significantly negative for simple tasks (r_c = −.23, CI_{95} = −.33, −.12) but became non-significant for complex tasks (r_c = .02, CI_{95} = −.07, .11). The non-overlapping 84% CIs (−.30, −.15 for simple tasks vs. −.04, .09 for complex tasks) further illustrated that the effect sizes were different. Thus, Hypothesis 4a was supported. However, this relationship did not materially differ across collocated (r_c = .02, CI_{95} = −.07, .10) and non-collocated teams (r_c = −.16, CI_{95} = −.37, .04), across interdependent (r_c = .00, CI_{95} =

−.09, .10) and independent tasks (r_c = −.10, CI_{95} = −.26, .06), and across intellective (r_c = −.04, CI_{95} = −.42, .34) and judgmental tasks (r_c = −.02, CI_{95} = −.10, .06). All the relevant 95% CIs included zero. The 84% CIs also overlapped (−.04, .08 for collocated teams vs. −.31, −.02 for non-collocated teams; −.07, .07 for interdependent tasks vs. −.22, .01 for independent tasks; −.31, .23 for intellective tasks vs. −.08, .04 for judgmental tasks). Therefore, Hypotheses 2a, 3a, and 5a were not supported.

The relationship between deep-level diversity in culturally diverse teams and team creativity/innovation. This relationship was significantly positive in collocated teams (r_c = .18, CI_{95} = .07, .29) but became non-significant in non-collocated teams (r_c = .02, CI_{95} = −.03, .06). The 84% CIs (.10, .26 for collocated teams vs. −.01, .05 for non-collocated teams) did not overlap, further illustrating a noticeable difference in the effect sizes. We also observed that this relationship was significantly positive for interdependent tasks (r_c = .19, CI_{95} = .11, .28) but became non-significant for independent tasks (r_c = −.10, CI_{95} = −.43, .23). The 84% CIs (.13, .25 for interdependent task vs. −.34, .13 for independent tasks) did not overlap, further illustrating a significant difference in the effect sizes. Hence, Hypotheses 2b and 3b were supported.

Regarding the moderating role of task complexity, the effect size for complex tasks (r_c = .16, CI_{95} = .06, .26) was not considerably larger than that for simple tasks (r_c = .05, CI_{95} = −.14, .24), as evidenced by the overlapping 84% CIs (.09, .23 for complex tasks vs. −.09, .19 for simple tasks). Note that the subgroup of simple tasks only involved two samples. In addition, the association between deep-level diversity in culturally diverse teams and team creativity/innovation did not substantially differ across intellective (r_c = .09, CI_{95} = −.04, .22) and judgmental tasks (r_c = .16, CI_{95} = .03, .29), as evidenced by the overlapping 84% CIs (.00, .19 for intellective tasks vs. .06, .25 for judgmental tasks). Therefore, we did not find evidence for the

moderating effects of task complexity and intellectiveness on the association between deep-level diversity in culturally diverse teams and team creativity/innovation. Hypotheses 4b and 5b were not supported.

Discussion

With the increasing prevalence of multicultural teams, understanding the effect of diversity in these teams on team creativity/innovation has become necessary (Leung & Wang, 2015). Our meta-analysis provides unique contributions to this line of research. We reexamine the relationship between diversity in multicultural teams and team creativity/innovation with a focus on testing its direction and strength on the basis of the socio-technical systems framework for cultural diversity and team creativity (Leung & Wang, 2015). Integrating the social categorization and information/decision-making perspectives, which are based on CEM (van Knippenberg et al., 2004), and considering the ABC framework (Busse et al., 2016), we develop coherent theorizing to examine the distinctive effects of surface- and deep-level diversity in culturally diverse teams and moderators. Surface-level diversity has negative effects due to its social costs whereas deep-level diversity has positive effects due to its informational benefits. The moderators may affect the relative prominence of social costs incurred by surface-level diversity and informational benefits incurred by deep-level diversity. Thus, the direction and strength of the associations between surface-/deep-level diversity in culturally diverse teams and team creativity/innovation are influenced.

In response to Stahl et al.'s (2010) call for a nuanced understanding of cultural diversity level, our meta-analysis differentiates the two diversity levels. We found that deep-level diversity in culturally diverse teams is positively related to team creativity/innovation, whereas surface-level diversity in culturally diverse teams has a non-significant relationship with team

creativity/innovation. These findings are inconsistent with Stahl et al.'s meta-analytic review, which finds that the two diversity levels are not differently related to most outcome variables. A possible explanation is that Stahl et al.'s meta-analysis examines relational types of team outcomes such as conflict and social integration, whereas our meta-analysis focuses on team creativity/innovation, which reaps informational benefits incurred by deep-level diversity in culturally diverse teams. The findings of the different effects of the two diversity levels on team creativity/innovation offer three important theoretical implications. First, these findings affirm the importance of distinguishing surface- versus deep-level diversity in cultural diversity research for the creative/innovative type of team outcomes. Previous research has commonly treated country or ethnic group as a proxy for culture without considering deep-level diversity. For instance, 79% of the studies in Schaffer and Riordan's (2003) review of cross-cultural methodologies for organizational research have operationalized culture as country. However, this proxy may not capture deep-level differences and disregard important effects. Researchers must be cautious when using country or ethnic group as a proxy for culture. They are encouraged to incorporate specific deep-level constructs into their theoretical frameworks and directly test their effects.

In addition, we found a non-significant relationship between surface-level diversity in multicultural teams and team creativity/innovation. This finding concurs with previous meta-analyses that has found a non-significant relationship between team diversity in nationality/ethnicity and team creativity (for meta-analytic reviews, see Bell et al., 2011; Hülsheger, Anderson, & Salgado, 2009; van Dijk et al., 2012). However, this result is not consistent with our hypothesized negative relationship. The non-significant relationship is intriguing because the team diversity literature has theorized a negative relationship between

diversity in nationality/ethnicity and team creativity (Hülsheger et al., 2009) from the social categorization perspective. These meta-analytic findings prompt us to rethink this relationship. We follow the mainstream research to adopt the social categorization perspective to argue for the negative effects of surface-level diversity in culturally diverse teams, whereas other studies offer different views. For instance, diversity in nationality provides informational benefits (Dahlin et al., 2005), which are salient for the creative/innovative type of team outcomes (van Dijk et al., 2012) and may counteract its social costs. Moreover, the social costs of surface-level diversity incurred by social categorization can be neutralized overtime (Harrison et al., 1998; Harrison, Price, Gavin, & Florey, 2002). Therefore, the relative prominence of informational benefits and social costs caused by surface-level diversity in culturally diverse teams is complex, thereby warranting further investigation.

The positive relationship between deep-level diversity in culturally diverse teams and team creativity/innovation sheds light on the cultural diversity literature, which has strived to understand how multicultural teams can be leveraged and deems team creativity as a positive immediate outcome of cultural diversity (Stahl et al., 2010). This finding also corroborates the information/decision-making perspective—the main theoretical perspective that accounts for the beneficial effects of deep-level diversity. Our result also confirms the positive effect of deep-level diversity in culturally diverse teams on the creative/innovative type of team outcomes postulated in Stahl et al.'s (2010) meta-analysis on cultural diversity. Noted that past studies have suggested different views of the relative prominence of social costs and informational benefits involved in deep-level diversity in culturally diverse teams. Dissimilarity in deep-level attributes leads to social costs that can sustain overtime (Harrison et al., 1998; Harrison et al., 2002). The relative prominence of informational benefits and social costs involved in deep-level diversity in

culturally diverse teams is inconclusive for general team outcomes. Our meta-analytic finding provides the implication that for the creative/innovative type of team outcomes, informational benefits outweigh social costs. Future research can further examine the relative prominence of informational benefits and social costs of deep-level diversity in culturally diverse teams for different types of team outcomes.

Second, on the basis of Leung and Wang's (2015) socio-technical systems framework for cultural diversity and team creativity, we examine the moderating effects of team virtuality and task characteristics (task interdependence, task complexity, and task intellectiveness). Team virtuality, task complexity, and task interdependence display diverse moderating effects depending on whether surface- or deep-level diversity in culturally diverse teams is captured. These findings provide theoretical implications regarding "when" the two diversity levels in culturally diverse teams are destructive or beneficial. Team and task characteristics are important boundary conditions, which may account for the heterogeneous findings in previous meta-analyses on team diversity (e.g., Hülsheger et al., 2009; van Dijk et al., 2012). Moreover, our findings support the general proposition that surface-level diversity in culturally diverse teams is negatively related to team creativity/innovation when social costs are relatively salient. On the contrary, deep-level diversity in culturally diverse teams is positively related to team creativity/innovation when informational benefits are relatively salient.

We also acknowledge the relevance of the ABC framework (Busse et al., 2016) to the effect of diversity in culturally diverse teams on team creativity/innovation. The ABC framework argues that the direction and strength of relationships depend on the marginal effects of social costs and informational benefits. Our findings consider the diversity level in multicultural teams together with certain moderators, thereby corroborating this reasoning. Future research can use

the ABC framework to further investigate other conditions that affect the relative prominence of social costs and informational benefits related to diversity in culturally diverse teams.

Practical Implications

The observed effects of surface- versus deep-level diversity in culturally diverse teams and the moderating effects of team virtuality and task characteristics have pivotal practical implications. First, managers are reminded that surface-level diversity in culturally diverse teams, such as having team members with different races, may not elevate team creativity/innovation. The critical factor in team creativity/innovation is whether team members differ in deep-level attributes, such as cultural values and worldviews. Leaders of multicultural teams should not be distracted by surface-level attributes and should consider deep-level attributes in recruiting team members to achieve high team creativity/innovation.

Second, to benefit from diversity in multicultural teams and circumvent its negative effects, managers must pay attention to team and task design. Many multicultural teams are geographically dispersed and work virtually. Ironically, virtual teams may not leverage the range of knowledge and perspectives offered by deep-level diversity in culturally diverse teams to enhance team creativity/innovation. Nevertheless, for multicultural virtual teams, certain approaches can be used to reduce communication difficulties and negative social processes. The frequent use of rich media, such as video conferencing, may help improve communication and interpersonal relationships. Face-to-face interaction should also be increased to build trust and enhance ease of communication among team members and thus facilitate the utilization of diverse knowledge and perspectives in culturally diverse teams. In terms of task design, managers should assign complex and interdependent tasks to multicultural teams. For teams working on simple tasks, culturally homogeneous teams are suggested; otherwise, team

creativity/innovation may be hurt. Moreover, to fully leverage interdependent tasks that strengthen the positive effect of deep-level diversity in culturally diverse teams, managers are suggested to facilitate intercultural communication and information sharing and learning. Companies can provide training courses to multicultural teams to equip team members with improved intercultural communication and collaboration skills.

Limitations and Directions for Future Research

We discuss the limitations of this research and their implications for future research. First, certain moderating variables are correlated. If many primary studies are available, then the unique effect of moderators can be examined via the multiple regression approach (Steel & Kammeyer-Mueller, 2002). Nevertheless, subgroup analysis has been widely adopted in meta-analytic reviews (Stahl et al., 2010). Given that our hypotheses are theoretically derived, the reported moderating effects should be robust.

Second, we call for field and laboratory experiments in future research to obtain causal data. Our meta-analytic results are primarily based on correlational data and do not show the direction of causality. Although diversity in multicultural teams is widely regarded as an antecedent of team creativity/innovation (e.g., Stahl et al., 2010), the causal claims implied in our hypotheses should be evaluated in future research.

Third, we cannot examine mediators for the relationship between diversity in multicultural teams and team creativity/innovation because of the constraints of the data set. We cannot analyze the social and informational processes. In addition, we cannot investigate the interplay between diversity in culturally diverse teams and the moderators in affecting social and informational processes and that between social and informational processes and the moderators in affecting team creativity/innovation. Moreover, we cannot examine the different views about

the relationships of these two processes. van Knippenberg et al. (2004) proposed that social and informational processes are dual pathways connecting diversity in multicultural teams and team creativity/innovation, and these two processes interact with each other. However, Leung and Wang (2015) proposed a chain mediating model in which cultural diversity influences social processes, and then informational processes, and finally team creativity. Without examining the mediating mechanisms between diversity in multicultural teams and team creativity/innovation, we cannot explore these different alternatives and thus encourage future research in this direction.

Moreover, this meta-analytic study does not examine moderators outside the scope of the socio-technical systems framework for cultural diversity and team creativity (Leung & Wang, 2015). For instance, team-level moderators may interact with organization-level moderators (e.g., Joshi & Roh, 2009) to influence the relationship between diversity in multicultural teams and team creativity/innovation. However, the scarce relevant research does not allow us to scrutinize these complex moderating effects. Primary studies should be in place to fill this gap.

A methodological issue is the imbalanced number of studies across moderator levels that entails unfair comparisons (Cooper & Richardson, 1986) and influences the effect size estimates in subgroup analysis. We also acknowledge the low number of studies for certain moderator levels that makes our findings susceptible to second-order sampling error (Schmidt & Hunter, 2014) and affects effect size variability. Further primary studies are necessary to address these concerns.

In conclusion, this meta-analysis reveals that surface-level diversity in culturally diverse team has a non-significant relationship with team creativity/innovation. Nevertheless, deep-level diversity in culturally diverse teams has a positive relationship with team creativity/innovation.

By influencing the relative prominence of social costs and informational benefits, team virtuality and task characteristics show moderating effects. This meta-analysis provides refined empirical conclusions for the relationship between diversity in culturally diverse teams and team creativity/innovation with prevailing theories and frameworks. Future research should investigate the social and informational processes underlying this relationship.

Footnote

[1] We would have considered other unreliability information if we had not adopted the artifact distribution approach. However, we did not consider item-specific measurement error, thus our correction was incomplete. Our findings should be interpreted as conservative estimates of the true population parameters (De Jong et al., 2016).

[2] Null hypothesis statistical testing in meta-analysis has remained controversial. Countering the advocate for its abandonment by certain scholars, especially Hunter and Schmidt (2004) and Schmidt and Hunter (2014), statistical testing has been widely utilized (Borenstein et al., 2009). It is not uncommon to adopt Hunter and Schmidt's method to derive effect sizes, and subsequently utilize statistical testing procedures (Aguinis, Sturman, & Pierce, 2008), including overlapping of CIs (e.g., Hong, Liao, Hu, & Jiang, 2013; Lapierre et al., 2018; Marlow et al., 2018; Robbins, Ford, & Tetrick, 2012; Rockstuhl, Dulebohn, Ang, & Shore, 2012) to evaluate moderating effects.

[3] Other methods are less commonly used, and/or their effectiveness is questionable (Kepes, Banks, McDaniel, & Whetzel, 2012). Trim and fill method and test of the intercept require at least 10 samples (Sterne et al., 2011). Hence, we did not employ these procedures within subgroups, many of which involved fewer than 10 samples.

References

*Articles included in the present meta-analysis are marked with an asterisk.

Adler, N. J. (1986). *International dimensions of organizational behavior*. Boston, Mass.: PWS-Kent.

*Aggarwal, I. (2013). *Cognitive style diversity in teams.* (Doctor of Philosophy doctoral dissertation), Carnegie Mellon University, Pittsburgh, PA.

Aguinis, H., Gottfredson, R. K., & Joo, H. (2013). Best-practice recommendations for defining, identifying, and handling outliers. *Organizational Research Methods*, *16*, 270-301. DOI: 10.1177/1094428112470848

Aguinis, H., Sturman, M. C., & Pierce, C. A. (2008). Comparison of three meta-analytic procedures for estimating moderating effects of categorical variables. *Organizational Research Methods*, *11*, 9-34. DOI: 10.1177/1094428106292896

Ancona, D. G., & Caldwell, D. F. (1992). Demography and design - Predictors of new product team performance. *Organization Science*, *3*, 321-341. DOI: 10.1287/orsc.3.3.321

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, *40*, 1297-1333. DOI: 10.1177/0149206314527128

Astill, R. G., Van der Heijden, K. B., Van IJzendoorn, M. H., & Van Someren, E. J. W. (2012). Sleep, cognition, and behavioral problems in school-age children: A century of research meta-analyzed. *Psychological Bulletin*, *138*, 1109-1138. DOI: 10.1037/a0028204

*Batarseh, F. S., Usher, J. M., & Daspit, J. J. (2017). Collaboration capability in virtual teams: Examining the influence on diversity and innovation. *International Journal of Innovation Management*, *21*, 1750034-1750031-1750029. DOI: 10.1142/s1363919617500347

Beal, D. J., Corey, D. M., & Dunlap, W. P. (2002). On the bias of Huffcutt and Arthur's (1995) procedure for identifying outliers in the meta-analysis of correlations. *Journal of Applied Psychology*, *87*, 583-589. DOI: 10.1037/0021-9010.87.3.583

Bell, S. T., Villado, A. J., Lukasik, M. A., Belau, L., & Briggs, A. L. (2011). Getting specific about demographic diversity variable and team performance relationships: A meta-analysis. *Journal of Management*, *37*, 709-743. DOI: 10.1177/0149206310365001

Blume, B. D., Ford, J. K., Baldwin, T. T., & Huang, J. L. (2010). Transfer of training: A meta-analytic review. *Journal of Management*, *36*, 1065-1105. DOI: 10.1177/0149206309352880

*Bogilović, S., Černe, M., & Škerlavaj, M. (2017). Hiding behind a mask? Cultural intelligence, knowledge hiding, and individual and team creativity. *European Journal of Work and Organizational Psychology*, *26*, 710-723. DOI: 10.1080/1359432x.2017.1337747

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester, The United Kingdom: Wiley.

Bowers, C. A., Pharmer, J. A., & Salas, E. (2000). When member homogeneity is needed in work teams - A meta-analysis. *Small Group Research*, *31*, 305-327. DOI: 10.1177/104649640003100303

Burnette, J. L., O'Boyle, E. H., VanEpps, E. M., Pollack, J. M., & Finkel, E. J. (2013). Mind-sets matter: A meta-analytic review of implicit theories and self-regulation. *Psychological Bulletin*, *139*, 655-701. DOI: 10.1037/a0029531

Busse, C., Mahlendorf, M. D., & Bode, C. (2016). The ABC for studying the Too-Much-of-a-Good-Thing effect: A competitive mediation framework linking antecedents, benefits, and costs. *Organizational Research Methods*, *19*, 131-153. DOI:

10.1177/1094428115579699

Byron, K., & Khazanchi, S. (2012). Rewards and creative performance: A meta-analytic test of theoretically derived hypotheses. *Psychological Bulletin*, *138*, 809-830. DOI: 10.1037/a0027652

Byron, K., Khazanchi, S., & Nazarian, D. (2010). The relationship between stressors and creativity: A meta-analysis examining competing theoretical models. *Journal of Applied Psychology*, *95*, 201-212. DOI: 10.1037/a0017868

*Cady, S. H., & Valentine, J. (1999). Team Innovation and perceptions of consideration: What difference does diversity make? *Small Group Research*, *30*, 730-750. DOI: 10.1177/104649649903000604

*Cheng, C. Y., Chua, R. Y. J., Morris, M. W., & Lee, L. (2012). Finding the right mix: How the composition of self-managing multicultural teams' cultural value orientation influences performance over time. *Journal of Organizational Behavior*, *33*, 389-411. DOI: 10.1002/job.1777

Cheng, G. H. L., & Chan, D. K. S. (2008). Who suffers more from job insecurity? A meta-analytic review. *Applied Psychology: An International Review*, *57*, 272-303. DOI: 10.1111/j.1464-0597.2007.00312.x

Choi, D., Oh, I. S., & Colbert, A. E. (2015). Understanding organizational commitment: A meta-analytic examination of the roles of the Five-Factor Model of personality and culture. *Journal of Applied Psychology*, *100*, 1542-1567. DOI: 10.1037/apl0000014

Connaughton, S. L., & Shuffler, M. (2007). Multinational and multicultural distributed teams: A review and future agenda. *Small Group Research*, *38*, 387-412. DOI: 10.1177/1046496407301970

Cooper, W. H., & Richardson, A. J. (1986). Unfair comparisons. *Journal of Applied Psychology*, *71*, 179-184. DOI: 10.1037//0021-9010.71.2.179

Cramton, C. D. (2001). The mutual knowledge problem and its consequences for dispersed collaboration. *Organization Science*, *12*, 346-371. DOI: 10.1287/orsc.12.3.346.10098

Cummings, T. G. (1978). Self-regulating work groups: A socio-technical synthesis. *Academy of Management Review*, *3*, 625-634. DOI: 10.5465/AMR.1978.4305900

*Curşeu, P. L. (2010). Team creativity in web site design: An empirical test of a systemic model. *Creativity Research Journal*, *22*, 98-107. DOI: 10.1080/10400410903579635

Dahlin, K. B., Weingart, L. R., & Hinds, P. J. (2005). Team diversity and information use. *Academy of Management Journal*, *48*, 1107-1123. DOI: 10.5465/AMJ.2005.19573112

Davis, M. C., Challenger, R., Jayewardene, D. N. W., & Clegg, C. W. (2014). Advancing socio-technical systems thinking: A call for bravery. *Applied Ergonomics*, *45*, 171-180. DOI: 10.1016/j.apergo.2013.02.009

De Dreu, C. K. W., & West, M. A. (2001). Minority dissent and team innovation: The importance of participation in decision making. *Journal of Applied Psychology*, *86*, 1191-1201. DOI: 10.1037//0021-9010.86.6.1191

De Jong, B. A., Dirks, K. T., & Gillespie, N. (2016). Trust and team performance: A meta-analysis of main effects, moderators, and covariates. *Journal of Applied Psychology*, *101*, 1134-1150. DOI: 10.1037/apl0000110

de Wit, F. R., Greer, L. L., & Jehn, K. A. (2012). The paradox of intragroup conflict: A meta-analysis. *Journal of Applied Psychology*, *97*, 360-390. DOI: 10.1037/a0024844

Degner, J., & Dalege, J. (2013). The apple does not fall far from the tree, or does it? A meta-analysis of parent-child similarity in intergroup attitudes. *Psychological Bulletin*, *139*,

1270-1304. DOI: 10.1037/a0031436

Duval, S., & Tweedie, R. (2000a). A nonparametric "Trim and Fill" method of accounting for publication bias in meta-analysis. *Journal of the American Statistical Association*, *95*, 89-98. DOI: 10.2307/2669529

Duval, S., & Tweedie, R. (2000b). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, *56*, 455-463. DOI: 10.1111/j.0006-341X.2000.00455.x

Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *British Medical Journal*, *315*, 629-634. DOI: 10.1136/bmj.315.7109.629

Erez, M. (2011). Cross-cultural and global issues in organizational psychology. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology* (Vol. 3, pp. 807-854). Washington, DC: American Psychological Association.

Fox, W. M. (1995). Sociotechnical system principles and guidelines: Past and present. *Journal of Applied Behavioral Science*, *31*, 91-105. DOI: 10.1177/0021886395311009

Geyskens, I., Krishnan, R., Steenkamp, J.-B. E. M., & Cunha, P. V. (2009). A review and evaluation of meta-analysis practices in management research. *Journal of Management*, *35*, 393-419. DOI: 10.1177/0149206308328501

*Giambatista, R. C., & Bhappu, A. D. (2010). Diversity's harvest: Interactions of diversity sources and communication technology on creative group performance. *Organizational Behavior and Human Decision Processes*, *111*, 116-126. DOI: 10.1016/j.obhdp.2009.11.003

*Gibson, C. B., & Gibbs, J. L. (2006). Unpacking the concept of virtuality: The effects of

geographic dispersion, electronic dependence, dynamic structure, and national diversity on team innovation. *Administrative Science Quarterly*, *51*, 451-495. DOI: 10.2189/asqu.51.3.451

Gibson, C. B., Huang, L., Kirkman, B. L., & Shapiro, D. L. (2014). Where global and virtual meet: The value of examining the intersection of these elements in twenty-first-century teams. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*, 217-244. DOI: 10.1146/annurev-orgpsych-031413-091240

Goldstein, H., & Healy, M. J. R. (1995). The graphical presentation of a collection of means. *Journal of the Royal Statistical Society. Series A (Statistics in Society)*, *158*, 175-177. DOI: 10.2307/2983411

Guillaume, Y. R. F., Dawson, J. F., Otaye-Ebede, L., Woods, S. A., & West, M. A. (2017). Harnessing demographic differences in organizations: What moderates the effects of workplace diversity? *Journal of Organizational Behavior*, *38*, 276-303. DOI: 10.1002/job.2040

Hajro, A., Gibson, C. B., & Pudelko, M. (2017). Knowledge exchange processes in multicultural teams: Linking organizational diversity climates to teams' effectiveness. *Academy of Management Journal*, *60*, 345-372. DOI: 10.5465/amj.2014.0442

*Han, J., Han, J., & Brass, D. J. (2014). Human capital diversity in the creation of social capital for team creativity. *Journal of Organizational Behavior*, *35*, 54-71. DOI: 10.1002/job.1853

Harrison, D. A., Price, K. H., & Bell, M. P. (1998). Beyond relational demography: Time and the effects of surface-and deep-level diversity on work group cohesion. *Academy of Management Journal*, *41*, 96-107. DOI: 10.2307/256901

Harrison, D. A., Price, K. H., Gavin, J. H., & Florey, A. T. (2002). Time, teams, and task performance: Changing effects of surface- and deep-level diversity on group functioning. *Academy of Management Journal*, *45*, 1029-1045. DOI: 10.2307/3069328

*Heller, D. M. (1997). *Cultural diversity and team performance: Testing for social loafing effects.* (Doctor of Philosophy doctoral dissertation), University of North Texas, Denton, TX.

*Herron, M. T. (1993). *The effects of the ethnic and gender diversity of work teams on on the perceptions of performance outputs.* (Doctor of Philosophy doctoral dissertation), California School of Professional Psychology, Alhambra, CA.

Higgins, J. P. T., Thompson, S. G., Deeks, J. J., & Altman, D. G. (2003). Measuring inconsistency in meta-analyses. *British Medical Journal*, *327*, 557-560. DOI: 10.1136/bmj.327.7414.557

Hinds, P., Liu, L., & Lyon, J. (2011). Putting the global in global work: An intercultural lens on the practice of cross-national collaboration. *Academy of Management Annals*, *5*, 135-188. DOI: 10.1080/19416520.2011.586108

Hinds, P. J., & Bailey, D. E. (2003). Out of sight, out of sync: Understanding conflict in distributed teams. *Organization Science*, *14*, 615-632. DOI: 10.1287/orsc.14.6.615.24872

*Hoever, I. J. (2012). *Diversity and creativity: In search of synergy.* (Doctor of Philosophy doctoral dissertation), Erasmus University Rotterdam, Rotterdam, Netherlands.

*Hoever, I. J., van Knippenberg, D., van Ginkel, W. P., & Barkema, H. G. (2012). Fostering team creativity: Perspective taking as key to unlocking diversity's potential. *Journal of Applied Psychology*, *97*, 982-996. DOI: 10.1037/a0029159

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*.

Beverly Hills, CA, and London: Sage.

*Homan, A. C., Buengeler, C., Eckhoff, R. A., van Ginkel, W. P., & Voelpel, S. C. (2015). The interplay of diversity training and diversity beliefs on team creativity in nationality diverse teams. *Journal of Applied Psychology*, *100*, 1456-1467. DOI: 10.1037/apl0000013

Hong, Y., Liao, H., Hu, J., & Jiang, K. (2013). Missing link in the service profit chain: A meta-analytic review of the antecedents, consequences, and moderators of service climate. *Journal of Applied Psychology*, *98*, 237-267. DOI: 10.1037/a0031666

House, R. J., Hanges, P. W., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.

*Huang, L., Gibson, C. B., Kirkman, B. L., & Shapiro, D. L. (2017). When is traditionalism an asset and when is it a liability for team innovation? A two-study empirical examination. *Journal of International Business Studies*, *48*, 693-715. DOI: 10.1057/s41267-017-0075-y

Huffcutt, A. I., & Arthur, W. (1995). Development of a new outlier statistic for meta-analytic data. *Journal of Applied Psychology*, *80*, 327-334. DOI: 10.1037/0021-9010.80.2.327

Hughes, D. J., Lee, A., Tian, A. W., Newman, A., & Legood, A. (2018). Leadership, creativity, and innovation: A critical review and practical recommendations. *Leadership Quarterly*, *29*, 549-569. DOI: 10.1016/j.leaqua.2018.03.001

Hülsheger, U. R., Anderson, N., & Salgado, J. F. (2009). Team-level predictors of innovation at work: A comprehensive meta-analysis spanning three decades of research. *Journal of Applied Psychology*, *94*, 1128-1145. DOI: 10.1037/a0015978

Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings* (2 ed.). Thousand Oaks, CA: Sage.

Jackson, S. E., May, K. E., & Whitney, K. (1995). Understanding the dynamics of diversity in decision-making teams. In R. A. Guzzo & E. Salas (Eds.), *Team effectiveness and decision making in organizations* (pp. 204-261). San Francisco: Jossey-Bass.

*Jang, S. (2017). Cultural brokerage and creative performance in multicultural teams. *Organization Science*, *28*, 993-1009. DOI: 10.1287/orsc.2017.1162

*Jehn, K. A., & Conlon, D. E. (in press). Are lifestyle differences beneficial? The effects of marital diversity on group outcomes. *Small Group Research*. DOI: 10.1177/1046496418755920

Jehn, K. A., Northcraft, G. B., & Neale, M. A. (1999). Why differences make a difference: A field study of diversity, conflict, and performance in workgroups. *Administrative Science Quarterly*, *44*, 741-763. DOI: 10.2307/2667054

*Joshi, A., & Knight, A. P. (2015). Who defers to whom and why? Dual pathways linking demographic differences and dyadic deference to team effectiveness. *Academy of Management Journal*, *58*, 59-84. DOI: 10.5465/amj.2013.0718

Joshi, A., & Roh, H. (2009). The role of context in work team diversity research: A meta-analytic review. *Academy of Management Journal*, *52*, 599-627. DOI: 10.5465/AMJ.2009.41331491

*Jules, C. (2007). *Diversity of member composition and team learning in organizations.* (Doctor of Philosophy doctoral dissertation), Case Western Reserve University, Cleveland, OH.

*Kearney, E., & Gebert, D. (2009). Managing diversity and enhancing team outcomes: The promise of transformational leadership. *Journal of Applied Psychology*, *94*, 77-89. DOI:

10.1037/a0013077

Kelley, H. H. (1979). *Personal relationships: Their structure and prophecies*. Hillsdaie. NJ: Eribaum.

Kepes, S., Banks, G. C., McDaniel, M., & Whetzel, D. L. (2012). Publication bias in the organizational sciences. *Organizational Research Methods*, *15*, 624-662. DOI: 10.1177/1094428112452760

Kiesler, S., & Cummings, J. N. (2002). What do we know about proximity and distance in work groups? A legacy of research. In P. J. Hinds & S. Kiesler (Eds.), *Distributed work* (Vol. 1, pp. 57-80). Cambridge, MA: MIT Press.

*Kim, S. Y. (2014). *Valuing group diversity fosters creativity for individuals and groups.* (Doctor of Philosophy doctoral dissertation), Northwestern University, Evanston, IL.

Klein, K. J., Dansereau, F., & Hall, R. J. (1994). Levels issues in theory development, data collection, and analysis. *Academy of Management Review*, *19*, 195-229. DOI: 10.5465/AMR.1994.9410210745

Kumar, K., van Fenema, P. C., & von Glinow, M. A. (2009). Offshoring and the global distribution of work: Implications for task interdependence theory and practice. *Journal of International Business Studies*, *40*, 642-667. DOI: 10.1057/jibs.2008.77

*Kurtzberg, T. R. (2005). Feeling creative, being creative: An empirical study of diversity and creativity in teams. *Creativity Research Journal*, *17*, 51-65. DOI: 10.1207/s15326934crj1701_5

Lapierre, L. M., Li, Y., Kwan, H. K., Greenhaus, J. H., DiRenzo, M. S., & Shao, P. (2018). A meta□analysis of the antecedents of work–family enrichment. *Journal of Organizational Behavior*, *39*, 385-401. DOI: 10.1002/job.2234

Laughlin, P. R., & Adamopoulos, J. (1980). Social combination processes and individual learning for six-person cooperative groups on an intellective task. *Journal of Personality and Social Psychology*, *38*, 941-947. DOI: 10.1037/0022-3514.38.6.941

Laughlin, P. R., Hatch, E. C., Silver, J. S., & Boh, L. (2006). Groups perform better than the best individuals on letters-to-numbers problems: Effects of group size. *Journal of Personality and Social Psychology*, *90*, 644-651. DOI: 10.1037/0022-3514.90.4.644

Leung, K., Bhagat, R. S., Buchan, N. R., Erez, M., & Gibson, C. B. (2005). Culture and international business: Recent advances and their implications for future research. *Journal of International Business Studies*, *36*, 357-378. DOI: 10.1057/palgrave.jibs.8400150

Leung, K., & Bond, M. H. (2004). Social axioms: A model for social beliefs in multicultural perspective. *Advances in Experimental Social Psychology*, *36*, 119-197. DOI: 10.1016/S0065-2601(04)36003-X

Leung, K., & Peterson, M. F. (2011). Managing a globally distributed workforce: Social and interpersonal issues. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology* (Vol. 3, pp. 771-805). Washington, DC: American Psychological Association.

Leung, K., & Wang, J. (2015). Social processes and team creativity in multicultural teams: A socio-technical framework. *Journal of Organizational Behavior*, *36*, 1008-1025. DOI: 10.1002/job.2021

*Li, C. R., Lin, C. J., Tien, Y. H., & Chen, C. M. (2017). A multilevel model of team cultural diversity and creativity: The role of climate for inclusion. *Journal of Creative Behavior*, *51*, 163-179. DOI: 10.1002/jocb.93

Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Thousand Oaks, CA: Sage

*Lisak, A., Erez, M., Sui, Y., & Lee, C. (2016). The positive role of global leaders in enhancing multicultural team innovation. *Journal of International Business Studies*, *47*, 655-673. DOI: 10.1057/s41267-016-0002-7

*Lu, L., Li, F. L., Leung, K., Savani, K., & Morris, M. W. (2018). When can culturally diverse teams be more creative? The role of leaders' benevolent paternalism. *Journal of Organizational Behavior*, *39*, 402-415. DOI: 10.1002/job.2238

MacDuffie, J. P. (2007). HRM and distributed work: Managing people across distances. *Academy of Management Annals*, *1*, 549-615. DOI: 10.1080/078559817

MacGregor-Fors, I., & Payton, M. E. (2013). Contrasting diversity values: Statistical inferences based on overlapping confidence intervals. *PLOS One*, *8*, e56794. DOI: 10.1371/journal.pone.0056794

Marlow, S. L., Lacerenza, C. N., Paoletti, J., Burke, C. S., & Salas, E. (2018). Does team communication represent a one-size-fits-all approach?: A meta analysis of team communication and performance. *Organizational Behavior and Human Decision Processes*, *144*, 145-170. DOI: 10.1016/j.obhdp.2017.08.001

Martins, L. L., Gilson, L. L., & Maynard, M. T. (2004). Virtual teams: What do we know and where do we go from here? *Journal of Management*, *30*, 805-835. DOI: 10.1016/j.jm.2004.05.002

*Martins, L. L., & Shalley, C. E. (2011). Creativity in virtual work: Effects of demographic differences. *Small Group Research*, *42*, 536-561. DOI: 10.1177/1046496410397382

McGrath, J. E. (1984). *Groups: Interaction and performance*. Englewood Cliffs, NJ: Prentice-Hall.

McGrath, J. E., & Hollingshead, A. B. (1994). *Groups interacting with technology: Ideas,*

evidence, issues, and an agenda. Thousand Oaks, CA: Sage Publications, Inc.

McKenna, K. Y. A., & Bargh, J. A. (2000). Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review*, *4*, 57-75. DOI: 10.1207/S15327957PSPR0401_6

*McLeod, P. L., Lobel, S. A., & Cox, T. H. (1996). Ethnic diversity and creativity in small groups. *Small Group Research*, *27*, 248-264. DOI: 10.1177/1046496496272003

*Mitchell, R., Boyle, B., & Nicholas, S. (2011). Cross-cultural group performance. *The Learning Organization*, *18*, 94-101. DOI: 10.1108/09696471111103704

*Nancarrow, L. (2001). *The impact of work group diversity on organizational outcomes.* (Master of Business Administration master's thesis), Carleton University, Ottawa, Canada.

*Nouri, R., Erez, M., Rockstuhl, T., Ang, S., Leshem-Calif, L., & Rafaeli, A. (2013). Taking the bite out of culture: The impact of task structure and task type on overcoming impediments to cross-cultural team performance. *Journal of Organizational Behavior*, *34*, 739-763. DOI: 10.1002/job.1871

*O'Reilly, C. A., III, Williams, K. Y., & Barsade, S. (1998). Group demography and innovation: Does diversity help? In D. H. Gruenfeld (Ed.), *Research on managing groups and teams* (Vol. 1, pp. 183-207). Stamford, Conn.: JAI Press.

*Paletz, S. B. F., Peng, K., Erez, M., & Maslach, C. (2004). Ethnic composition and its differential impact on group processes in diverse teams. *Small Group Research*, *35*, 128-157. DOI: 10.1177/1046496403258793

*Perry-Smith, J. E., & Shalley, C. E. (2014). A social composition view of team creativity: The role of member nationality-heterogeneous ties outside of the team. *Organization Science*, *25*, 1434-1452. DOI: 10.1287/orsc.2014.0912

*Pluut, H., & Curşeu, P. L. (2013). The role of diversity of life experiences in fostering collaborative creativity in demographically diverse student groups. *Thinking Skills and Creativity*, *9*, 16-23. DOI: 10.1016/j.tsc.2013.01.002

Rebhun, U., & Waxman, C. I. (2000). The "Americanization" of Israel: A demographic, cultural and political evaluation. *Israel Studies*, *5*, 65-91. DOI: 10.2979/ISR.2000.5.1.65

*Ren, H., Gray, B., & Harrison, D. A. (2015). Triggering faultline effects in teams: The importance of bridging friendship ties and breaching animosity ties. *Organization Science*, *26*, 390-404. DOI: 10.1287/orsc.2014.0944

Robbins, J. M., Ford, M. T., & Tetrick, L. E. (2012). Perceived unfairness and employee health: A meta-analytic integration. *Journal of Applied Psychology*, *97*, 235-272. DOI: 10.1037/a0025408

Rockstuhl, T., Dulebohn, J. H., Ang, S., & Shore, L. M. (2012). Leader-member exchange (LMX) and culture: A meta-analysis of correlates of LMX across 23 countries. *Journal of Applied Psychology*, *97*, 1097-1130. DOI: 10.1037/a0029978

*Rodriguez, R. A. (1998). Challenging demographic reductionism: A pilot study investigating diversity in group composition. *Small group research*, *29*, 744-759. DOI: 10.1177/1046496498296004

Schaffer, B. S., & Riordan, C. M. (2003). A review of cross-cultural methodologies for organizational research: A best-practices approach. *Organizational Research Methods*, *6*, 169-215. DOI: 10.1177/1094428103251542

*Schilpzand, M. C., Herold, D. M., & Shalley, C. E. (2011). Members' openness to experience and teams' creative performance. *Small Group Research*, *42*, 55-76. DOI: 10.1177/1046496410377509

Schmidt, F. L., & Hunter, J. E. (2014). *Methods of meta-analysis: Correcting error and bias in research findings* (3 ed.). Thousand Oaks, CA: Sage.

Sheppard, B. H., & Sherman, D. M. (1998). The grammars of trust: A model and general implications. *Academy of Management Review*, *23*, 422-437. DOI: 10.5465/AMR.1998.926619

*Spoelma, T. M., & Ellis, A. P. J. (2017). Fuse or fracture? Threat as a moderator of the effects of diversity faultlines in teams. *Journal of Applied Psychology*, *102*, 1344-1359. DOI: 10.1037/apl0000231

Stahl, G. K., Maznevski, M. L., Voigt, A., & Jonsen, K. (2010). Unraveling the effects of cultural diversity in teams: A meta-analysis of research on multicultural work groups. *Journal of International Business Studies*, *41*, 690-709. DOI: 10.1057/jibs.2009.85

Steel, P. D. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, *133*, 65-94. DOI: 10.1037/0033-2909.133.1.65

Steel, P. D., & Kammeyer-Mueller, J. D. (2002). Comparing meta-analytic moderator estimation techniques under realistic conditions. *Journal of Applied Psychology*, *87*, 96-111. DOI: 10.1037//00210-9010.87.1.96

Sterne, J. A. C., & Egger, M. (2005). Regression methods to detect publication and other bias in meta-analysis. In H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.), *Publication bias in meta-analysis: Prevention, assessment and adjustments* (pp. 99-110). Chichester, United Kingdom: John Wiley & Sons.

Sterne, J. A. C., Sutton, A. J., Ioannidis, J. P. A., Terrin, N., Jones, D. R., Lau, J., . . . Higgins, J. P. T. (2011). Recommendations for examining and interpreting funnel plot asymmetry in

meta-analyses of randomised controlled trials. *BMJ*, *343*. DOI: 10.1136/bmj.d4002

Stewart, G. L., & Barrick, M. R. (2000). Team structure and performance: Assessing the mediating role of intrateam process and the moderating role of task type. *Academy of Management Journal*, *43*, 135-148. DOI: 10.2307/1556372

*Stringfellow, A. (1998). *Managing diversity to achieve knowledge integration: The effective use of cross-functional teams in new product development.* (Doctor of Philosophy doctoral dissertation), University of Florida, Gainesville, FL.

Sussman, S. W., & Sproull, L. (1999). Straight talk: Delivering bad news through electronic communication. *Information Systems Research*, *10*, 150-166. DOI: 10.1287/isre.10.2.150

*Suwannarat, P., & Mumi, A. (2012). Examining the effects of cultural diversity on team performance and IJV performance. *International Journal of Business Strategy*, *12*, 120-132.

*Tadmor, C. T., Satterstrom, P., Jang, S., & Polzer, J. T. (2012). Beyond individual creativity: The superadditive benefits of multicultural experience for collective creativity in culturally diverse teams. *Journal of Cross-Cultural Psychology*, *43*, 384-392. DOI: 10.1177/0022022111435259

Thompson, L., & Nadler, J. (2002). Negotiating via information technology: Theory and application. *Journal of Social Issues*, *58*, 109-124. DOI: 10.1111/1540-4560.00251

Triandis, H. C. (1996). The psychological measurement of cultural syndromes. *American Psychologist*, *51*, 407-415. DOI: 10.1037/0003-066X.51.4.407

Trist, E. L., & Bamforth, K. W. (1951). Some social and psychological consequences of the Longwall method of coal-getting: An examination of the psychological situation and defences of a work group in relation to the social structure and technological content of

the work system. *Human Relations*, *4*, 3-38. DOI: 10.1177/001872675100400101

Tung, R. L. (1993). Managing cross-national and intra-national diversity. *Human Resource Management*, *32*, 461-477. DOI: 10.1002/hrm.3930320404

*Turkmen, A. A. (2013). *Cognitive diversity and innovation: Does cognitive diversity in multinational corporations influence workgroup innovation?* (Doctor of Philosophy doctoral dissertation), Fielding Graduate University, Santa Barbara, CA.

van Dijk, H., van Engen, M. L., & van Knippenberg, D. (2012). Defying conventional wisdom: A meta-analytical examination of the differences between demographic and job-related diversity relationships with performance. *Organizational Behavior and Human Decision Processes*, *119*, 38-53. DOI: 10.1016/j.obhdp.2012.06.003

van IJzendoorn, M. H., Juffer, F., & Poelhuis, C. W. K. (2005). Adoption and cognitive development: A meta-analytic comparison of adopted and nonadopted children's IQ and school performance. *Psychological Bulletin*, *131*, 301-316. DOI: 10.1037/0033-2909.131.2.301

van Knippenberg, D. (2017). Team innovation. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*, 211-233. DOI: 10.1146/annurev-orgpsych-032516-113240

van Knippenberg, D., De Dreu, C. K. W., & Homan, A. C. (2004). Work group diversity and group performance: An integrative model and research agenda. *Journal of Applied Psychology*, *89*, 1008-1022. DOI: 10.1037/0021-9010.89.6.1008

van Knippenberg, D., & Mell, J. N. (2016). Past, present, and potential future of team diversity research: From compositional diversity to emergent diversity. *Organizational Behavior and Human Decision Processes*, *136*, 135-145. DOI: 10.1016/j.obhdp.2016.05.007

*Watson, W. E., Kumar, K., & Michaelsen, L. K. (1993). Cultural diversity's impact on

interaction process and performance: Comparing homogeneous and diverse task groups. *Academy of Management Journal*, *36*, 590-602. DOI: 10.2307/256593

Wildman, J. L., Thayer, A. L., Rosen, M. A., Salas, E., Mathieu, J. E., & Rayne, S. R. (2012). Task types and team-level attributes: Synthesis of team classification literature. *Human Resource Development Review*, *11*, 97-129. DOI: 10.1177/1534484311417561

Williams, K. Y., & O'Reilly, C. A., III. (1998). Demography and diversity in organizations: A review of 40 years of research. *Research in Organizational Behavior*, *20*, 77-140.

Wood, J. A. (2008). Methodology for dealing with duplicate study effects in a meta-analysis. *Organizational Research Methods*, *11*, 79-95. DOI: 10.1177/1094428106296638

*Yoerger, M., Allen, J. A., & Crowe, J. (2018). The impact of premeeting talk on group performance. *Small Group Research*, *49*, 226-258. DOI: 10.1177/1046496417744883

Table 1 Surface-level diversity in culturally diverse teams and team creativity/innovation

Moderator	*k*	*N*	*r*	r_c	*SE*	CI_{95} lower	CI_{95} upper	CI_{84} lower	CI_{84} upper	*SD*	CV_{80} lower	CV_{80} upper	I^2
Main effect	37	2235	−.02	−.02	.04	−.11	.06	−.08	.04	.21	−.30	.25	70.43
1. Team virtuality													
Collocated	30	1745	.01	.02	.04	−.07	.10	−.04	.08	.19	−.23	.26	64.51
Non-collocated	7	490	−.15	−.16	.10	−.37	.04	−.31	−.02	.24	−.47	.14	80.69
2. Task interdependence													
Interdependent	28	1673	.00	.00	.05	−.09	.10	−.07	.07	.21	−.27	.27	69.92
Independent	9	562	−.09	−.10	.08	−.26	.06	−.22	.01	.20	−.36	.16	72.13
3. Task complexity													
Complex	30	1830	.02	.02	.05	−.07	.11	−.04	.09	.21	−.25	.29	70.46
Simple	7	405	−.21	−.23	.05	−.33	−.12	−.30	−.15	.00	−.23	−.23	18.35
4. Task intellectiveness													
Intellective	6	252	−.04	−.04	.19	−.42	.34	−.31	.23	.44	−.60	.52	89.09
Judgmental	25	1566	−.02	−.02	.04	−.10	.06	−.08	.04	.14	−.20	.16	53.61

Note: *k* = number of samples; *N* = sample size (number of teams); *r* = uncorrected mean correlation; r_c = corrected mean correlation; *SE* = standard error; CI = confidence interval; *SD* = standard deviation; CV = credibility interval; I^2 = percentage of variance due to real heterogeneity. An effect size was significantly different from zero when its CI_{95} did not include zero. In subgroup analysis, effect sizes were significantly different when their CI_{84} did not overlap. Findings based on fewer than three samples should be interpreted with caution.

Table 2 Deep-level diversity in culturally diverse teams and team creativity/innovation

Moderator	*k*	*N*	*r*	r_c	*SE*	CI_{95} lower	CI_{95} upper	CI_{84} lower	CI_{84} upper	*SD*	CV_{80} lower	CV_{80} upper	I^2
Main effect	21	1170	.14	.16	.05	.06	.25	.09	.22	.17	−.06	.37	59.44
1. Team virtuality													
Collocated	18	999	.16	.18	.05	.07	.29	.10	.26	.18	−.05	.41	63.38
Non-collocated	3	171	.02	.02	.02	−.03	.06	−.01	.05	.00	.02	.02	.00
2. Task interdependence													
Interdependent	18	1030	.17	.19	.04	.11	.28	.13	.25	.11	.05	.34	44.78
Independent	3	140	−.09	−.10	.17	−.43	.23	−.34	.13	.24	−.41	.20	79.65
3. Task complexity													
Complex	19	1104	.15	.16	.05	.06	.26	.09	.23	.17	−.06	.38	62.28
Simple	2	66	.05	.05	.10	−.14	.24	−.09	.19	.00	.05	.05	4.19
4. Task intellectiveness													
Intellective	4	189	.08	.09	.07	−.04	.22	.00	.19	.00	.09	.09	.00
Judgmental	14	802	.14	.16	.07	.03	.29	.06	.25	.21	−.11	.42	70.46

Note: *k* = number of samples; *N* = sample size (number of teams); *r* = uncorrected mean correlation; r_c = corrected mean correlation; *SE* = standard error; CI = confidence interval; *SD* = standard deviation; CV = credibility interval; I^2 = percentage of variance due to real heterogeneity. An effect size was significantly different from zero when its CI_{95} did not include zero. In subgroup analysis, effect sizes were significantly different when their CI_{84} did not overlap. Findings based on fewer than three samples should be interpreted with caution.

Appendix 1 Coding for diversity and moderator level

Diversity in culturally diverse teams
- Surface-level: diversity was measured based on observable, surface-level attributes (i.e., countries or ethnic groups).
- Deep-level: diversity was explicitly measured based on deep-level attributes, such as values and thinking styles, in teams with members from different countries/ethnicities.

Team virtuality
- Collocated teams: teams that were collocated or relied on face-to-face communication.
- Non-collocated teams: teams that were virtual, (partially) geographically dispersed/distributed, hybrid, or primarily communicated through information and communication technology.

Task interdependence
- Interdependent tasks: tasks that involved reciprocal interdependence (e.g., work tasks in a real organizational setting and those that require reciprocal effort in a laboratory setting).
- Independent tasks: tasks that involved pooled interdependence (e.g., team output was a simple aggregation of the individually generated ideas).

Task complexity
- Complex tasks: tasks that involved solving problems of a broad scope and complex solutions. This type of tasks is typically unstructured and involves different facets (e.g., generating promotion plans for products and R&D teams).
- Simple tasks: tasks that involved alternative use tests in a laboratory setting; this type of tasks has narrow scopes and is direct and structured (e.g., generating different uses of a brick).

Task intellectiveness
- Intellective tasks: tasks that involved demonstrably correct decisions and solutions based on a certain conceptual system (e.g., engineering, accounting, and medical tasks).
- Judgmental tasks: tasks in which individual preferences and social consensus played a determining role (e.g., marketing and management tasks).

Appendix 2 Sample description table

Sample	*N*	Team characteristic	Surface-level diversity in culturally diverse teams	Deep-level diversity in culturally diverse teams	Team creativity/ innovation	Reliability (Surface-level diversity)	Reliability (Deep-level diversity)	Reliability (team creativity/ innovation)	Team virtuality	Task interdependence	Task complexity	Task intellectiveness
Aggarwal (2013)	112	Multiple ethnicities	Ethnic diversity (r = .01)	Cognitive style variance (r = .21)	Team creativity	1.00		.97	Collocated	High	High	Low
Batarseh, Usher, and Daspit (2017)	42	Multiple nationalities		Deep-level diversity in values, beliefs, and attitudes (r = −.03)	Team innovation				Non-collocated	High	High	High
Bogilović, Černe, and Škerlavaj (2017)	22	Multiple nationalities	National diversity (r = −.01)		Team creativity	1.00		.77	Collocated	High	High	Low
Cady and Valentine (1999)	50	Multiple ethnicities	Racial diversity (r = .26)		Team idea generation	1.00			Collocated	Low	High	Low
Cheng, Chua, Morris, and Lee (2012)	67	Multiple nationalities		Cultural value orientation variance (r = −.12)	Performance in visual component of advertisement				Collocated	High	High	Low
Curşeu (2010)	60	Multiple nationalities	National diversity (r = .31)	Disparity in need for cognition (r = .18)	Creativity of the web pages	1.00		.96	Collocated	High	High	Low
Giambatista and Bhappu (2010), Study 1	50	Multiple ethnicities	Ethnic diversity (r = .04)	Perceived ethnic diversity (r = .00)	Team creativity	1.00			Non-collocated	Low	High	Low
Giambatista and Bhappu (2010), Study 2	79	Multiple ethnicities	Ethnic diversity (r = −.13)	Personality diversity (r = .05)	Team creativity	1.00			Non-collocated	High	High	Low
Gibson and Gibbs (2006), Study 1	14	Multiple nationalities	National diversity (r = −.66)		Team innovation	1.00		.78	Non-collocated	High	High	Mix
Gibson and Gibbs (2006), Study 2	56	Multiple nationalities	National diversity (r = −.49)		Team innovation	1.00		.29	Non-collocated	High	High	High
Han, Han, and Brass (2014)	36	Multiple nationalities	National diversity (r = −.14)	Difference in teamwork mental models (r = −.03)	Team creativity	1.00			Collocated	High	High	Low
Heller (1997)	68	Multiple ethnicities/ nationalities	Racial/national diversity (r = −.14)		Team idea generation	1.00		1.00	Collocated	Low	Low	Low
Herron (1993)	93	Multiple ethnicities	Ethnic diversity (r = −.22)		Team innovation	1.00			Collocated	High	High	Mix
Hoever (2012)	95	Multiple nationalities	National diversity (r = −.07)		Team creativity	1.00		.74	Collocated	High	High	Low
Hoever, van Knippenberg, van Ginkel, and	49	Multiple nationalities	National diversity (r = .07)		Team creativity	1.00		.89	Collocated	High	High	Low

Barkema (2012)												
Homan, Buengeler, Eckhoff, van Ginkel, and Voelpel (2015)	48	Multiple nationalities	National diversity (r = .07)	Standard deviation of diversity beliefs (r = .29)	Team creativity	1.00			Collocated	High	High	Low
Huang et al. (2017), Study 1	56	Multiple nationalities		Diversity on traditionalism (r = .22)	Team idea generation				Collocated	High	High	High
Huang et al. (2017), Study 2	62	Multiple ethnicities		Diversity on traditionalism (r = .69)	Team idea generation				Collocated	High	High	Low
Jang (2017)	2117	Multiple nationalities	National diversity (r = .14)		Team creative performance	1.00			Non-collocated	High	High	Low
Jehn and Conlon (in press)	56	Multiple ethnicities	Racial diversity (r = .01)		Creative success	1.00		.80	Collocated	High	High	Low
Joshi and Knight (2015)	46	Multiple ethnicities	Ethnic diversity (r = −.03)		Lab performance	1.00		1.00	Collocated	High	High	Low
Jules (2007)	33	Multiple ethnicities	Racial diversity (r = −.23)	Learning style diversity (r = .12)	Idea creation	1.00			Collocated	High	High	Mix
Kearney and Gebert (2009)	62	Multiple nationalities	National diversity (r = .25)		Quality of innovations	1.00			Collocated	High	High	High
Kim (2014)	55	Multiple ethnicities	Racial diversity (r = .10)		Team creativity	1.00		.83	Collocated	Low	High	Low
Kurtzberg (2005)	119	Multiple ethnicities		Cognitive style diversity (r = .20)	Team creativity			1.00	Collocated	High	High	Low
Li et al. (2017)	57	Multiple ethnicities	Ethnic diversity (r = .68)		Team creativity	1.00			Collocated	High	High	High
Lisak et al. (2016)	82	Multiple nationalities		Perception of team cultural diversity (r = .09)	Team innovation				Collocated	High	High	High
Lu, Li, Leung, Savani, and Morris (2018)	48	Multiple nationalities		Perceived intercultural diversity (r = .08)	Team creativity		.72		Collocated	High	High	Mix
Martins and Shalley (2011)	47	Multiple nationalities /ethnicities	National diversity (r = −.38)		Team creativity	1.00			Non-collocated	Low	High	Low
McLeod, Lobel, and Cox (1996)	34	Multiple ethnicities	Ethnic diversity (r = .42)		Team idea generation	1.00			Collocated	Low	High	Low
Mitchell, Boyle, and Nicholas (2011)	98	Multiple ethnicities/ nationalities	Cultural background diversity (r = .23)	Cognitive heterogeneity (r = .27)	Knowledge creation	1.00			Collocated	High	High	Mix
Nancarrow (2001)	32	Multiple ethnicities	Ethnic diversity (r = −.37)		Team creativity	1.00			Collocated	High	High	High
Nouri et al. (2013)	96	Multiple nationalities	Cultural diversity (r = −.32)		Task creativity performance	1.00			Non-collocated	Low	Low	Low
O'Reilly, Williams, and	31	Multiple ethnicities	Diversity in race-ethnicity		Team innovation (creativity and	1.00			Collocated	High	High	Mix

Barsade (1998)			(r = .45)		implementation ability)						
Paletz, Peng, Erez, and Maslach (2004)	34	Multiple ethnicities	Ethnic diversity (r = .03)		Team creativity	1.00	.95	Collocated	High	Low	Low
Perry-Smith and Shalley (2014)	82	Multiple nationalities /ethnicities	National diversity (r = .22)		Team creativity	1.00		Collocated	High	High	Low
Pluut and Curşeu (2013)	37	Multiple nationalities	National diversity (r = −.10)	Diverse mindsets (r = .14)	Collaborative creativity	1.00		Collocated	High	High	Low
Ren, Gray, and Harrison (2015)	148	Multiple nationalities /ethnicities	Cultural background diversity (r = −.06)		Research team performance	1.00	.58	Collocated	High	High	Mix
Rodriguez (1998)	11	Multiple nationalities /ethnicities	Racial/ethnic diversity (r = −.28)	Value diversity (r = .52)	Team creativity	1.00		Collocated	High	High	Low
Schilpzand et al. (2011)	31	Multiple nationalities		Standard deviation for openness to experience (r = .54)	Team creativity			Collocated	High	High	Low
Spoelma and Ellis (2017)	94	Multiple ethnicities	Ethnic diversity (r = −.14)		Team creativity	1.00	1.00	Collocated	Low	Low	Low
Stringfellow (1998)	33	Multiple ethnicities		Value diversity (r = −.56)	Team idea generation			Collocated	Low	High	Low
Suwannarat and Mumi (2012)	89	Multiple ethnicities	Racial diversity (r = −.16)		Team creativity	1.00		Collocated	High	High	Low
Tadmor, Satterstrom, Jang, and Polzer (2012)	57	Multiple ethnicities		Multicultural Experience diversity (r = .10)	Team creativity			Collocated	Low	Low	Low
Turkmen (2013)	9	Multiple nationalities /ethnicity	National diversity (r = .04)	Cognitive style diversity (r = −.27)	Team innovation quality	1.00	1.00	Collocated	High	Low	High
Watson, Kumar, and Michaelsen (1993)	36	Multiple ethnicities/ nationalities	Cultural background diversity (r = −.46)		Team idea generation	1.00		Collocated	High	Low	High
Yoerger, Allen, and Crowe (2018)	68	Multiple ethnicities	Racial diversity (r = −.21)		Team creativity	1.00	.88	Collocated	Low	Low	Low

Appendix 3 Correlation between moderators

Moderator	1	2	3	4
1. Team virtuality[a]	—			
2. Task interdependence[b]	−.15	—		
3. Task complexity[c]	.05	**.42**	—	
4. Task intellectiveness[d]	.07	**.33**	−.03	—

Note: Significant correlations ($p < .05$) are in bold. [a] 0 = collocated, 1 = non-collocated; [b] 0 = independent, 1 = interdependent; [c] 0 = simple, 1 = complex; [d] 0 = judgmental, 1 = intellective.

Appendix 4 Meta-analytic results based on original sample sizes and effect sizes (without Winsorization)

Table 1 Surface-level diversity in culturally diverse teams and team creativity/innovation

Moderator	*k*	*N*	*r*	r_c	*SE*	CI_{95} lower	CI_{95} upper	CI_{84} lower	CI_{84} upper	*SD*	CV_{80} lower	CV_{80} upper	I^2
Main effect	37	4204	.06	.06	.04	−.01	.13	.01	.11	.19	−.18	.30	77.31
1. Team virtuality													
Collocated	30	1745	.02	.02	.05	−.07	.11	−.04	.09	.20	−.24	.28	68.21
Non-collocated	7	2459	.08	.09	.07	−.04	.22	−.00	.18	.16	−.12	.30	90.52
2. Task interdependence													
Interdependent	28	3642	.08	.09	.04	.01	.16	.04	.14	.17	−.13	.30	76.90
Independent	9	562	−.09	−.10	.08	−.26	.06	−.21	.01	.20	−.36	.16	72.13
3. Task complexity													
Complex	30	3799	.08	.09	.04	.02	.16	.04	.14	.17	−.12	.31	76.23
Simple	7	405	−.21	−.23	.05	−.33	−.12	−.30	−.15	.00	−.23	−.23	18.35
4. Task intellectiveness													
Intellective	6	252	−.01	−.01	.21	−.42	.41	−.30	.29	.49	−.63	.62	91.04
Judgmental	25	3535	.07	.08	.03	.01	.14	.03	.12	.13	−.09	.24	67.67

Note: *k* = number of samples; *N* = sample size (number of teams); *r* = uncorrected mean correlation; r_c = corrected mean correlation; *SE* = standard error; CI = confidence interval; *SD* = standard deviation; CV = credibility interval; I^2 = percentage of variance due to real heterogeneity. An effect size was significantly different from zero when its CI_{95} did not include zero. In subgroup analysis, effect sizes were significantly different when their CI_{84} did not overlap. Findings based on fewer than three samples should be interpreted with caution.

Table 2 Deep-level diversity in culturally diverse teams and team creativity/innovation

Moderator	*k*	*N*	*r*	r_c	*SE*	CI_{95} lower	CI_{95} upper	CI_{84} lower	CI_{84} upper	*SD*	CV_{80} lower	CV_{80} upper	I^2
Main effect	21	1170	.15	.16	.05	.06	.27	.09	.24	.19	−.08	.41	65.92
1. Team virtuality													
Collocated	18	999	.17	.19	.06	.07	.31	.11	.27	.20	−.07	.45	69.40
Non-collocated	3	171	.02	.02	.02	−.03	.06	−.01	.05	.00	.02	.02	.00
2. Task interdependence													
Interdependent	18	1030	.18	.20	.05	.10	.30	.13	.27	.15	.01	.39	57.17
Independent	3	140	−.09	−.10	.17	−.43	.23	−.34	.13	.24	−.41	.20	79.65
3. Task complexity													
Complex	19	1104	.16	.17	.06	.06	.28	.09	.25	.20	−.08	.42	68.44
Simple	2	66	.05	.05	.10	−.14	.24	−.09	.19	.00	.05	.05	4.19
4. Task intellectiveness													
Intellective	4	189	.08	.09	.07	−.04	.22	.00	.19	.00	.09	.09	.00
Judgmental	14	802	.16	.17	.07	.03	.32	.07	.27	.24	−.13	.47	75.66

Note: *k* = number of samples; *N* = sample size (number of teams); *r* = uncorrected mean correlation; r_c = corrected mean correlation; *SE* = standard error; CI = confidence interval; *SD* = standard deviation; CV = credibility interval; I^2 = percentage of variance due to real heterogeneity. An effect size was significantly different from zero when its CI_{95} did not include zero. In subgroup analysis, effect sizes were significantly different when their CI_{84} did not overlap. Findings based on fewer than three samples should be interpreted with caution.