BJM BRITISH JOURNAL OF MANAGEMENT
British Academy of Management

British Journal of Management, Vol. 27, 628–645 (2016)
DOI: 10.1111/1467-8551.12131

Managing Nationality Diversity: The Interactive Effect of Leaders' Cultural Intelligence and Task Interdependence

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In light of the workforce's increasing nationality diversity, our study explores the antecedents for the successful management of nationality diversity as visualized in a favourable diversity climate and enhanced team performance. We propose a double-contingency model in which we argue that the effects of nationality diversity will be dependent upon task interdependence and leaders' cultural intelligence. We propose that nationality diversity will be more consequential in more interdependent teams, in which team interactions and processes are more salient. Moreover, team leaders with higher cultural intelligence will possess the skills to foster adequate team processes and thereby enhance diversity climate and performance of nationally diverse, more interdependent teams. We collected multi-source data from 63 work teams (N = 410) and their supervisors at a German facility management company. Moderated regression analyses supported the hypothesized three-way interaction between nationality diversity, task interdependence and leaders' cultural intelligence. Additional simple slope analysis showed that nationality diversity is positively related to diversity climate and performance only when both team leaders' cultural intelligence and task interdependence are high. Our study not only provides recommendations for successful nationality diversity management but also yields theoretical implications for diversity and cultural intelligence research.

Continuous globalization and the growing percentage of non-native employees have made workforces across the world increasingly diverse in terms of nationalities (e.g. Arends-Tóth and Van De Vijver, 2003; McKay, Avery and Morris, 2008; Zick *et al.*, 2001). Many organizations try to actively address this changing labour market, as diversity has been shown to be a double-edged sword which can have either positive or negative consequences (Milliken and Martins, 1996). For instance, 80% of the top ranked Global Fortune 500 companies of 2013, representing a broad range of industries and various countries, advertise organizational diversity programmes online. The objectives of these initiatives reflect two different, underlying perspectives (Ely and Thomas, 2001; Van Knippenberg, Homan and Van Ginkel, 2013). First, from a fairness perspective, nationality diversity management strives to create a discrimination-free, fair diversity climate. Second, from a competitiveness perspective, diversity constitutes an asset that enhances performance. Thus, we focus on diversity climate and enhanced performance, representing indicators of successful nationality diversity management.

Research instruments can be obtained from the corresponding author. This research was funded by the cooperating company. The opinions expressed in this article are those of the authors and not those of the company.

Critical debates concerning diversity management practices have evolved in the *British Journal of Management*: Lorbiecki and Jack (2000) warned that diversity management may in fact stabilize status differences between the privileged group and minorities, and Oswick and Noon (2014) found striking similarities between diversity management approaches and superficial management fashions, such that organizations' rhetoric commitments to diversity are not accompanied by adequate practices (Tatli, 2011). Even if diversity initiatives are implemented, their effectiveness varies considerably across empirical studies (Bezrukova, Jehn and Spell, 2012; Paluck, 2006). Thus, scholars have called for a better integration of the organizational context in order to understand the mechanics of successful nationality diversity management (Herdman and McMillan-Capehart, 2010; Homan *et al.*, 2015). Given these critical evaluations of organizational practices, we adopt Rink and Ellemer's (2007) idea that employees can recognize diversity as part of their organizational identity when they experience team diversity as a valuable asset for accomplishing team tasks (see also Ely and Thomas, 2001). They advocate a bottom-up approach to diversity management, which implements diversity-enhancing norms at the team level rather than imposing top-down initiatives. Following this bottom-up approach, we draw from the categorization–elaboration model (Van Knippenberg, De Dreu and Homan, 2004) to identify boundary conditions that enable organizations to shape employees' team-level experiences with nationality diversity and thereby influence diversity climate perceptions and team performance. In particular, we focus on task and leader characteristics, which are likely to influence whether teams suffer or benefit from nationality diversity (Greer *et al.*, 2012; Homan and Greer, 2013; Homan and Jehn, 2010).

First, we argue that task interdependence, which requires close cooperation and functional team processes, provides the basis for diversity to unfold its effects on diversity climate perceptions and team performance (Joshi and Roh, 2009; Kossek, Zonia and Young, 1996; Rink and Ellemers, 2007). However, task interdependence by itself does not necessarily instigate favourable team processes (Somech, Desivilya and Lidogoster, 2009; Timmerman, 2000). As such, we propose that the direction of the effects of nationality diversity under high task interdependence will be contingent upon team leaders' cultural intelligence (Groves and Feyerherm, 2011). Culturally intelligent leaders will possess the necessary attitudes and skills to prevent negative effects due to adverse social categorization processes and to unlock the positive potential of the different perspectives represented in nationally diverse teams (Ely and Thomas, 2001; Milliken and Martins, 1996; Van Knippenberg, De Dreu and Homan, 2004).

By integrating the current insights on diversity effects and cultural intelligence we aim to further develop the current state of the art knowledge on nationality diversity management. We propose that a double-contingency model, which simultaneously takes into account task and leader characteristics, helps to explain the lack of consistent positive effects of nationality management initiatives (Bezrukova, Jehn and Spell, 2012; Herdman and McMillan-Capehart, 2010; Paluck, 2006). In this vein, task interdependence is needed to create a context in which the implications of nationality diversity for team interactions and processes are salient. Moreover, we propose that diversity management benefits from an expertise perspective, i.e. team leaders need to understand the particularities of nationality diversity in order to manage them successfully. In sum, we offer a comprehensive team-level approach to nationality diversity management, and link this approach to team performance as well as the development of a positive team diversity climate. Finally, we provide practical recommendations about when and how nationality diversity needs to be managed.

The categorization–elaboration model of diversity

Diversity refers to differences in a group concerning an attribute on which people can differ from or resemble each other (Van Knippenberg and Schippers, 2007). Nationality is prone to serve as such an attribute (Stahl *et al.*, 2010). Easily observable surface-level characteristics (e.g. names, physical appearance or language accents) as well as deep-level differences in cultural values, including heuristics about appropriate work behaviour (e.g. Hofstede, 1980; House *et al.*, 2002), increase the salience of different nationalities in teams (Van Knippenberg, De Dreu and Homan, 2004).

Research on diversity has reported inconsistent findings, such that meta-analyses were unable to

detect a universal main effect of team diversity (Horwitz and Horwitz, 2007; Joshi and Roh, 2009; Van Dijk, Van Engen and Van Knippenberg, 2012; Webber and Donahue, 2001). However, these findings do not imply that team diversity is irrelevant. Instead, the categorization–elaboration model outlines that diversity can have both positive and negative implications for teams, which are contingent on specific moderators (Van Knippenberg, De Dreu and Homan, 2004). In particular, task characteristics determine *if*, whereas team processes determine *how*, diversity affects team outcomes.

The model emphasizes two crucial team processes, social categorization and elaboration of informational resources, which can result in contrary implications for team outcomes. According to social identity and self-categorization theory, individuals identify with and favour the social group to which they belong (Tajfel and Turner, 1986). Social identification with a salient demographic subgroup bears the risk of displacing favourable identification processes with the work group (Hogg and Terry, 2000) and can result in dysfunctional team processes such as subgroup formation (Homan *et al.*, 2010) and conflict (Jehn, Northcraft and Neale, 1999). Nationality diversity has been shown to elicit these intergroup tensions, which can instigate concerns about whether employees from diverse backgrounds are treated fairly and interfere with performance (Ely and Thomas, 2001; Van Knippenberg, De Dreu and Homan, 2004). Conversely, scholars arguing from a cognitive resource perspective have suggested that diversity coincides with a broader range of different perspectives, which can improve team performance if used effectively (Cox and Blake, 1991; Milliken and Martins, 1996; Webber and Donahue, 2001). Indeed, minority members often contribute novel problem solving approaches (Ely and Thomas, 2001), and ethnically diverse teams are likely to recognize that members possess unique information if they are not distracted from the existence of their different perspectives (Phillips, Northcraft and Neale, 2006). At the same time, these positive experiences with diversity are likely to contribute to a positive climate in which diverse employees feel accepted and treated fairly (Ely and Thomas, 2001; Rink and Ellemers, 2007).

In sum, diversity can have considerable implications for diversity climate and team performance, but it is important to consider the moderating context to understand these effects more precisely. Building upon the categorization–elaboration model, we propose an integrated approach to nationality diversity management which simultaneously takes task interdependence and leaders' cultural intelligence, which can influence the emergent team processes, into account.

The relevance of task interdependence for diversity effects

The categorization–elaboration model emphasizes the role of team processes in understanding the effects of team diversity. An important, related implication is that the relevance of diversity is contingent on the extent to which a task requires functional team processes and close interaction of team members (Joshi and Roh, 2009; Van Knippenberg, De Dreu and Homan, 2004). For instance, diversity has been shown to have pronounced effects in complex tasks in which team members need to successfully integrate their unique contributions to find a solution (Bowers, Pharmer and Salas, 2000; Van Dijk, Van Engen and Van Knippenberg, 2012). Additionally, diversity can have implications for easier tasks as well when individual efforts need to be closely coordinated (Van Der Vegt and Janssen, 2003). Therefore, we propose that task interdependence, which describes the extent to which employees need to collaborate in order to fulfil the group task (Shea and Guzzo, 1987), is an essential precondition for diversity effects to occur.

At first glance, theories on intergroup contact might suggest that close cooperation among employees, instigated by task interdependence, may help to develop a superordinate team identity which overcomes prejudices and motivates employees to pursue a common goal (Gaertner and Dovidio, 2000; Pettigrew, 1998). However, Van Knippenberg and Schippers (2007) concluded in their review article that empirical support for this hypothesis is equivocal. For instance, while Timmerman (2000) as well as Jehn, Northcraft and Neale (1999) found that demographic diversity only affected outcomes under high team interdependence, the former study reported a negative effect whereas the latter study reported a positive effect on team outcomes. As a possible explanation for these contradictory findings, Somech, Desivilya and Lidogoster (2009) argued that task interdependence may generally increase the relevance of both functional *and* dysfunctional team

processes. In this regard, they demonstrated that task interdependence does not automatically result in cooperative team processes including joint elaboration of information, which are crucial to unlock the potential of team diversity (Van Knippenberg, De Dreu and Homan, 2004). Thus, we propose that task interdependence may be required to elicit diversity effects, yet may not determine the direction of these effects for diversity climate and team performance, as we shall elaborate next.

Diversity climate

An integral part of successful nationality diversity management is that employees perceive a discrimination-free diversity climate, i.e. a common understanding among employees that the organizational practices are fair for all employees, irrespective of their demographic characteristics (Gonzalez and Denisi, 2009). Climates generally represent team members' shared perceptions about 'the way things are done around here' (Schneider and Reichers, 1990, p. 22) and reflect how employees jointly interpret their organizational environment. Thus, a high diversity climate means that all team members perceive that diverse employees are treated fairly. Diversity climate seems to be particularly beneficial for minority members, resulting in increased performance (McKay, Avery and Morris, 2008) or decreased absenteeism (Avery *et al.*, 2007). Importantly, diversity climate may also lower turnover intentions of majority group members (Chrobot-Mason and Aramovich, 2013), who respond particularly positively when they feel included by diversity initiatives (Plaut *et al.*, 2011). Beside these individual-level effects, diversity climate has been shown to foster the effectiveness of diverse firms (Gonzalez and Denisi, 2009). Surprisingly, while the benefits of diversity climate are well documented, little is known about its antecedents. Recent research indicates that introducing diversity initiatives alone may not be enough to foster a fair diversity climate (Herdman and McMillan-Capehart, 2010). Drawing from the idea that diversity climates emerge from direct experiences with diversity (Rink and Ellemers, 2007), we propose that task interdependence will allow employees to gather such experiences and thus be an important prerequisite for diversity climate perceptions.

The effect of nationality diversity on diversity climate is complex. While one might assume that high nationality diversity by itself may signal that the work environment is non-discriminatory towards diverse employees, empirical research has demonstrated that simply increasing workplace diversity does not automatically result in a fair diversity climate (Ely and Thomas, 2001; Kossek, Zonia and Young, 1996). Climate research indicates that team members need possibilities for interaction and discussion to arrive at a common interpretation of the prevailing climate (Rentsch, 1990; Roberson, 2006). Similarly, Kossek, Zonia and Young (1996) argued that interaction between employees is necessary to make sense of nationality diversity in the workplace. Teams with lower task interdependence may have fewer opportunities to observe and interpret how employees of different nationalities are treated, which builds the basis for diversity climate perceptions. In contrast, when task interdependence is higher, team members interact more closely with each other. Thereby, they are more often exposed to diversity-related work incidents and have more opportunities to engage in sense-making, such that common perceptions of diversity climate emerge. Interestingly, while close interaction facilitates shared climate perceptions within teams, different teams can interpret the very same workplace event completely differently in terms of fairness (Rentsch, 1990). In support of this reasoning, Ely and Thomas (2001) reported that employees from several interactive work settings interpreted equivocal, diversity-related incidents (e.g. the promotion of a majority employee instead of a minority employee) fundamentally differently in terms of fairness. Their study illustrates that although interdependent cooperation may be necessary to develop a common perception of a diversity climate, it is not enough in itself to determine whether this climate will be perceived favourably.

Team performance

Task interdependence can also moderate whether diversity has an impact on team performance. Following Steiner's (1972) taxonomy, lower task interdependence characterizes additive tasks. Thus, team performance depends mostly on each member's individual performance and is less dependent on functional team processes. As the effect of diversity is greatly determined by the emergent, (un)favourable team processes (Joshi and Roh, 2009; Van Knippenberg, De Dreu and

Homan, 2004), nationality diversity will be less consequential when task interdependence is lower. In contrast, higher task interdependence is typical for conjunctive tasks, which require team members to coordinate their efforts to achieve their goals. In this case, team performance is more sensitive to process losses or gains associated with diversity (Horwitz and Horwitz, 2007).

The reasoning above illustrates that task interdependence is likely to be a prerequisite to elicit diversity effects (Rink and Ellemers, 2007; Van Der Vegt and Janssen, 2003). However, the direction of diversity effects is still equivocal (Van Knippenberg and Schippers, 2007). In order to determine in what way diversity will affect interdependently working teams, it is important to take into account other factors that may influence diversity-related team processes (Van Knippenberg, De Dreu and Homan, 2004).

As leaders facilitate team functioning (Zaccaro, Rittman and Marks, 2001), they may shape whether diversity affects teams in negative or positive ways (Van Knippenberg, Van Ginkel and Homan, 2013). For instance, visionary leaders who tend to categorize team members in subgroups hinder communication within diverse teams (Greer *et al.*, 2012), whereas adequate leadership can prevent that diversity impairs team identification (Kearney and Gebert, 2009). As cultural intelligence enables leaders to deal with the particularities of nationality diversity for team processes, we propose that leaders' cultural intelligence can act as an important moderator of nationality diversity effects in more interdependent teams.

The implications of leaders' cultural intelligence for diversity climate and team performance in more interdependent, nationally diverse teams

We propose that leaders benefit from cultural expertise in order to facilitate favourable team processes in nationally diverse, more interdependent teams. Cultural intelligence comprises intrinsic motivation and self-efficacy beliefs regarding intercultural situations (motivational component), effective behavioural adaptation (behavioural component), as well as knowledge of and reflection upon cultural differences (cognitive and metacognitive components), which enable an individual to act competently in cross-cultural situations (Ang and Van Dyne, 2008). Most research on cultural intelligence has focused on expatriates' effectiveness (Ang and Van Dyne, 2008; Earley and Ang, 2003), proposing that those with higher (compared with lower) cultural intelligence will be more effective when working in different cultures. Interestingly, however, surprisingly few studies explored its interactive relationship with team nationality diversity. This is striking, because leaders' cultural intelligence is likely to shape the team's response to diversity.

Of those exceptions, Adair, Hideg and Spence (2013) reported a positive relationship between team members' cultural intelligence and shared team values for culturally diverse, but not homogeneous, teams. Additionally, Groves and Feyerherm (2011) found that team leaders' cultural intelligence was positively associated with team members' ratings of team competence and leader effectiveness when cultural diversity was high. In order to advance this pioneering work, we provide a theoretical extension based on the categorization–elaboration model of diversity. In this regard, we propose that cultural intelligence of the leader can indeed be useful to obtain the benefits of diversity, but only when diversity is likely to be consequential for the team's outcomes, i.e. under high task interdependence. Next, we shall link the implication of leaders' cultural intelligence to diversity-sensitive team processes in order to derive hypotheses about the effects of nationality diversity on diversity climate and team performance in more interdependent teams.

Diversity climate

Leaders' behaviours towards diversity can shape diversity climate perceptions within nationally diverse teams (Herdman and McMillan-Capehart, 2010; Van Knippenberg, Van Ginkel and Homan, 2013). Culturally intelligent leaders enjoy interacting with people from different cultures (Ang *et al.*, 2007; Earley and Ang, 2003) and are aware of cultural differences, which they take into consideration when making judgements about persons and situations (Ang *et al.*, 2007; Triandis, 2006). Given this favourable combination of positive attitudes and skills, employees of different nationalities may indeed feel treated fairly. Conversely, leaders with low cultural intelligence may have less elaborate

diversity cognitions. Therefore, they are more prone to rely on nationality as a cue to categorize their team members (Homan *et al.*, 2010) and to lead their team in terms of objective subgroups rather than as unique individuals (Greer *et al.*, 2012). Thus, they run the risk of engendering feelings of unfair treatment in nationally diverse, more interdependent teams.

Furthermore, team leaders shape the relationship between nationality diversity and climate perceptions in more interdependent teams by helping employees interpret organizational practices (Ostroff, Kinicki and Tamkins, 2003). Making sense of diversity-related workplace incidents may be especially necessary, as they easily create equivocal situations (Ely and Thomas, 2001). Minority members tend to distrust diversity initiatives if they doubt whether these practices actually improve their situation or serve to legitimize the status quo (Lorbiecki and Jack, 2000; Purdie-Vaughns *et al.*, 2008), while majority members easily feel excluded by diversity programmes (Plaut *et al.*, 2011). Due to their strong intercultural communication skills (Imai and Gelfand, 2010), culturally intelligent leaders may address these concerns in a way that is comprehensible to employees of all nationalities resulting in a favourable diversity climate, which is perceived to be fair by all employees. In contrast, team leaders with low cultural intelligence may lack the skills to defuse ambiguous situations, which engender feelings of unfair treatment. Thus, nationality diversity can result in a favourable diversity climate in highly task interdependent teams provided that the leader has higher cultural intelligence. When the leader's cultural intelligence is low, however, diversity in an interdependent team is likely to result in a more unfavourable diversity climate. This reasoning results in our first hypothesis.

> *H1*: In more interdependent teams, nationality diversity will be positively related to team perceptions of diversity climate when leaders' cultural intelligence is high but negatively related to team perceptions of diversity climate when leaders' cultural intelligence is low.

Team performance

In order to engender performance gains from nationality diversity, team leaders need to facilitate favourable team processes that integrate the varying perspectives in diverse teams (Van Knippenberg, De Dreu and Homan, 2004). Indeed, leaders' personal work attitudes determine the emergence of cooperative team norms, especially when team members do not initially expect smooth cooperation with their colleagues (Taggar and Ellis, 2007), which is usually the case in diverse teams (Chatman and Flynn, 2001). As culturally intelligent leaders are not only open-minded towards different cultures but also endorse cooperative norms (Imai and Gelfand, 2010), they are likely to shape norms that appreciate and consider different perspectives in nationally diverse teams and thereby increase team performance (Homan *et al.*, 2007). On the other hand, leaders with low cultural intelligence have more difficulties to understand and judge cross-cultural interactions appropriately (Ang *et al.*, 2007). Thus, they may be less skilled to identify and overcome cultural obstacles that hinder effective cooperation and, consequently, team performance of nationally diverse, more interdependent teams.

Besides shaping team norms, cultural intelligence enables leaders to elicit and integrate non-shared information in cross-cultural settings (Imai and Gelfand, 2010). In contrast, team leaders with low cultural intelligence are less likely to share ideas with culturally different others (Chua, Morris and Mor, 2012). Therefore they may not be inclined to foster information exchange between nationally diverse team members. As the elaboration of information is supposed to account for performance gains in diverse as opposed to homogeneous teams (Van Knippenberg, De Dreu and Homan, 2004), culturally intelligent leaders may know how to effectively unlock the potential of diversity, whereas those with low cultural intelligence may overlook that diversity can be an asset, rather than a liability, for team performance. We thus propose the following hypothesis.

> *H2*: In more interdependent teams, nationality diversity will be positively related to team performance when leaders' cultural intelligence is high but negatively related to team performance when leaders' cultural intelligence is low.

Method

Participants and procedure

We collected data in a German, nationally diverse facility management company (23% non-German

employees from 78 different nations), which provided an excellent setting to test our research hypotheses. The company offers a variety of specialized services ranging from building and public facility cleaning to public vehicle cleaning and technical building maintenance. The work teams were either functional (e.g. providing specialized services such as graffiti removal or fire protection) or object-based (e.g. maintaining specific real estate objects), resulting in varying levels of task interdependence across and within these divisions.

Data collection was embedded in a broader organizational employee survey. The researchers provided written announcements, which informed participants upfront about the purpose of the study, data protection issues, the date of the data collection appointment, and the support of the top management and work council for the study. Two German researchers collected data in separate meetings for team members and their leaders, which took place during working hours. At the beginning of each appointment, the researchers gave a standardized introduction about the purpose of the study, guaranteed anonymity and voluntariness of participation, and described the coding system used for matching the data, which had been approved by the work council and an independent data protection institute prior to data collection. In nationally diverse teams, bi-lingual local members of the work council joined the introduction to assist with (predominantly Turkish) translations upon inquiry. After the introduction, participants could choose between a German, Turkish or English questionnaire. To generate parallel language versions (Brislin, 1970), a team of four native or proficient bi-lingual speakers had translated each version from all other language versions (English to German; German to English; German to Turkish; Turkish to English). About six months later, we obtained team performance ratings from the team leaders' supervisors.

Seventy per cent of the invited employees participated in the survey, and so we received 488 questionnaires from members of 75 teams. We predefined criteria to identify participants who provided low quality data. First, participants who were not seriously interested in contributing probably stopped completing the questionnaire at an early point. Thus, we excluded questionnaires that yielded more than 70% missing answers. Second, some participants may have quickly checked random response options regardless of the item content. Therefore, we analysed the pattern of chosen response categories and excluded 17 participants who had chosen the same category (e.g. 5, 'strongly agree') across a whole page that contained multiple constructs and reversed coded items. Moreover, we excluded teams with less than three team members and with a response rate of less than 50%, because the reliable measurement of group-level constructs is especially important when team sizes are rather small. In this respect, Dawson (2003) pointed out that the sampling ratio (SR) based on the number of respondents per team size serves as an indicator for the reliability of aggregated group-level constructs. While Dawson (2003) did not recommend a concrete cutoff value, he recommended including teams with relatively lower SR. Speaking to the appropriateness of our chosen inclusion criteria, the SR of the included teams (mean SR $= 0.05$) was lower than that of the excluded teams (mean SR $= 0.13$). Finally, teams with missing values on any of our main study variables were excluded.

We ultimately obtained a final sample of 410 employees from 63 teams, representing 59% of the invited employees. Team members were predominantly male (85%), with a mean age of 45 years (SD $= 11.22$), had worked for the company for 20.99 years (SD $= 7.01$), and 22% indicated non-German nationalities, representing various countries in Europe (e.g. Turkey, Poland), Asia (e.g. Vietnam, India), Africa (e.g. Ghana, Senegal) and the Arab world (e.g. Iraq, Morocco).[1] Whereas 28 teams were nationally homogeneous (all German), 35 teams included on average 2.89 different nationalities (SD $=$ 0.99). Most team members completed a German version of the questionnaire (N $= 357$), whereas 51 employees chose the Turkish version and two employees the English version. Team leaders were mostly male (81%), German (68%), on average 45 years old (SD $= 9.41$), and had worked in their current position for 8.25 years (SD $= 7.03$). Seven team leaders preferred the Turkish questionnaire to the German version (N $= 56$). Thirty per cent of the teams belonged to the technical division, 29% to the building cleaning division and 41% to

[1]The demographics of team members in our sample were comparable to the overall workforce (82.3% male; mean age 44.77, SD $= 11.62$; mean tenure 20.66, SD $= 6.91$; 23% non-German) and to members of excluded teams (79% male; mean age 44.21, SD $= 11.75$; mean tenure 20.45, SD $= 4.92$; 23% non-German).

the vehicle cleaning division. The average team size was 9.11 (SD = 5.97, range 4–16 members).

Measures

The response scale of all the items ranged from 1 ('strongly disagree') to 5 ('strongly agree'). We aggregated individual employee responses, such that group means represented team-level constructs.

Nationality diversity. As we theoretically defined diversity as variety, we calculated the index of the quality variation (IQV) of each team, which considers the number and percentage distribution of different nationalities. The IQV is a standardized Blau index adjusted for the theoretical maximum of nationality diversity, which depends on team size (Harrison and Klein, 2007). The IQV can assume values between 0 (no diversity) and 1 (each team member has a different nationality), and we observed values ranging from 0 to 0.87 in our sample (M = 0.27, SD = 0.30). As the human resource department provided archival data, we obtained an objective measure of nationality diversity, even for teams in which not all team members participated in the survey.

Task interdependence. Team members rated two items adapted from Langfred (2007), namely 'Team colleagues have to work together in order to get team tasks done' and 'Whether I can do my job depends on whether others do their job'. However, participants frequently indicated that the latter item was difficult to understand and the correlation between both items was low ($r = 0.32$, $p < 0.001$; corresponds to Cronbach's $\alpha = 0.46$). Therefore we decided to use only the first item. Considered together, intraclass correlation coefficient (1) [ICC(1)] = 0.11, ICC(2) = 0.45 and median $r_{wg} = 0.75$ provided sufficient reason for aggregation and were comparable to previous research findings on task interdependence (e.g. Somech, Desivilya and Lidogoster, 2009). Moreover, significantly higher between-team than within-team variability, $F(62, 342) = 1.81$, $p < 0.001$, supported our conceptualization as a team-level construct.

Cultural intelligence. Team leaders completed 11 items from the Cultural Intelligence Scale (Ang *et al.*, 2007). Sample items are 'I consciously apply my cultural knowledge when interacting with people with different cultural backgrounds' and 'I enjoy interacting with people from different cultures'. Cronbach's α was 0.87.

Diversity climate. Team members answered five items describing a fair diversity climate (Mor Barak, Cherin and Berkman, 1998), such as 'Managers here are known for hiring and promoting employees regardless of their skin colour, sex, religion or age' and 'Managers here give feedback and evaluate employees fairly, regardless of the employee's cultural background, sex, religion or age'. After excluding one item that diminished the reliability ('I feel I have been treated differently here because of my skin colour, sex, religion or age', reversed coded), we obtained a Cronbach's $\alpha = 0.79$. Agreement indices generally provided support for aggregation [ICC(1) = 0.34, ICC(2) = 0.76, median $r_{wg(J)} = 0.67$] and were similar to previous research on diversity climate (e.g. Gonzalez and Denisi, 2009). Although $r_{wg(J)}$ was slightly below the usually reported value of 0.70, indicating some within-team variation, we proceeded with the aggregation because ratings of diversity climate varied to a greater extent between than within teams, $F(62, 332) = 4.25$, $p < 0.001$.

Team performance. The team leaders' supervisors were instructed to compare the team to other teams performing a similar task (Van Der Vegt and Bunderson, 2005) and to evaluate it with two items – overall performance and work quality – on a scale from 1 ('far below average') to 5 ('far above average'). The item correlation was $r = 0.66$, $p < 0.001$.

Control variables. With regard to the team leader, hierarchical position, experience operationalized as position tenure, interaction frequency with the team, and ethnicity might influence team performance and diversity climate. Further, we considered division and team size as team characteristics that might impact the outcome variables. Moreover, as team members' educational background may affect performance, we included the percentage of team members who held a university entrance or higher degree. We also controlled for the percentage of Germans (as opposed to non-Germans) because research has shown that majority and minority group members perceive diversity climate differently (Mor Barak, Cherin and Berkman, 1998). Finally, as we were specifically interested in nationality diversity, we controlled for other types of diversity, such as age (operationalized as within-team standard

deviation) and gender (operationalized as the Blau index).

Results

Preliminary analysis

We were able to probe measurement equivalence of the German and non-German versions of our diversity climate measure because it was the only measure that consisted of multiple items, and both language subgroups were big enough to conduct a multiple group confirmatory factor analysis (Byrne, 2012). In this procedure, separate models for each language subgroup are estimated simultaneously. Factor loadings and item intercepts are then constrained equal across groups. Strong measurement invariance is established if these constraints do not significantly impair the overall model fit. The non-significant χ^2 difference test, $\Delta\chi^2(6) = 6.54$, p = 0.37, indicated that the German and the non-German diversity climate items measure the same construct and supported the validity of our translation-back translation procedure.

Next, we explored the relationship of the proposed control variables with the outcomes to avoid that impotent controls unnecessarily impair statistical power (Becker, 2005). For this purpose, we regressed our two dependent variables on the proposed controls (Kraimer *et al.*, 2011) and identified three significant control variables, which we retained in our subsequent analyses. Team performance was rated less favourably for the vehicle cleaning division (β = –0.64, p = 0.02) and for teams with experienced leaders (β = –0.35, p = 0.01), whereas diversity climate was perceived more favourably by age diverse teams (β = 0.44, p = 0.004). Table 1 shows the descriptive statistics and correlations of all variables included in the main analysis.

Main analysis

We used stepwise regression analyses to test our hypotheses (Table 2). With regard to Hypothesis 1, the three-way interaction between nationality diversity, task interdependence and cultural intelligence was significantly associated with diversity climate (b = 2.20, SE = 1.04, p = 0.04). To further explore the nature of the interaction, we created plots for lower and higher values of the moderating variables (Figure 1) and conducted simple slope tests (Aiken and West, 1991). As theorized, nationality diversity was not significantly related to diversity climate when task interdependence was lower, irrespective of leaders' cultural intelligence (b = –0.19, SE = 0.61, p = 0.76 for low cultural intelligence, and b = –0.64, SE = 0.66, p = 0.34 for high cultural intelligence). In contrast, in more highly interdependent teams, nationality diversity was positively related to diversity climate when leaders' cultural intelligence was high (b = 1.83, SE = 0.72, p = 0.01) yet unrelated to diversity climate when leaders' cultural intelligence was low (b = –0.73, SE = 0.86, p = 0.40), providing partial support for Hypothesis 1.

As predicted in Hypothesis 2, we found a significant three-way interaction associated with team performance (b = 1.88, SE = 0.81, p = 0.02; see Figure 2). When task interdependence was lower, nationality diversity was not significantly related

Table 1. Means, standard deviations and zero-order correlations

	Mean (SD)	1	2	3	4	5	6	7	8	9
1. Leaders' position tenure	99.03 (84.35)									
2. Team age diversity	8.68 (3.32)	−0.15								
3. Division vehicle[a]	0.41 (0.50)	0.07	−0.40**							
4. Division building[a]	0.29 (0.46)	−0.11	−0.04	−0.53**						
5. Nationality diversity	0.27 (0.30)	0.20	−0.24	0.32*	0.14					
6. Task interdependence	4.35 (0.52)	0.02	−0.07	0.16	−0.17	−0.00				
7. Leaders' cultural intelligence	3.73 (0.66)	−0.00	0.05	0.15	−0.11	0.34**	0.05	(0.87)		
8. Team performance[b]	3.23 (0.63)	−0.36**	0.15	−0.23	0.13	−0.10	−0.12	−0.27*	(0.66)	
9. Diversity climate	3.43 (0.81)	−0.21	0.47**	−0.28*	0.09	−0.11	0.16	0.05	0.24	(0.79)

Notes: n = 63; Cronbach's α is indicated in parentheses on the diagonal. Leaders' position tenure is reported in months.
[a] Coded 0 = team does not belong to this division, 1 = team belongs to this division.
[b] Two-item measure; correlation instead of Cronbach's α is reported.
*p < 0.05, **p < 0.01, two-tailed.

Table 2. Stepwise regression analyses for diversity climate and team performance

	Diversity climate		Team performance	
	b	SE	b	SE
Step 1				
Position tenure	−0.001	0.001	−0.002**	0.001
Division vehicle[a]	−0.16	0.27	−0.33	0.21
Division building[a]	0.07	0.27	−0.24	0.21
Age diversity	0.10**	0.03	0.00	0.03
F	4.93**		3.07*	
R^2	0.25		0.18	
Step 2				
Nationality diversity[b]	0.07	0.40	0.38	0.31
Task interdependence[b]	−0.04	0.23	−0.42*	0.18
Cultural intelligence[b]	0.02	0.15	−0.32**	0.11
F	3.39**		2.81*	
R^2	0.30		0.26	
ΔR^2	0.05		0.09	
Step 3				
Nationality diversity × task interdependence	0.94	0.69	0.67	0.54
Nationality diversity × cultural intelligence	0.80	0.48	0.83*	0.37
Task interdependence × cultural intelligence	−0.51	0.37	−0.25	0.28
F	2.92**		2.88**	
R^2	0.36		0.36	
ΔR^2	0.06		0.09	
Step 4				
Nationality diversity × task interdependence × cultural intelligence	2.20*	1.04	1.88*	0.81
F	3.24**		3.34**	
R^2	0.41		0.42	
ΔR^2	0.05*		0.06*	

Notes: n = 63. Unstandardized parameter coefficients are reported (Aiken and West, 1991).
[a] Dummy coded; technical division used as the reference group.
[b] Variables were mean centred for the analysis and the computation of the interaction terms (Aiken and West, 1991).
*p < 0.05, **p < 0.01, two-tailed.

to team performance, regardless of leaders' cultural intelligence (b = 0.13, SE = 0.47, p = 0.78 for low cultural intelligence, and b = –0.05, SE = 0.51, p = 0.92 for high cultural intelligence). However, a different result pattern emerged for more interdependent teams: nationality diversity was positively related to team performance when leaders' cultural intelligence was high (b = 1.92, SE = 0.56, p = 0.001), but it was unrelated to team performance when leaders' cultural intelligence was low (b = –0.49, SE = 0.66, p = 0.49), partially supporting Hypothesis 2.[2]

Supplementary analysis

As our theoretical reasoning specifically pertains to nationality diversity, we did not expect to replicate the results for other types of diversity. Indeed, the hypothesized three-way interaction occurred neither for age nor gender diversity in predicting team performance (b = –0.07, SE = 0.109, p = 0.41, and b = 0.96, SE = 1.22, p = 0.44 respectively) and diversity climate (b = 0.07, SE = 0.11, p = 0.50, and b = 0.92, SE = 1.54, p = 0.56 respectively). Thus, whereas cultural intelligence is beneficial for interdependent, nationally diverse teams, it does not seem to be a universal diversity competence which generalizes to other diversity types.

Discussion

We proposed that successful management of nationality diversity in terms of a fair,

[2]We would like to thank an anonymous reviewer for suggesting that power might be increased by including teams with a respondent rate below 50%. We reran the analyses with these teams but the pattern of results did not change.

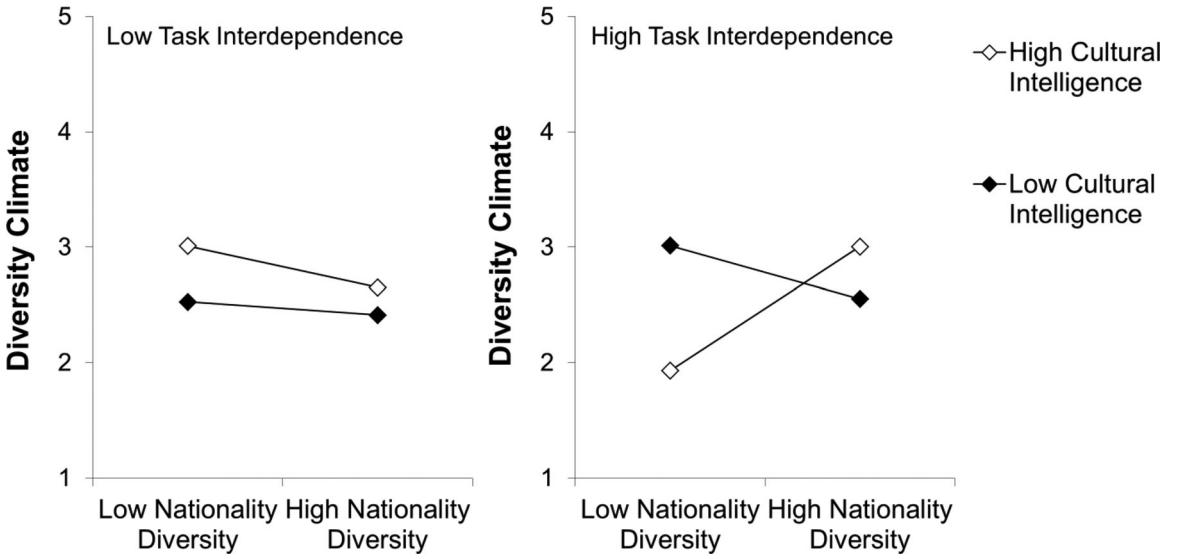

Figure 1. Effects of nationality diversity, task interdependence and leaders' cultural intelligence on diversity climate. High/low values correspond to one standard deviation above/below the mean.

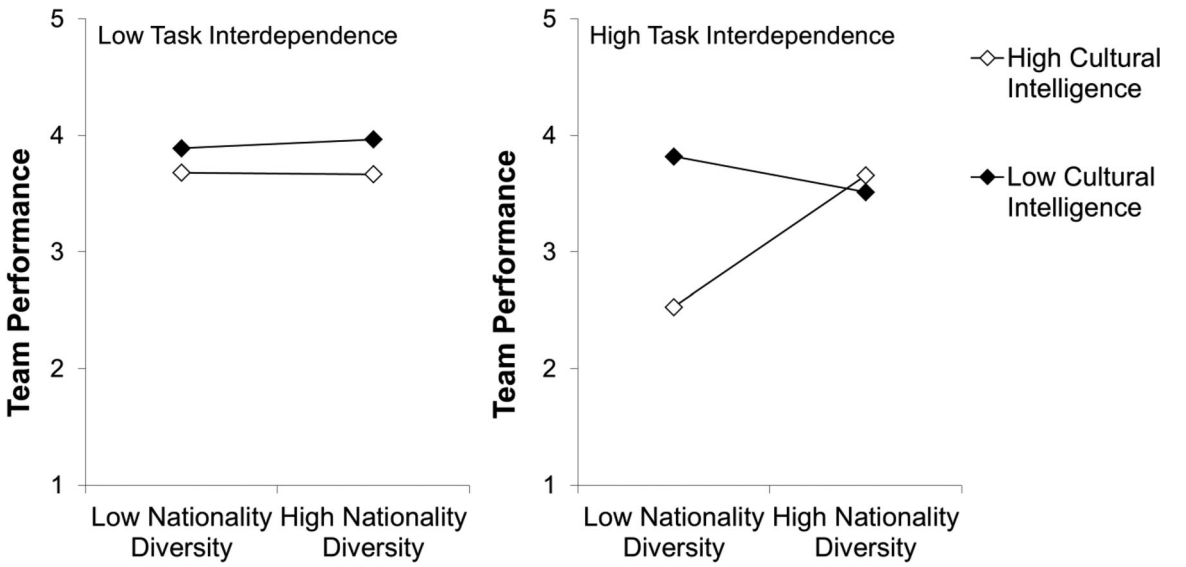

Figure 2. Effects of nationality diversity, task interdependence and leaders' cultural intelligence on team performance. High/low values correspond to one standard deviation above/below the mean.

discrimination-free diversity climate and enhanced team performance is contingent on the interplay of task interdependence and leaders' cultural intelligence. Most of our predictions were supported. When interdependence was lower, diversity was unrelated to diversity climate and team performance, irrespective of leaders' cultural intelligence. However, in more interdependent teams, diversity was positively related to diversity climate and team performance when leaders' cultural intelligence was high. Yet, contrary to our hypotheses, we did not find significant effects of nationality diversity in more interdependent teams when leaders' cultural intelligence was low. Although the direction of the effects was negative as expected, it failed to reach significance due to the large standard errors indicating substantial variability. Thus, other moderators may compensate for the potential detrimental effect of leaders' low cultural intelligence. For instance, team

members may have favourable attitudes towards diversity, even if their leader does not, and may thus initiate team processes that enhance diversity climate and team performance (e.g. Homan *et al.*, 2007).

Theoretical implications and future directions

Previous research on diversity management initiatives has reported inconclusive results. For instance, Bezrukova, Jehn and Spell (2012) and Paluck (2006) have concluded that diversity training effectiveness can vary considerably, and Herdman and McMillan-Capehart (2010) found that top-down diversity programmes do not always lead to favourable diversity climates. These inconsistent findings call for an integrative framework, which identifies crucial boundary conditions for effective nationality diversity management. In this regard, we propose a double-contingency approach to nationality diversity management, taking both task interdependence and leaders' cultural intelligence into account, which jointly affect employees' immediate experiences with nationality diversity at the team level (cf. Rink and Ellemers, 2007). For this purpose, we integrate previously disconnected research on diversity and cultural intelligence. Thereby, we make unique contributions to each field and advance our understanding of the effects of nationality diversity in teams.

Categorization–elaboration model of diversity. Our research helps us to gain a more detailed understanding about the contingencies of diversity effects in teams. In particular, we illustrate a double contingency of diversity effects, rather than examining one moderator of diversity. In this regard, we clarify the role of task interdependence in setting the stage for diversity effects. Although previous work has illustrated that task interdependence moderates the effects of diversity in teams (Jehn, Northcraft and Neale, 1999; Joshi and Roh, 2009; Timmerman, 2000), this work shows inconsistent findings. We demonstrate that task interdependence seems merely to determine the consequentiality of diversity rather than the specific direction of diversity effects.

Leaders' cultural intelligence, in turn, helps to promote the positive effects of nationality diversity for developing a favourable diversity climate and boosting team performance. Our research seems to indicate that diverse, more interdependent teams benefit from a leader with a certain level of expertise about the relevant diversity type at hand. In this regard, our study demonstrates that culturally intelligent leaders could overcome challenges and unlock the potential of nationality diversity but not of age or gender diversity. Future research could identify further moderators that are specific to age or gender diversity. Drawing analogies from cultural intelligence, competences for other diversity types should include knowledge about what distinguishes persons who differ on the diversity type in question and the skills to effectively interact and communicate with them. For instance, while older employees benefit from their broader experience, younger employees have an advantage concerning new technologies (Kanfer and Ackerman, 2004). Leaders with close mentoring relationships with younger or older partners may be more aware of these differences and more skilled at addressing and integrating them. Likewise, leaders who grew up with different-sex siblings may have developed a gender diversity competence, which helps them to consider and effectively deal with men's and women's differing preferences to cooperate in different situations (Balliet *et al.*, 2011). In sum, matching the moderators and the diversity type may resolve inconsistencies and lead to more rigorous predictions about diversity effects.

Cultural intelligence research. Our research highlights the advantages of cultural intelligence not only for expatriates (Ang *et al.*, 2007; Earley and Ang, 2003) but also for leaders of interdependent, nationally diverse teams. We expand previous findings on team-member-rated leader effectiveness and work group competence (Groves and Feyerherm, 2011) to successful nationality diversity management. Moreover, the integration with diversity research sheds light on limitations of cultural intelligence. In this regard, we take the pioneering work on cultural intelligence in team settings (Adair, Hideg and Spence, 2013; Groves and Feyerherm, 2011) a step further by identifying task interdependence as an important boundary condition.

Moreover, Earley and Ang (2003) suggested that cultural intelligence might be a general diversity competence. Yet, in our study, the favourable impact of leaders' cultural intelligence on nationally diverse, more interdependent teams did not seem to generalize to gender or age diversity. While consideration of culture is the unique characteristic

of cultural intelligence that creates added value in intercultural settings beyond general constructs, such as emotional intelligence (Ang *et al.*, 2007) or leadership competences (Groves and Feyerherm, 2011), it does not seem to enable team leaders to capitalize on other types of demographic diversity.

As another caveat, we note that team performance seemed to be lowest for leaders with high cultural intelligence in nationally homogeneous teams. This unexpected finding mirrors the results by Adair, Hideg and Spence (2013), who reported that cultural intelligence hinders the development of shared values in homogeneous teams. In a similar vein, Homan and colleagues (2015) found that training team members' competences in dealing with nationality diversity resulted in deteriorated team performance in teams that were nationally homogeneous, especially in teams that had a higher need for such a nationality diversity training programme. Possibly, diversity training or a culturally intelligent leader who endorses diversity induce a productivity-oriented diversity belief that diverse groups have a performance advantage compared to homogeneous groups (Nakui, Paulus and Van der Zee, 2011). Homogeneous teams may thus doubt whether they are able to perform well. As a consequence of a self-fulfilling prophecy, team performance may suffer in homogeneous teams with such productivity-oriented diversity beliefs, as the lack of diversity makes such teams unable to apply such beliefs (Homan *et al.*, 2015). Taken together, these observations may challenge the implicit assumption that cultural intelligence is a uniformly positive or – in the worst case – neutral characteristic (Earley and Ang, 2003). Future research could explore the potential negative effects resulting from a mismatch of high cultural intelligence in nationally homogeneous settings in greater depth.

Nationality diversity management. While a substantial body of research praises the positive consequences of a favourable diversity climate (cf. Van Knippenberg, Homan and Van Ginkel, 2013), little is known about how to create it. Herdman and McMillan-Capehart (2010) found that management attitudes moderate the effectiveness of top-down diversity programmes, and Rink and Ellemers' (2007) theoretical model proposes that the direct favourable or unfavourable experiences with diversity affect emergent diversity climates. We provide an empirical test of a team-level approach to nationality diversity management, which links how team leaders' cultural intelligence and task interdependence shape employees' experiences with nationality diversity and reveals the complex interplay between these variables. Favourable diversity climate emerges from the alignment between the communicated organizational intentions and what employees observe at their workplace (Ostroff, Kinicki and Tamkins, 2003). In more interdependent teams, team members have many occasions to interact with nationally diverse colleagues and to witness how they are treated. Culturally intelligent leaders can facilitate successful cooperation and defuse ambiguous, diversity-related incidents comprehensively, such that all employees feel treated fairly. When combined with high nationality diversity, employees perceive consistent diversity cues which result in favourable diversity climate perceptions (Purdie-Vaughns *et al.*, 2008). It is noteworthy that diversity climate is independent of leaders' cultural intelligence when task interdependence is low. Thus, the lack of interaction seems to prevent leaders from influencing diversity climate perceptions by acting as role model or by managing team processes.

The interplay of boundary conditions that shape diversity climate inspires some interesting future research questions. First, diversity management is often seen as a top-down process in which the organization launches initiatives aimed to enhance diversity (Herdman and McMillan-Capehart, 2010). Future research could also investigate bottom-up processes in greater depth. For instance, culturally intelligent team leaders at lower organizational levels may change diversity climates even in organizations that do not particularly care about diversity (Rink and Ellemers, 2007). Second, future research could examine what drives diversity climate perceptions of employees in less interdependent teams, as team leaders seem to be less influential in this situation. Are individual team members' own attitudes towards diversity more important, or do organizational climates shape team diversity climates?

Practical implications

Organizations can encounter the shortcomings of diversity management that focuses exclusively on organizational practices, such as special programmes targeting minorities (Oswick and Noon, 2014; Tatli, 2011), by facilitating that employees directly experience the positive sides of diversity

within their work teams. Although there is no simple one-fits-all solution at the team level, our results suggest some interesting avenues for the management of nationality diversity. First, when task interdependence is higher, team leaders are crucial for successful nationality diversity management in nationally diverse teams. Thus, organizations may invest in cultural intelligence training programmes to enhance leaders' intercultural capabilities. Yet, we caution against precipitate training or personnel selection based on cultural intelligence if the respective leaders do not have to manage nationally diverse teams because team performance may suffer from a mismatch of high cultural intelligence in homogeneous teams. Organizations thus need to carefully synchronize the enhancement of nationality diversity and leaders' cultural intelligence.

In contrast, when interdependence is lower, leaders may have limited impact on diversity climate perceptions and team performance. Nevertheless, due to the workforce's increasing nationality diversity and the important implications for individual and firm performance (Gonzalez and Denisi, 2009; McKay, Avery and Morris, 2008), organizations cannot evade nationality diversity management but need to adopt alternative diversity-enhancing strategies.

Moreover, we recommend monitoring which type of demographic diversity is relevant for the organization at hand. Whereas cultural intelligence might be especially valuable to manage nationality diversity, different competences might be more appropriate to address gender and age diversity.

Strengths and limitations

Our study's particular strength is the integration of different data sources. Nationality diversity was obtained from company records, team members rated task interdependence and diversity climate, team leaders rated their cultural intelligence, and team leaders' supervisors assessed team performance. Thus, it is unlikely that common method or self-serving bias distorted our results. However, we acknowledge that our non-experimental study design cannot determine causality of the proposed relationships. Nevertheless, we have confidence in the directionality of our results because it is difficult to plausibly explain the complex pattern of results assuming reversed causality and because we collected team performance ratings after a time lag of several months.

Although objective performance ratings are more desirable than team performance ratings, objective performance indicators comparable across all teams were not available at our level of analysis. Thus, while we had to rely on performance ratings from managers at the next higher hierarchical level, future research might replicate our findings using objective indicators. As another limitation, we had to use short scale measures due to the restricted length of the questionnaire. This issue was especially problematic for the measurement of task interdependence. Unfortunately, participants found it difficult to understand one of the two items, resulting in a low inter-item correlation of $r = 0.32$, $p < 0.001$, which corresponds to an unacceptable Cronbach's $\alpha = 0.46$. Consequently, we decided to use a single-item measure of task interdependence in our analyses. Future research could replicate our findings using a more extensive operationalization of task interdependence.

Furthermore, our sample provided a rather conservative setting because it consisted of blue collar workers who performed rather simple tasks, which restricts the possibility of detecting positive diversity effects. We speculate that our findings might be even more pronounced in teams working on complex tasks that require creative solutions (Van Knippenberg, De Dreu and Homan, 2004). Moreover, as an anonymous reviewer noted, team characteristics were range restricted, such that teams in our sample had generally high task interdependence and low nationality diversity. In part, this observation is to be expected given that teams are defined as an interacting group striving for a shared goal (Kozlowski and Bell, 2003). As such, it is common to find relatively high levels of task interdependence in research on teams, as organizational groups with very low levels of task interdependence probably represent administrative units rather than actual teams. Additionally, other field studies reported comparable levels of nationality diversity (Greer *et al.*, 2012; Richard *et al.*, 2004; Sargent and Sue-Chan, 2001). As such, we are confident that our findings for nationality diversity management are applicable to other situations and organizations. While limited variability creates a conservative setting for statistical analyses, it does not preclude testing relationships. Moreover, if the variability is representative of the population, there is no reason to question the validity of the

findings. However, our study results may not generalize to contexts with very low task interdependence or very high nationality diversity.

Finally, a sample size of 63 teams is modest to test complex interaction patterns.[3] While this problem is frequently encountered in field research on organizational teams (Giessner *et al.,* 2013; Tsai *et al.*, 2012), conclusions based on studies with little power should be drawn with caution. Although our findings are in line with our theory, further replication will increase confidence in our results' meaningfulness and robustness.

Conclusion

As nationality diversity is expected to increase considerably, organizations need to develop effective strategies for nationality diversity management. For this purpose, characteristics of the task, the leader and actual team diversity need to be considered simultaneously. In more interdependent teams, team leaders play a key role for nationality diversity management. Specifically, cultural intelligence equips leaders with the skills needed to create a favourable diversity climate and to unleash the positive potential of diversity for team performance in more interdependent, nationally diverse teams.

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[3]We would like to thank two anonymous reviewers for their comments on these issues.

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