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Effects of Multinational Team and Team Member Characteristics on Subgroup Formation, Group Identification, and Trust in Team

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Effects of Multinational Team and Team Member Characteristics on Subgroup Formation, Group Identification, and Trust in Team

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Biography

The author was born in Istanbul, Turkey, on October 3rd, 1982. She received a Bachelor of Arts degree in psychology from Bogazici University, Turkey, in 2005 and a Master of Arts degree in industrial/organizational psychology from Koc University, Turkey, in 2008.

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Abstract

Multinational teams (MNTs) consist of members from different national backgrounds who work interdependently to achieve a shared objective (Earley & Gibson, 2002). These teams are frequently employed in global organizations because they provide several advantages, such as meeting the needs of customers from different cultures and getting diverse perspectives on how to lead projects and approach problems (Connaughton & Shuffler, 2007; Earley & Mosakowski, 2000). Much of the previous research on MNTs has focused on whether members' national background diversity has an impact on MNT effectiveness (Connaughton & Shuffler, 2007; Stahl, Mäkelä, Zander, & Maznevski, 2010a; Stahl, Maznevski, Voigt, & Jonsen, 2010b). Recent research, however, suggests that defining the conditions under which diversity increases team effectiveness is a more fruitful approach than trying to reach rigid conclusions about the overall effectiveness of diverse teams (Roberge & van Dick, 2010; van Knippenberg, De Dreu, & Homan, 2004a; van Knippenberg, Haslam, & Platow, 2007).

In the present study, perceptions and behaviors of MNT members were examined using the Input-Mediator-Output-Input (IMOI) framework of team effectiveness (Ilgen, Hollenbeck, Johnson, & Jundt, 2005). Specifically, the salient team-level inputs in MNTs were defined as national diversity (Earley & Gibson, 2002) and reliance on virtual communication (Gibson & Gibbs, 2006), and the salient individual-level inputs were defined as team members' collectivism orientation (Mockaitis, Rose, & Zettinig, 2012) and diversity beliefs (van Dick, van Knippenberg, Hägele, Guillaume, & Brodbeck, 2008). Critical

mediators that were tested include identification with one's in-group, out-group, and the team as a unit; and one's trust in the team, since those mediators are components of team cohesion. Team commitment was examined as the output.

Data were collected from 184 participants via an online survey. During the time the data were collected, the participants were working as MNT members at multinational organizations such as consulting firms. Results of the study did not support a majority of the hypothesized relationships. However, a final model was developed and tested based on exploratory analyses. According to this model, collectivism orientation and leader's effectiveness directly predicted commitment to one's team; there was also an indirect relationship that was mediated by identification with the team and trust in the team. The results show that selecting team members with high collectivism orientation and developing the skills of team leaders are crucial for increasing MNT members' commitment to their teams.

Introduction

Like any team in a work context, multinational teams (MNTs) consist of members who have interdependent tasks and goals and who are mutually accountable to one another to accomplish those goals. The defining feature of MNTs is that they are composed of team members from multiple nationalities; these multiple nationalities can reflect cultural differences in, for example, perceptions of teamwork or expectations from individual relationships (Earley & Gibson, 2002). Members of MNTs are often geographically dispersed, making the use of virtual communication common in this team type (Gibson & Gibbs, 2006). These teams have become more prevalent as a result of globalization and can provide crucial strategic advantages such as meeting the needs of diverse customers and obtaining higher profit margins through their strength in approaching issues from different perspectives (Connaughton & Shuffler, 2007; Joshi & Lazarova, 2005).

While the cultural diversity of an MNT is thought to be a strategic benefit, empirical findings on the effectiveness of MNTs are mixed. Several researchers have found that cultural diversity increases team effectiveness through its positive effects on team processes (e.g., Earley & Mosakowski, 2000), whereas others have found that cultural diversity leads to problems among team members (Staples & Zhao, 2006) and decreases effectiveness (e.g., Kirkman, Tesluk, & Rosen, 2004). Regardless of the conflicting findings, MNTs are still used in many multinational organizations (Connaughton & Shuffler, 2007; Haas & Nüesch, 2012). Consequently, examining the factors that influence the functioning and

effectiveness of MNTs, such as team members' team commitment, is an important endeavor that may improve our understanding of those teams and help us develop tools for effective team management.

MNTs' key team- and individual team member characteristics may impact their functioning and effectiveness. Diversity in nationality is the dominant team characteristic in an MNT. Moreover, a majority of MNTs are comprised of members who are geographically distributed. As a result, the teams operate virtually; members primarily communicate via technological tools such as conference calls or e-mails. Virtuality might be also a factor that impedes the functioning of MNTs, since the team members may be have limited chances for face-to-face interaction (Connaughton & Shuffler, 2007; Gibson & Gibbs, 2006). Collectivism orientation is key team member characteristic for any team because it represents the overall tendencies toward group membership, so that higher collectivism orientation may result in a positive view of working with a group of people (e.g., C. L. Jackson, Colquitt, Wesson, & Zapata-Phelan, 2006; Maznevski, Gomez, DiStefano, Noorderhaven, & Wu, 2002). Diversity beliefs, on the other hand, constitute another key MNT team member characteristic; these beliefs refer to a person's assumptions about the benefits or risks of diversity as well as a preference to work in diverse work groups (van Knippenberg & Haslam, 2003).

One way to improve MNT effectiveness is to facilitate efforts to accomplish shared goals. Team members in MNTs need to coordinate efforts and strive to accomplish the shared goals of the team. However, coordination and

cooperation in MNTs may be impeded as a result of cross-cultural differences among team members (Kirkman & Shapiro, 2001; Mockaitis et al., 2012; Staples & Zhao, 2006). Those differences may be observed in team members' perceptions of team processes and group dynamics (Joshi, Labianca, & Caligiuri, 2003; Maznevski & Peterson, 1997; Newell, David, & Chand, 2007), expectations of team leaders (Joshi & Lazarova, 2005), preferences for management practices (Earley, 1993), tendencies for collaboration (Smith & Berg, 1997), communication styles (Henderson, 2005; Staples & Zhao, 2006), and perceptions of time (Arman & Adair, 2012; Brislin & Kim, 2003; Mohammed & Nadkarni, 2011).

Team cohesion is defined as team members' commitment to the overall task of the team or to one another, and it impacts team effectiveness; higher cohesion mostly leads to better performance (Mathieu, Maynard, Rapp, & Gilson, 2008). Team members' perceptions about their teams and experiences with their team members constitute the basis of team cohesion (Kozlowski, Gully, Nason, & Smith, 1999). Team cohesion is important for MNTs' functioning as well and it may be undermined in MNTs by diversity in team members' nationalities and virtuality of team. These team characteristics and key individual team member characteristics may influence several indicators of team cohesion.

Identification with the team (i.e., seeing the team as a definitive of oneself; Connaughton & Daly, 2004) or some members of the team (subgroups within the team) and trust in team (our belief that all behaviors of the team will benefit us regardless of our presence there; Mayer, Davis, & Schoorman, 1995) are

indicators of team cohesion. These indicators may be at risk in MNTs due to the diverse nature of the team and they may be also influenced by team members' individual characteristics such as their beliefs about the benefits of diversity (van Knippenberg & Haslam, 2003). Identification with the whole team and subgroup of members of the team and trust in team are expected to impact team members' commitment to their team (emotional attachment to the team; Mathieu & Zajac, 1990; Mowday, Steers, & Porter, 1979) and the behaviors they display for assisting their teammates (i.e., backup behaviors; Dickinson & McIntyre, 1997).

In summary, the purpose of the present study was to examine (i) the effects of key team member's individual-level characteristics (i.e., collectivism orientation and diversity beliefs), key team characteristics (i.e., degree of virtuality and nationality diversity), and team leader's effectiveness on in-group, out-group, and team identification in MNTs, (ii) the effects of in-group, out-group, and team identification on team members' trust in their teams, and (iii) the effect of team trust on individual-level outputs (i.e., commitment to team and backup behaviors). Consistent with the purpose, the focus of this study was individual-level values, perceptions, and behaviors, since they are the building blocks of team trust and team identification, which, in turn, lead to team cohesion. The in-depth examination of individual's perceptions and experiences is vital for understanding MNTs, given the potential concerns arising from cultural differences among team members (Mockaitis et al., 2012).

The team compilation model (Kozlowski et al., 1999) can be used as a basis for explaining the importance of team member perceptions in teams.

Beginning with team formation, the model explains the role of individual-level attitudes, values, and perceptions in the team development processes. This model served as one of the theoretical bases of the present study, and it will be explained further to clarify why team members' perceptions should be studied in the MNT context.

Model of Team Compilation

According to the model of team compilation (Kozlowski et al., 1999), team development consists of four phases that occur across levels (i.e., individual-level, dyadic-level, team-level) and time. The first phase is called team formation. During this phase, team members learn about one another's skills, abilities, personalities, attitudes, and values. The members socialize with each other and try to understand the basic nature and purpose of the team. The second phase is called task compilation. During this phase, team members demonstrate their own competence and acquire information about each other's task knowledge and performance skills. Through these processes, the team members begin to understand what others can do for the team. The focus of the first and second phases of team development is at the individual level.

During the third phase, which is called role compilation, team members shift from the individual focus to a dyadic focus. As dyads, team members try to develop a mutual understanding of their roles in the team and improve their coordination. Finally, in the last phase, called team compilation, team members acquire a team-level understanding of the informal network of team member relationships within the team. MNTs' unique characteristics, such as national

diversity, may influence the compilation process. The specific implications for the team compilation model will be explained in the sections concentrating on each characteristic.

Previous researchers developed comprehensive models to describe the factors that influence overall team functioning and effectiveness (Hackman, 1987; Ilgen et al., 2005). These comprehensive models are essential for understanding MNT functioning as well, and they can serve as a strong framework for the analysis of MNT performance. The models were primarily based on the inputs, outputs, processes or states mediating the effects of inputs on outputs. Before the team compilation processes begins, organizational teams are typically formed with a purpose, which then serves to shape the team's objectives. Meeting these objectives is the core of team performance and it is then one of the main indicators of team effectiveness, along with its other indicators such as team commitment.

Input-Mediator-Output-Input Framework

The Input-Process-Output (IPO) model (Hackman, 1987; McGrath, 1964) is an early team effectiveness model that has made a major contribution to teams research. The model provides a well-defined basis for the explanation of team functioning. The IPO model was further extended when the Input-Mediator-Output-Input (IMOI) model (Ilgen et al., 2005) was developed. In addition to the more general models, specific models have been developed for MNTs (e.g., Earley & Gibson, 2002); however, these are not significantly different from the IMOI model. Therefore, this study relied on the IMOI model as a framework for

organizing the relationships among team and team member characteristics, trust, identification, commitment to team, and backup behaviors.

In the IPO model, team processes, such as coordination, were defined as "mediating mechanisms linking such variables as member, team, and organizational characteristics with such criteria as performance quality and quantity, as well as members' reactions" (Marks, Mathieu, & Zaccaro, 2001, p. 359). According to the IMOI model (Ilgen et al., 2005), simultaneously with team processes, the emergent cognitive and affective states, such as trust and cohesion, also transmit the effects of inputs to outputs. It should be noted that outputs in a team might be analyzed at the individual-level (e.g., team members' performance or commitment to their teams) as well as at the team-level (e.g., team performance). The distinguishing characteristic of the IMOI model is that it is constructed as a cyclical model in which outputs from one performance episode serve as inputs in subsequent performance episodes, whereas the IPO model (Hackman, 1987) defines team dynamics as a single linear path. Recent studies of teams mostly rely on the IMOI model because it provides a more comprehensive model and reflects the complexity of teams better (Ilgen et al., 2005; Mathieu et al., 2008).

This study, which used the IMOI model, examined the salient inputs for MNTs (i.e., national diversity, degree of virtuality of the team, collectivism orientation of team members, team members' beliefs about diversity), crucial mediators (i.e., group identification, team trust), and key individual-level outputs (i.e., commitment to team and backup behaviors; see Figure 1 for an overview of

the conceptual model). The cyclical nature of the model was beyond the scope of the present study.

Effectiveness of MNTs

The IMOI model provides a strong framework for analyzing the mechanisms impacting the effectiveness of MNTs. In addition to the efforts that examine the mechanisms contributing to the functioning of MNTs, several studies have examined the overall effectiveness of those teams with the purpose of understanding whether or not MNTs are effective. Diversity among team members serves as an input in teams, and its impact on team effectiveness has constituted a major area of research (Ilgen et al., 2005; van Knippenberg & Schippers, 2007; Webber & Donahue, 2001). Previous studies have focused on the effects of diversity on team functioning (Joshi & Roh, 2009; van Knippenberg & Schippers, 2007; Webber & Donahue, 2001) primarily with the purpose of examining which types of diversity may ease or risk team effectiveness. The relevant literature makes a distinction between surface-level (i.e., easily observable) and deep-level (i.e., hard to observe) characteristics (S. T. Bell, 2007; Harrison, Price, & Bell, 1998).

Surface-level diversity is based on people's features that can be easily perceived or seen by others. Features, including various demographic characteristics, are also examples of surface-level diversity characteristics. A foremost concern in MNT functioning has been the influence of national diversity, a major surface-level characteristic, on performance. Research results about the relationship between national diversity and performance are either

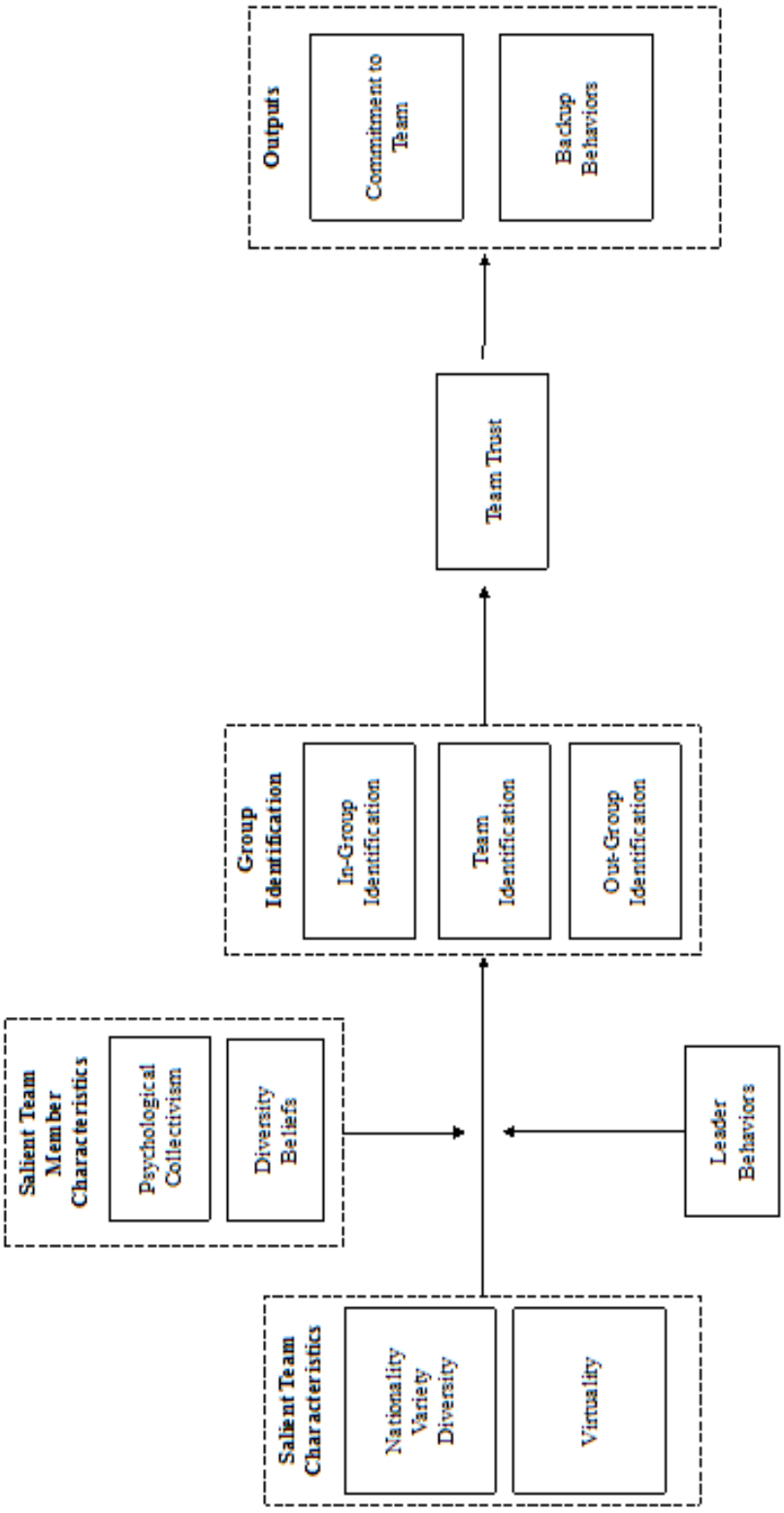

Figure 1. Overview of the conceptual model.

conflicting or inconclusive (Dahlin, Weingart, & Hinds, 2005; Gelfand, Erez, & Aycan, 2007; Stahl et al., 2010a; Stahl et al., 2010b; Timmerman, 2000). There are meta-analytic results showing that diversity in race and ethnicity had a negative (Joshi & Roh, 2009) or inconsequential impact (Webber & Donahue, 2001) on performance. However, several studies have shown that national diversity increases team performance (e.g., Earley & Mosakowski, 2000). Likewise, meta-analytic results have revealed that higher national diversity in MNTs is associated with more creativity and higher satisfaction with the team (Stahl et al., 2010b).

Surface-level diversity is often contrasted with deep-level diversity, which refers to characteristics such as personality, values, and abilities, which are not easy to observe (Harrison et al., 1998). Surface-level characteristics of team members are known starting from the first days of teamwork, whereas it takes time to learn about deep-level characteristics during the team compilation process (Kozlowski et al., 1999). Deep-level characteristics can be more important than surface-level characteristics: Research on teams has shown that their effects on performance are stronger than the effects of surface-level characteristics (S. T. Bell, 2007; Harrison et al., 1998; Harrison, Price, Gavin, & Florey, 2002). Thus, the study of MNTs should include deep-level characteristics of the individual team members, in addition to team characteristics. In an MNT, key deep-level team member characteristics include members' collectivism orientation (i.e., their overall feelings about being a part of a group; C.L. Jackson et al., 2006, and

diversity beliefs (i.e., their beliefs about the benefits versus costs of diverse teams; van Knippenberg & Haslam, 2003).

Research on effectiveness of MNTs has examined the impact of both deep- and surface-level diversity on team effectiveness. However, the results revealed conflicting findings. Based on those findings, a distinction between optimistic and pessimistic views of MNTs was made (Haas & Nüesch, 2012; Mannix & Neale, 2005; Stahl et al., 2010a). The optimistic view asserts that national diversity leads to greater variety of task-relevant knowledge and that the expertise arising from this variety increases team performance. The pessimistic view asserts that national diversity prevents successful interaction and cooperation, and decreases team cohesion in MNTs. Both approaches can be defended through robust theories of psychology, such as the value-in-diversity hypothesis, the similarity-attraction theory, and the self-categorization theory (Haas & Nüesch, 2012; Mannix & Neale, 2005; Stahl et al., 2010a), which will be further explained in the following sections of the paper.

As a response to the sharp distinction between both the positive and negative views of MNTs, other researchers have suggested that we should focus on the factors that make diverse teams work more effectively rather than on questioning whether or not diverse teams are effective (Roberge & van Dick, 2010; van Knippenberg et al., 2004a). The categorization-elaboration model (CEM; van Knippenberg et al., 2004a) is a theoretical perspective that can be used to represent this approach to diversity. This perspective constitutes the backbone

of the present study, and like the models introduced above, it will be explained in more detail in the following paragraphs.

Value-in-diversity hypothesis. The value-in-diversity hypothesis (Cox & Blake, 1991) provides a basis for the optimistic view of MNTs (Mannix & Neale, 2005; Stahl et al., 2010a). The hypothesis states that cultural diversity in an organization can be a source of competitive advantage because it can result in higher levels of cultural sensitivity, diverse perspectives, and more effective decision-making processes. Further, MNTs, which are inherently diverse, may result in significant differences in perspectives and problem solving approaches among team members; these differences may trigger creativity (Stevens, Plaut, & Sanchez-Burks, 2008). The benefits associated with culturally diverse teams are thought to translate into more efficient solutions and improved effectiveness and performance in MNTs (Stahl et al., 2010a).

Similarity-attraction theory. The similarity-attraction theory (Byrne, 1971) constitutes a basis for the pessimistic view of MNTs. The theory suggests that perceived similarity in characteristics increases attraction among people. In a homogenous team, similarity of national background may contribute to the perception of similarities, starting from the first phase of team compilation (i.e., team formation; Kozlowski et al., 1999). However, in an MNT, differences in national backgrounds and cultures are salient, and individuals may perceive themselves to be less similar to team members from different nationalities (Mannix & Neale, 2005; Randel, 2003; Stahl et al., 2010b). Perceived dissimilarities may cause problems in mutual attraction among MNT members

(Stahl et al., 2010a). Low levels of attraction may inhibit team cohesion and may interrupt communication and team integration processes. Consequently, this approach suggests that performance may decrease in MNTs (Haas & Nüesch, 2012; Stahl et al., 2010a).

Self-categorization theory. The self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) suggests that people categorize each other into subgroups based on people's surface-level characteristics (e.g., gender, age, nationality, ethnicity). This theory serves as another basis for the pessimistic view of MNTs (Mannix & Neale, 2005; Stahl et al., 2010a). According to the theory, after the categorization process, people show preference and liking for those who are more similar to themselves, and they categorize similar others into their in-group, whereas they categorize those less similar as out-group members.

The classification of in- versus out-group members decreases the willingness to cooperate with team members from out-groups (see van Knippenberg & Schippers, 2007 for a review). During the first phase of team compilation, team members may primarily pay attention to each other's national backgrounds, since this is a readily detectible surface-level characteristic (Joshi et al., 2003; Mowday & Sutton, 1993; Randel, 2003). As a result of attending to this highly visible characteristic, team members may automatically categorize nationally dissimilar teammates into an out-group. Such a categorization may impede the development of cohesion and the cooperation among team members and ultimately decrease overall team effectiveness (Salk & Brannen, 2000).

Categorization-elaboration model. The main argument of the categorization-elaboration model (CEM; van Knippenberg et al., 2004a) is that diversity influences elaboration of task-relevant information and perspectives and that the level of the elaboration determines performance. However, the impact of diversity on elaboration depends on several factors, such as affective and evaluative reactions of group members (e.g., cohesion and identification), task requirements, task motivation, and task ability of the team. The key determinant of affective and evaluative reactions is the social categorization process. This process is triggered when group differences make in-group and out-group distinctions salient. The reactions of team members also depend on individual members' beliefs about the benefits or risks of diversity (van Dick et al., 2008). Basically, the model posits that positive affective and evaluative reactions (e.g. liking the team members or identification with the team) is one of the main factors that strengthen the positive effect of diversity on elaboration of task-relevant information and that this elaboration results in higher performance.

CEM (van Knippenberg et al., 2004a) has clear implications for MNTs. In an MNT, an important variable defining diversity is the national diversity of team members, which serves as a key team-level input. The degree of nationality diversity determines the presence of faultlines, which can be defined as invisible borders distinguishing in- and out-groups based on a certain attribute (Lau & Murnighan, 1998). The faultlines can be based on several characteristics such as age or gender as well, depending on team characteristics. In an MNT, nationality is expected to serve as the basis of faultline formation, so that national

background may lead to social categorization through the self categorization process (Joshi et al., 2003; Randel, 2003; Turner et al., 1987). However, it is important to note that the unique combination of represented nationalities (e.g., 1 Italian and 3 American members versus1 Italian, 1 German, 1 American, and 1 Swedish members) may make a difference in terms of the activation and strength of faultlines, which will be discussed later. Based on the premises of CEM (van Knippenberg et al., 2004a), positive affective and evaluative reactions of MNT members are expected to be triggered by the presence and strength of faultlines based on nationality, since the differences in national backgrounds of team members are cognitively salient at those teams.

Synthesis of the Theoretical Bases for the Present Study

Before developing hypotheses, it may be helpful to synthesize the main models, theories, and concepts and their potential implications for MNTs. The team compilation model (Kozlowski et al., 1999) explains the developmental phases teams, including MNTs, go through. According to the model, individual perceptions of team members are crucial for the subsequent stages of team development. Team effectiveness models tend to emphasize team inputs, outputs, and the mediating mechanisms by which the inputs become outputs (Hackman, 1987; Ilgen et al., 2005). In the present study, key team-level inputs which represent team members' perceptions (nationality diversity and degree of virtuality) and also key individual-level team member characteristics (collectivism orientation and diversity beliefs), their effects on team trust through group

identification, and impact of team trust on individual-level outputs were examined, with the purpose of understanding MNT functioning better.

The underlying motive of this study was defining the conditions maximizing MNT members' commitment to their teams, in line with the main ideas of CEM (van Knippenberg et al., 2004a), rather than with the goal of supporting either the optimistic or pessimistic view of MNTs (Mannix & Neale, 2005; Stahl et al., 2010a). Within this framework, value-in-diversity hypothesis, similarity-attraction theory, and self-categorization theory also served as a basis for explaining the hypothesized relationships among inputs, mediators, and outputs. The following sections will focus on detailed explanations of the key team- and team member characteristics, processes, outputs, and the expected relationships among them.

Team-Level Inputs: Salient Team Characteristics

MNTs have several unique characteristics that can serve as inputs. Some of these characteristics can be classified as team-level features that arise from team design and composition, whereas others can be classified as individual-level features of team members (e.g., their personal attitudes and values). In an MNT, a salient team characteristic is nationality variety diversity, which is a defining feature of those teams (Earley & Gibson, 2002). A second key team characteristic is virtuality, which is important given that a majority of the MNTs are virtual teams (i.e., the team members are geographically dispersed and coordination and cooperation primarily relies on technological tools such as e-mails or conference calls, rather than face-to-face interaction; (Connaughton & Shuffler, 2007; Gibson

& Gibbs, 2006). In the present study, these salient team characteristics were examined as the main determinants of MNT members' identification with their in-groups, out-groups, and teams as a unit.

Nationality variety diversity as a team-level input. Diversity can be conceptualized in different ways (e.g., separation, disparity, and variety) depending on the anticipated mechanism through which diversity relates to outcomes. Variety diversity captures differences in kind on a key categorical attribute, such as national diversity; the level of diversity depends on the number of different types within the category that are present in the group (Harrison & Klein, 2007). According to this conceptualization of diversity, a four-person MNT consisting of team members from a total of four nationalities is more diverse than an MNT consisting of four team members representing a total of two different nationalities. Such differences are expected to have important effects on functioning of diverse teams (van Knippenberg & Schippers, 2007), including MNTs (Garrison, Wakefield, Harvey, & Kim, 2010; Staples & Zhao, 2006).

Implications of variety diversity for team compilation. Variety diversity is especially salient during the first phase of team development, which is characterized by social uncertainty (Kozlowski et al., 1999). Perceived dissimilarities arising from national diversity in a team may increase social uncertainties; any problems in the effective resolution of these uncertainties may complicate the team compilation process for all team members. Teams that consists of members from various backgrounds (i.e., that have a high level of variety diversity) may experience increased social uncertainty, which may lead to

feelings of foreignness and alienation (Garrison et al., 2010). In that case, MNT members may feel unsure about the coordination and interaction among team members. Those feelings may lead to a negative first impression of the team, even before members begin to work actively on team tasks. Perceived dissimilarities may also lead to low cohesion among team members, which may disrupt team development and functioning (Hobman, Bordia, & Gallois, 2003; Stahl et al., 2010b; Staples & Zhao, 2006).

Impact of variety diversity on group formation and identification. Within a team, subgroup formation is expected to take place, since perceived similarities serve as a basis for attraction (similarity-attraction theory; Byrne, 1971) and lead to self-categorization into an in-group; dissimilar others are categorized as out-group members (self-categorization theory; Turner et al., 1987). CEM (van Knippenberg et al., 2004a) posits that the salience of the categorization criterion (i.e., cognitive accessibility of categories) eases the social categorization process, which results in subgroup formation. In an MNT, nationality may be the salient mechanism for the subgroup formation process, given that it is the defining characteristic of these teams, which is cognitively very accessible. However, the likelihood of the appearance of nationality as the basis of subgroup formation may depend on the level of nationality variety diversity, which will be further discussed.

The level of nationality variety diversity is expected to impact group formation since it may determine the strength of any subgroup faultlines (Lau & Murnighan, 1998). Those invisible faultlines serve as the borders distinguishing

groups from each other based on a certain characteristic, such as gender (men vs. women) or cultural background (e.g., Asians vs. Europeans). The strength of faultline is the determinant of the strength of the distinction among subgroups within a given group, which results in formation of in- vs. out-groups. In sum, stronger faultlines lead to stronger group categorizations (Lau & Murnighan, 1998; Lau & Murnighan, 2005; Thatcher & Patel, 2011).

The analysis of nationality variety diversity in the present study considered three different scenarios, which may represent different levels of faultline strength. First, for a team with low levels of variety diversity, an MNT may be relatively homogenous (e.g., one Italian and four German team members), and one nationality might be strongly represented (e.g., by 4-5 members), while another nationality is represented by only few members (e.g., 1 member). Second, in a moderate variety diversity case, an MNT may consist of two Italian and three German members; this type of diversity would create two distinct groups (i.e., Germans vs. Italians in this case). In the third case, a high variety diversity team would have many different nationalities represented (e.g., one Italian, one German, one Ukrainian, and one American team member), and the distinction based on nationality would be less salient. The faultline based on nationality is expected to be very strong in moderately diverse teams, whereas it is expected to be weaker in low or high levels of variety diversity.

In MNTs with a moderate-level of nationality variety diversity, the distinction between in-groups and out-groups on the basis of nationality is expected to be salient and this distinction may foster subgroup formation based on

national backgrounds. Such a subgroup formation would result in team members defining subgroups by nationality (Connaughton & Daly, 2004). When MNTs have low- or high-levels of nationality variety diversity, the team members may define their in- and out-groups based on characteristics other than nationality, since the faultlines based on nationality may be weak. In that case, team members may instead form subgroups on the basis of gender, age, or other characteristics.

If the level of diversity and the basis of subgroup formation are related as expected (i.e., if the relevant hypothesis is supported), we may also expect the level of nationality variety diversity to influence the levels of in-group, out-group, and team identification of team members, since easier social categorization process also strengthens identification with in-group members (CEM; van Knippenberg et al., 2004a). Identification is defined as "the process in which an individual comes to see an object (e.g., an individual, a group, or an organization) as being definitive of oneself and [by which one] forms a psychological connection with that object" (Connaughton & Daly, 2004, p. 90). Social identity theory (Tajfel & Turner, 1986) also posits that in-group membership becomes a part of the self-concept of individuals. Group identification results in feelings of belonging to a social category (Ashforth & Mael, 1989), and it is likely to be one of the crucial mediating mechanisms in a team context (Fiol & O'Connor, 2005; Polzer, Crisp, Jarvenpaa, & Kim, 2006).

In sum, the level of variety diversity is expected to have a curvilinear relationship with in-group, out-group, and team identification. In-group identification is expected to be highest in moderately diverse teams, since the

categorization based on the salient characteristic (i.e., nationality variety diversity) would be very strong, whereas it is expected to be lowest in teams with low-or high levels of variety diversity. On the other hand, as a result of expected strong in-group identification, team and out-group identification are expected to be lowest in moderately diverse teams and higher in other teams.

Degree of virtuality as a team-level input. MNTs typically coordinate across time and place; because of this, the use of virtual communication is a key team characteristic (Connaughton & Shuffler, 2007; Gibson & Gibbs, 2006). According to Griffith and Neale's (2001) classification, traditional and virtual teams can be differentiated on the basis of two dimensions: the time they spend together and the level of technology support they employ. Traditional teams spend a lot of time together, and they are mostly involved in face-to-face communication, whereas purely virtual teams do not spend much time together and mainly rely on technology for communication and coordination. Hybrid teams fall in-between the two ends of both dimensions.

The degree of virtuality may differ among teams, depending on their unique conditions. For example, a project team may involve members from different nationalities who spend all their time in a certain location, as expatriates, until the end of the project. Such an MNT would be considered a more traditional face-to-face team. In a different team, however, team members may be located in different offices and countries and may frequently travel to work face-to-face with one another. Such an MNT may be classified as a hybrid team. On the other end of the continuum, if the MNT members never or very rarely meet face-to-face, we

may consider the MNT as a purely virtual team. These different degrees of virtuality, ranging from “only face-to-face” to “only virtual,” may influence team identification in MNTs given that high virtuality may limit the opportunities (e.g., interaction and personal relationships) required for developing a shared identity with the team.

Implications of virtuality for team compilation. Media richness theory (Daft & Lengel, 1986) defines richness of a communication medium as its capacity for feedback, the number of cues (e.g., voice, intonation or gestures) and channels (e.g., verbal or written) used, and the degree of how personal it is. On the basis of these criteria, face-to-face communication is the richest medium, whereas richness of media decreases as we move from face-to-face to virtual communication. Rich communications provide the opportunity to clarify ambiguity by amplifying understanding in a timely manner; therefore, they can contribute significantly to the effectiveness of communication in teams (Maruping & Agarwal, 2004). However, primary methods of communication used in virtual teams are not considered to be as rich. Thus, effectiveness of communication may be lower in virtual teams due to low instances of face-to-face interactions (Berry, 2011).

Based on the tenets of the media richness theory, high levels of virtuality limit face-to-face interaction among team members and minimize the opportunities to gather personal information about each other. Consequently, this may slow, or even inhibit, the process of resolving social uncertainties through communication and interaction. The implications of virtuality for the first phase

of team development may depend on the degree of virtuality unique to a given team (Connaughton & Shuffler, 2007). The risks would be higher for MNTs that rely dominantly on virtual communication in their functioning.

Impact of virtuality on group identification. As mentioned before, perceived similarities (Byrne, 1971) are expected to lead to in-group categorization (Turner et al., 1987) and self-identification with those team members (Tajfel & Turner, 1986). In a purely virtual MNT, cues about nationality of team members are clear and obvious; however, cues about team members' deep-level characteristics, such as personality and values, are not prominent due to the limitations of virtual communication (Fiol & O'Connor, 2005). Lack of deep-level information, when combined with the difficulties of reliance on virtual communication may decrease the chances for interacting with team members and developing close relationships. This may, in turn, limit identification with the team as a unit and lead to lower team cohesion.

Virtuality may also increase the salience of cultural differences among MNT members from different cultures and lead to easier subgroup formation based only on nationality; this is especially likely in teams with moderate-level variety diversity characteristics. Virtuality is expected to strengthen the visibility of dominant differences such as nationality by limiting the chances for observing other characteristics. Therefore, the distinction of groups based on a certain dominant characteristic is expected to be easier at virtual teams. The ease of distinction is expected to lead to stronger identification with in-group and weaker identification with out-group (Fiol & O'Connor, 2005). In short, higher degree of

virtuality is expected to increase in-group identification and decrease team and out-group identification.

The effects of variety diversity and virtuality on in-group and out-group identification might be moderated by other variables. Specifically, the effect of nationality variety diversity on group identification may change depending on MNT members' psychological collectivism orientations and diversity beliefs, since those individual-level characteristics may influence the way an MNT member perceives the team and foreign team members (Homan et al., 2008; Mockaitis et al., 2012). The effects of virtuality on group identification may depend on the team leader's efforts to organize the team, since leadership in virtual teams is a key determinant of effective team processes (B. S. Bell & Kozlowski, 2002; Cascio & Shurygailo, 2003; Kayworth & Leidner, 2002).

Moderators of Team Characteristics–Group Identification Relationships

Psychological collectivism as an individual-level input. The individualism–collectivism distinction has served as one of the dominant bases for the categorization of cultures (Hofstede, 1980). Based on this classification, collectivistic cultures primarily value being a group, loyalty to the group, and reliance on group decisions. In the workplace, collectivism leads to expectations of family-like relationships, acting according to the interest of organization, performing better as a part of a group (vs. performing individually), and valuing relationships over tasks. On the other hand, individualistic cultures value personal autonomy, individual success, and privacy. In the workplace, individualism leads to focusing on personal interests over group interests, performing better when

working individually, and being task-oriented rather than relationship-oriented (Hofstede, 1980; Hofstede & Hofstede, 2005).

Hofstede's framework has served as a useful basis for research focusing on between-country comparisons of cultural orientations at the national level (Gelfand et al., 2007; Javidan, House, Dorfman, Hanges, & De Luque, 2006; Kirkman, Lowe, & Gibson, 2006; McSweeney, 2002; Taras, Kirkman, & Steel, 2010). However, several scholars argue that there is likely to be significant within-country variations (Bochner & Hesketh, 1994; Eby & Dobbins, 1997; C. L. Jackson et al., 2006; Kirkman & Shapiro, 2001; Kirkman & Shapiro, 2005; Maznevski et al., 2002; Triandis, 1996). For example, although the U.S. is considered to be individualist, people in the U.S. may range from collectivistic to individualistic. Realistically, cultural differences are likely operating at both the individual and country level (e.g., C. L. Jackson et al., 2006; Maznevski et al., 2002).

Diversity in national background is a defining characteristic of MNTs, and national differences are likely to present underlying cultural differences in collectivism orientation and other values of team members. Research suggests that deep-level characteristics, such as personality and values, are more influential on team performance than surface-level characteristics such as nationality (S. T. Bell, 2007; Harrison et al., 1998; Harrison et al., 2002). Collectivism orientation is one of the values that may vary among team members, particularly in MNTs, and it has direct implications for teamwork (Connaughton & Shuffler, 2007; Dierdorff, Bell, & Belohlav, 2011; Sarker, 2005). The impact of collectivism

orientation might be even more pronounced in MNTs due to the high variability in values of team members from different countries of origin (Kirkman & Shapiro, 2005; Mockaitis et al., 2012). Therefore, collectivism orientation of MNT members was studied as the first salient individual-level characteristic in those teams.

Implications of collectivism orientation for team compilation. Collectivism is related to effective team performance. In particular, preference for teamwork, a facet of collectivism, is related to early team performance (Dierdorff et al., 2011), indicating this facet's influence on the early phases of team compilation. Values such as collectivism orientation specify a person's self-concept and define who one is and how one behaves (Erez & Earley, 1993; Markus & Kitayama, 1991). Consequently, a team member's collectivistic orientation may set the frame for his overall conception of and tendency toward teamwork, especially during the first phase of team compilation (i.e., when social uncertainties are prevalent; (Erez & Earley, 1993; Kirkman, Gibson, & Shapiro, 2001). Team members with a collectivistic orientation may tend to have overall positive perceptions of teamwork that may result in more optimism in general. On the other hand, team members with an individualistic orientation may be more negative toward teamwork and subsequently toward their teammates (Earley, 1993; Mockaitis et al., 2012).

Impact of collectivism orientation on the variety diversity–group identification relationship. Understanding the conditions under which collectivism orientation is beneficial for team functioning is an important

endeavor (and consistent with CEM; van Knippenberg et al., 2004a) since collectivism orientation may impact the way group processes work for a team member (Brown et al., 1992). CEM states that the impact of social categorization on elaboration of task-relevant information depends on affective and evaluative reactions of team members, and collectivism orientation may be a strong determinant of those reactions. Exploring the impact of collectivism on the relationship between nationality variety diversity and group identification may provide a basis for defining the conditions that lead to higher commitment to the team for members with varying degrees of collectivism orientation.

An in-group–out-group distinction based on nationalities is expected to be most salient in an MNT with moderate levels of variety diversity. However, group categorization is expected to occur in any team and may be based on different characteristics, such as gender or ease of communication. Nevertheless, such a distinction may make in-group identification easier for collectivistic team members, given that they can easily define their in-groups and feel more related to them, based on the premises of self-categorization theory (Turner et al., 1987).

On the other hand, the categorization process may impact identification with the out-group negatively for collectivistic team members. They would be expected to feel closer to their in-groups and, consequently, show lower liking and preference for and identification with out-group members. If the in-group–out-group categorization is prevalent in the team, collectivistic team members are also expected to be less likely to identify with the team as a whole. Thus, collectivism orientation is expected to moderate the effect of nationality variety

diversity on in-group, out-group, and team identification. Specifically, high collectivism orientation is expected to strengthen the effects of nationality variety diversity on in-group, out-group, and team identification.

Diversity beliefs as an individual-level input. Diversity beliefs represent a person's assumptions about the benefits or risks of diversity as well as a preference to work in diverse work groups (van Knippenberg & Haslam, 2003). A person with positive beliefs about diversity (pro-diversity beliefs) is expected to think that involvement of people from different backgrounds can increase the effectiveness of groups, whereas a person with negative beliefs about diversity (pro-similarity beliefs) is expected to think that the presence of different backgrounds leads to difficulties within the team (Homan, van Knippenberg, van Kleef, & Dreu, 2007; van Knippenberg et al., 2004a; van Knippenberg & Haslam, 2003). The concept of diversity beliefs can be applied to any type of diversity and it has certain implications for MNTs. Diversity beliefs of MNT members can be expected to be another salient individual-level characteristic and may be a strong determinant of team members' perceptions of and attitudes toward their teams (van Dick et al., 2008).

Implications of diversity beliefs for team compilation. Diversity beliefs may impact the way a certain team member perceives the team as a unit and how he feels about working at an MNT, beginning during the first phase of team compilation in which individual perceptions are crucial (Kozlowski et al., 1999). The theory of reasoned action (Ajzen, 1991; Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) states that beliefs and attitudes toward a certain object or concept

impact the intentions about it, and intentions determine behaviors directed toward it. This theory may have implications for identification processes in the diverse groups (Hogg & Terry, 2000; Terry & Hogg, 1996).

Based on the theory of reasoned action, diversity beliefs of MNT members represent their attitudes toward the idea of working in a multicultural team. Consequently, these beliefs are expected to impact the behaviors of people as members of multinational teams. Specifically, an MNT member who does not think that cultural diversity is an asset for the team (i.e., pro-similarity approach) may be more likely to question the efficacy of the whole group and may have stronger concerns about team functioning. As a result, such an MNT member may have lower intentions to socialize and to understand his or her teammates from other backgrounds. On the other hand, pro-diversity MNT members may have positive feelings about the team, even before meeting the team members. Consequently, having positive beliefs may provide for a natural affiliation toward diverse team members during the initial phases of team compilation.

Impact of diversity beliefs on the variety diversity–group identification relationship. Diversity beliefs of team members may impact their identification with their teammates in diverse groups (van Dick et al., 2008; van Knippenberg et al., 2007). In a study concerning the effects of diversity beliefs in ethnically diverse teams, results revealed that team members holding pro-diversity beliefs were more likely to identify with their teams because they saw ethnic diversity as an advantage rather than a risk (van Dick et al., 2008). Based on the results of the study, the authors argued that understanding the impact of diversity beliefs on

team functioning may help us better explain the effects of diversity on team effectiveness.

The findings are consistent with CEM (van Knippenberg et al., 2004a) as well, since the affective and evaluative reactions involved in the model may be influenced by diversity beliefs. Specifically, pro-diversity beliefs of team members may be one of the key variables mitigating the negative effects of out-group categorization in diverse teams; such beliefs can increase team effectiveness (van Dick et al., 2008). Specifically, the pro-diversity beliefs of an MNT member may serve as a buffer between nationality variety diversity and out-group categorization. Individuals with pro-diversity beliefs may consider the presence of those from different national backgrounds as an advantage for the team and might not compartmentalize diverse members into an out-group; thus, they may be more likely to develop a strong identification with the whole team. On the other hand, pro-similarity MNT members' negative beliefs about the contribution of foreign team members to the team may lead to a perception that team members from dissimilar national backgrounds are out-group members, which may result in less identification with the team.

Leader behaviors as an individual-level input. Team leadership is defined as a key input for team effectiveness because it influences processes (e.g., coordination), emergent states (e.g., trust), and outputs (e.g., team performance; (Mathieu et al., 2008). Cultural diversity in an MNT may introduce several challenges for leadership. To address the varying needs of team members from different national backgrounds, MNT leaders should have the capacity to

understand and integrate diverse perspectives of MNT members from different cultural backgrounds (Joshi & Lazarova, 2005; Matveev & Milter, 2004; Maznevski & DiStefano, 2000; Zander & Butler, 2010).

Another concern in MNT leadership is the virtual nature of such teams (B. S. Bell & Kozlowski, 2002; Joshi, Lazarova, & Liao, 2009). The ability of leaders to engage in traditional leadership behaviors is challenged in those teams due to their virtual nature. Prevalent leader behaviors such as communicating vision and role modeling have to shift from face-to-face expression to virtual expression. In face-to-face settings, leadership is implied through several cues, such as body language and voice inflections. Such cues are lost in virtual settings and being accepted as a leader at a virtual team requires more effort than doing this in a face-to-face team (B. S. Bell & Kozlowski, 2002; Kayworth & Leidner, 2002; Zigurs, 2003).

Previous researchers have suggested that leaders of virtual MNTs should have specific strengths such as the capacity to use communication technology for building and preserving trust and for monitoring team progress (DeRosa, Hantula, Kock, & D'Arcy, 2004; Malhotra, Majchrzak, & Rosen, 2007). They should put forth effort to help team members understand, appreciate, and leverage diversity (B. S. Bell & Kozlowski, 2002; Malhotra et al., 2007), and they should manage coordination of work-cycles and meetings and enhance external visibility (e.g., by organizing virtual steering committees; (Malhotra et al., 2007). Leaders who work with virtual teams have to be more proactive and they have to pay more attention to group dynamics to anticipate potential problems compared to leaders of face-

to-face teams because the information they receive might be degraded and delayed due to temporal and spatial distribution of teams (B. S. Bell & Kozlowski, 2002; Mohammed & Nadkarni, 2011).

The importance of leadership for the effectiveness of MNTs can be explained through CEM (van Knippenberg et al., 2004a). In CEM, task requirements, task motivation, and task ability are defined as moderators of the diversity-information elaboration relationship. Leader behaviors may be crucial, especially for clarification of the task requirements and motivation of the team, since a good leader has to explain the expectations from each team member and can also motivate the whole team through his leadership skills. A leader can improve the quality of decisions, despite the cultural differences and reliance on virtual communication in MNTs, if he can acknowledge the potential areas of miscommunication due to cultural barriers and ambiguity arising from virtual communication (Malhotra et al., 2007; Matveev & Milter, 2004; Maznevski & DiStefano, 2000; Zander & Butler, 2010).

Virtuality of the team is expected to have a negative impact on group categorization in MNTs, and the leader's behaviors may further impact group identification in virtual teams (Fiol & O'Connor, 2005). In diverse teams, leader behaviors have a direct effect on motivation and group identification, which, in turn, increase team effectiveness (van Knippenberg et al., 2004a; van Knippenberg & Hogg, 2003; van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004b). The effectiveness of the team leader may moderate the effects of virtuality on group identification, so that a leader displaying the behaviors

required for leading virtual MNTs can contribute to the team members' affiliation with the whole team. Specifically, leader behaviors such as communicating with team members regularly and highlighting the shared goals of the team would be beneficial for the development of the team cohesion (Kayworth & Leidner, 2002; Malhotra et al., 2007; Sivunen, 2006). On the other hand, a leader failing to display the crucial leadership behaviors may strengthen the negative effect of virtuality on team identification.

Group Identification as a Mediator between the Inputs and Trust

If we believe that the behaviors of a person will be to our benefit, even if we cannot monitor or control them, it means we trust that person (Mayer et al., 1995). In the work context, trust can decrease ambiguity and uncertainty, give rise to cooperation, and improve individual satisfaction and performance (Dirks & Ferrin, 2001). In the team context, trust is an emergent state which is defined as one of the key mediators in the IMOI framework of team effectiveness (Mathieu et al., 2008). Trust is a determinant of team cohesion, and it has positive influences on team performance through its effects on cohesion (Mach, Dolan, & Tzafrir, 2010). Potency, the collective belief about effectiveness, has been identified as one of the indicators of trust (Ilgen et al., 2005). Research has shown that potency improves teamwork processes (LePine, Piccolo, Jackson, Mathieu, & Saul, 2008) and team performance (Gully, Incalcaterra, Joshi, & Beaubien, 2002). Effects of trust on performance may be also be indirect, namely through its positive impact on motivation of team members (Dirks, 1999; Porter & Lilly, 1996).

In an MNT, forming interpersonal trust might be especially challenging due to cultural diversity (Newell et al., 2007; Stahl et al., 2010a). If the team is highly virtual, development of trust becomes even harder (Jarvenpaa & Leidner, 1999) as a result of the limitations in communication, consistent with media richness theory (Daft & Lengel, 1986). Group identification is a determinant of trust (Williams, 2001), and the extent to which an individual identifies with the team as a unit is expected to determine trust in the team.

Nationality variety diversity is expected to be a factor impacting subgroup formation in a team, as explained before. However, subgroup formation may inhibit the development of trust in the team as a whole. For example, in-group identification leads to higher in-group trust and lower out-group trust (Voci, 2006). If an MNT member identifies strongly with some of the team members who constitute a subgroup, that MNT member would be less likely to identify with the whole team as a unit. Thus, strong in-group or out-group identification is expected to decrease team trust.

Individual-Level Outputs

According to the IMOI model and other team effectiveness models, outputs represent the end results of the overall teamwork process, and they are considered to be the main indicators of team effectiveness (Hackman, 1987; Ilgen et al., 2005). Successful and sound processes result in high-quality outputs, and problematic processes result in low-quality outputs. Outputs can be categorized into three main levels. The first level refers to organizational-level consequences such as the contribution of the team to overall organizational performance and

effectiveness. The second level is concerned with the team-level consequences like team process improvement. The third level is the individual-level outputs such as team-oriented behaviors of team members (e.g., completing individual tasks efficiently or helping others). Individual-level outputs are important because they are the building blocks of the outputs at the higher levels (Hackman, 1987; Ilgen et al., 2005; Mathieu et al., 2008; McGrath, 1964).

Consistent with the tenets of CEM (van Knippenberg et al., 2004a), individual-level outputs were examined in the present study with the purpose of defining the processes leading to positive consequences in the MNT context. MNT members' commitment to their teams and their backup behaviors observed by their teammates were studied as the key individual-level outputs that were expected to be influenced by trust in team.

Team member commitment as an output. Commitment to the team can be defined as a team member's emotional and affective attachment to the team, consistent with the original conceptualization of the construct at the organizational level (Mathieu & Zajac, 1990; Mowday, Steers, & Porter, 1979). A team member committed to his team is expected to be ready to engage in additional tasks and behaviors (such as backup behaviors) for the benefit of his team, feel at home among his teammates, and value the success of the team (Ellemers, de Gilder, & van den Heuvel, 1998). Commitment of all team members to the team constitutes the basis of team cohesion; therefore, commitment can be thought of as an individual-level indicator of team effectiveness (Mathieu et al., 2008). Commitment can be also defined as an affective reaction that plays a role

in functioning of diverse teams. Commitment improves team performance and team-oriented behaviors, and a lack of commitment can be a sign of one's intention to leave the team (Becker, Ullrich, & van Dick, 2013).

Backup behaviors as an output. Backup behaviors are defined as the assistance provided to team members to help them complete their tasks when the teammates are unable to perform or when they make a mistake (Dickinson & McIntyre, 1997). The assistance can be in the form of a verbal statement, such as providing verbal feedback to a teammate, or a physical act, such as helping a teammate or assuming and completing a teammate's tasks (Marks et al., 2001). Backup behaviors are one of the key team processes (Dickinson & McIntyre, 1997; Marks et al., 2001), and they have been tied to team performance in previous research (Aubé & Rousseau, 2005; Marks, Sabella, Burke, & Zaccaro, 2002). The theory of reasoned action (Ajzen, 1991; Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) states that attitudes determine behaviors through their impact on intentions. In the team context, positive attitudes such as commitment are expected to have positive behavioral outcomes (Becker et al., 2013), such as backup behaviors.

Trust as a Mediator between Identification and Outputs

Regardless of the difficulties in forming and maintaining trust in MNTs, trust is vital for those teams since it fosters cohesion among team members and improves team functioning among members from different cultural backgrounds (O'Hara-Devereaux & Johansen, 1994). Research on MNTs has revealed that trust in team increases team cohesiveness (Jarvenpaa, Shaw, & Staples, 2004),

knowledge sharing (Jarvenpaa, Knoll, & Leidner, 1998; Newell et al., 2007; Staples & Webster, 2008), team performance (Joshi et al., 2009; Pinjani & Palvia, 2013), and team member satisfaction (Pinjani & Palvia, 2013). Similarly, trust has positive effects on commitment (Earley & Gardner, 2005; George & Brief, 1992). MNT members who trust their team should be more likely to feel a bond with their teams and care about their teams. Consequently, a positive relationship between trust and commitment can be expected.

Trust can be an antecedent of backup behaviors as well, given that it has also been defined as the foundation of interpersonal cooperation (McAllister, 1995) and helping behaviors in the workplace (Choi, 2006; Dirks, 1999; Dirks & Ferrin, 2001). Team members who trust in their team should be more comfortable with putting forth the extra energy necessary for backup behaviors. In the absence of trust, team members may have a low willingness to show that effort because they may assume that the team does not deserve it or that their behaviors and contributions will not be recognized. Thus, higher trust in team is expected to be related to displaying more backup behaviors as well.

Rationale

MNTs are used frequently in multinational organizations and the frequency is likely to increase in the upcoming years as a result of globalization, global mobility, and further advances in technology, which may give rise to the increased use of virtual communication (Connaughton & Shuffler, 2007; Haas & Nüesch, 2012; Stahl et al., 2010a; Stahl et al., 2010b). Given MNTs' prevalence and the potential difficulties that arise from their unique characteristics, research

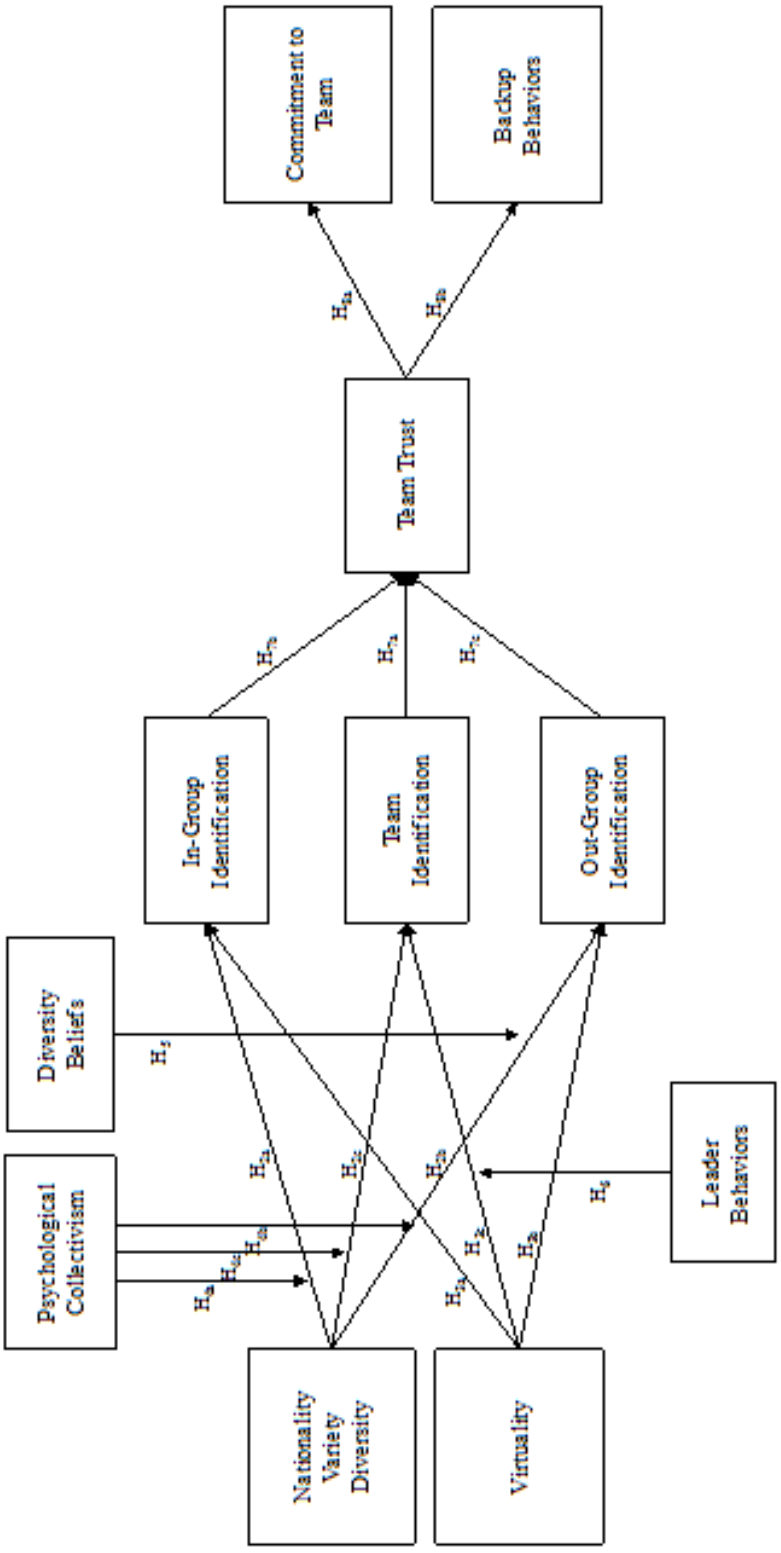

Figure 2. The conceptual model of the hypothesized relationships

that investigates how these characteristics relate to team members' perceptions and behaviors is helpful for understanding the individual-level mechanisms for improving MNT effectiveness.

The present study sought to examine the effects of the key inputs and mediators on team member commitment and backup behaviors in MNTs. Nationality variety diversity and virtuality of the team were examined as the salient team-level inputs in MNTs. Based on these salient characteristics, key individual-level inputs were defined as team members' collectivism orientation and their beliefs about diversity. Based on the IMOI framework (Ilgen et al., 2005), the inputs were expected to influence the outputs through their effects on the mediators (i.e., group identification and trust in team). The main motive for the study was understanding the conditions and contexts in which nationality diversity affects important team member outcomes, consistent with the main ideas of CEM (van Knippenberg et al., 2004a). The findings are expected to have theoretical contributions, and they may also serve as a basis for certain practical recommendations for effective management of MNTs.

The main theoretical contribution of the present study is the examination of the basis of subgroup formation in MNTs. Moreover, examination of the team and team member characteristics impacting in-group, out-group, and team identification and their effects on trust in team will deepen our theoretical conceptualization of MNT processes. The analysis of the impact of different units of team identification (e.g., subgroup and overall team) on team trust represents a

novel endeavor that has the potential to make an incremental theoretical contribution to the present literature on MNTs.

Several practical contributions are expected based on the results. First of all, results will inform team design in terms of ideal levels of nationality variety diversity and virtuality. This study identifies the team configurations that are more likely to result in formation of in- and out-groups that may result in identification with in-group rather than the whole team. If strong in-group identification leads to significant decrease in team identification, it may risk the effectiveness of teams. Identified at-risk configurations can either be avoided or interventions such as team training can be utilized to foster identification with the team as a whole.

Another team design issue concerns the level of virtuality. Virtuality may have significant effects on team members' identification with in-group as well as out-group members. If the effects are significant and negative, the level of virtuality in an MNT can be considered a factor to be controlled. Even if it cannot be avoided or minimized, specific techniques (e.g., training or intervention programs) can be designed to minimize its negative effects. If those negative effects can be reduced through leader's specific behaviors, in line with the relevant hypothesis, a foremost concern would be selecting leaders who have the required skills. In addition, improving the leaders through specific training programs may be also considered.

Practical contributions may also center around the findings regarding the impact of salient individual-level characteristics, which are expected to moderate the effects of variety diversity on group identification. Specifically, desired levels

of psychological collectivism and diversity beliefs can be defined with regard to their overall effects on in-group, out-group, and team identification. Consequently, these individual characteristics can serve as criteria in the selection of MNT members.

Statement of Hypotheses

HYPOTHESIS I: Members of MNTs with moderate levels of national background variety diversity will be more likely to define in- and out-groups based on nationalities, whereas members of MNTs with low or high levels of diversity will define the in- and out-groups based on different attributes.

HYPOTHESIS II: Nationality variety diversity will have a curvilinear relationship with identification with the (a) in-group, (b) out-group, and (c) team. Identification with the in-group will be highest for moderate levels of diversity. Identification with out-groups and with the team will be lowest for moderately diverse teams.

HYPOTHESIS III: Degree of virtuality is (a) positively related to identification with the in-group and (b) negatively related to identification with the out-group and (c) the whole team.

HYPOTHESIS IV: The curvilinear relationship between the variety diversity and in-group, out-group, and team identification relationships is moderated by MNT members' collectivism orientation. There will be a three-way interaction such that the curvilinear impact will be stronger for team members with higher collectivism orientation as compared to those with lower collectivism orientation.

HYPOTHESIS V: The curvilinear relationship between the variety diversity and out-group identification relationship is moderated by MNT members' diversity beliefs. There will be a three-way interaction such that the curvilinear impact will be weaker for team members with pro-diversity beliefs as compared to those with pro-similarity beliefs.

HYPOTHESIS VI: The relationship between virtuality and team identification is moderated by leader's behaviors such that the negative impact of virtuality on team identification will be weaker when the team leader is displaying effective behaviors.

HYPOTHESIS VII: (a) In-group identification and (b) out-group identification are negatively related to team trust, and (c) team identification is positively related to team trust.

HYPOTHESIS VIII: Team trust is positively related to (a) team commitment and (b) backup behaviors.

Method

Data were collected in two phases since some revisions to the procedure were needed. The original plan was to collect dyadic data by asking the main respondents to ask one of their teammates to rate their backup behaviors. Despite an intensive, three-month-long effort to achieve this objective, the number of main respondents was 78, and only 15 of them were rated by their teammates. Some personal contacts were asked about the reasons for low participation. Two main reasons were given: (i) the length of the survey and a hesitation to share it with other people knowing the time it would take to complete, and (ii) the dyadic nature of the data collection effort, which seemed to be a burden and stopped many people from becoming a main respondent since they did not want to ask their teammates to rate them.

After the first phase of data collection, modifications were made to the protocol to help increase the sample size. First, scale analyses were conducted with the purpose of shortening the questionnaire. Several items were eliminated due to low variance, skewness, kurtosis, high inter-item correlation, low item-total correlation, or the items' impact on scale reliability. The list of eliminated items and scale reliability scores are provided separately for each scale in the relevant sections and appendices. The eliminated items were not included in the data analysis. Second, the requirement for teammate rating was dropped given the low response rates and the feedback that survey respondents were hesitant to send the survey to a teammate. Thus, backup behaviors could not be measured. The

following subsections of the method section reflect the information about the final sample compiled after both phases.

Participants

A-priori power analyses had been conducted before data collection to calculate the sample size required for conducting the proposed analyses for an anticipated effect size of .15, desired power level of .80 (Cohen, 1992) and probability level of .05. The software named G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009) was used for the power analysis procedure. Based on the original data analysis plan, the suggested sample size was determined as 153 for the most complicated regression analysis. This value was set as the minimum sample size for this study.

The final sample consisted of 184 participants from 30 different national backgrounds who were working as members of multinational teams at the time of data collection. The countries they were working in consisted of 31 different countries (see Table 1). A total of 82 participants (44.5%) reported that they were working at a country different than their home country. More than half of the participants (62.5%) were female and the age of all participants ranged from 22 to 61 with a mean value of 34.1 (*SD* = 6.5). Half of the participants (54.9%) had a Master's degree whereas 29.3 % had an undergraduate degree and 15.8 % had a doctoral degree. The majority of the participants (75%) spoke English as a foreign language and the rest of them were native English speakers. Total work experience ranged from 3 months to 48 years (*M* =124.3, *SD* = 91.4, *in months*).

Table 1

Countries Represented in the Sample

	Country of Origin	Country of Work
Argentina	1	1
Australia	1	1
Austria	-	2
Belgium	1	1
Brazil	2	1
Canada	2	6
Chile	1	1
Denmark	1	-
Egypt	2	1
France	4	3
Germany	8	16
Greece	1	-
India	6	1
Iran	1	-
Italy	4	4
Jamaica	1	2
Jordan	1	1
Mexico	-	1
Netherlands	1	4
Oman	1	-
Poland	1	1
Qatar	1	3
Romania	15	16
Russia	1	-
Saudi Arabia	1	-
Serbia	1	2
Singapore	-	2
South Africa	1	1
South Korea	-	1
Spain	3	2
Sweden	-	1
Switzerland	-	1
Turkey	84	43
United Arab Emirates	-	4
United Kingdom	4	16
USA	31	43
Vietnam	-	1
Zambia	1	-
Not reported	1	1

The length of their experience with their current teams ranged from 1 month to 7 years (*M*=22.4, *SD*=20.7, *in months*).

The participants were members of different types of teams, classified using the typology presented by Sundstrom, McIntyre, Halfhill, and Richards (2000). Specifically, they were members of time-limited project teams (e.g., consulting teams; 34.2%), management teams (e.g., steering committees; 22.8%), advisory groups (e.g., employee involvement groups; 10.3%), service groups (e.g., flight crews; 7.1%) and action and performing groups (e.g., musician groups; 1.6 %). In addition, 6.5 % of the participants were members of student project groups. If participants were part of multiple teams (e.g., two separate project groups), they were specifically asked to focus on the team with which they do the most work while filling out the questionnaire.

Procedure

Potential respondents (i.e., employees who might be working as MNT members at the time of data collection) were reached via four main resources. First, personal contacts were used for snowballing. Facebook posts and direct personal e-mails were shared with contacts. The personal contacts were also asked to share the announcement with their networks. Second, key contacts from the human resources departments of several multinational organizations were reached through personal network or e-mail addresses indicated at official webpages of the organizations, and they were offered company-based reports in return of their support for data collection. None of these contacts agreed to post the study as a broad company announcement; however, some of the contacts agreed to share the

announcement with their personal networks. Third, the announcement for participation was posted on the LinkedIn pages of global professional groups such as Big Four Consulting, since it was known that such companies employ multinational teams for their projects. Finally, a professional ad was posted on Facebook, which was designed to be seen by the current employees of several multinational organizations known for employing MNTs in at least 10 countries. The ad was active for a total of nine days (including two weekends), and, according to the reports provided by Facebook, 51,000 people saw the ad. Due to the difficulty of determining the total number of people reached via all these methods, the response rate could not be calculated.

The announcement that was shared via these methods included the criteria for participation (e.g., that the person must be collaborating interdependently with people from different cultures on a regular basis) and explained the study (see Appendix A). The potential participants were also informed that the researcher would make a donation to a charity (i.e., Greenpeace, Unicef, World Wide Fund for Nature) in return for their participation in the study. The link to the informed consent form (see Appendix B) and the link to the questionnaire (which was prepared and shared via Qualtrics by the principal investigator) were included in the announcement. The announcement and the questionnaire were written in English; the assumption was made that nonnative speakers would be competent in understanding and expressing themselves in English given that they were working as members of MNTs.

The order of the scales included in the questionnaire had to be considered carefully to avoid priming effects (Schwarz & Strack, 1991). Especially the procedure of listing the in-group and out-group members within the team had the potential to trigger positive or negative thoughts and impact the way participants respond to relevant questions. Therefore, it was presented late in the questionnaire.

The questionnaire started with the open-ended questions about demographics, duration of work experience, country of origin and country in which participants were working, and whether the participants were native versus nonnative speakers of English (Yes/No). After these questions, the participants responded to the scales that measured their personal values (i.e., collectivism orientation and diversity beliefs). Following those scales, they saw the following direction: “If you are part of multiple teams (e.g., two separate project groups), please focus on the team with which you do the most work for all questions concerning your team and experiences with the team.” They indicated their total duration of experience with their team and responded to a multiple-choice question about the type of their team. Next, participants were asked to complete scales measuring trust in the team, team identification, and team commitment.

After that, participants were asked questions that focused on team leaders. First, they replied to the following question: “Is there a particular person (including you) you can consider as the leader of your present team?” (Yes/No). If their answer was yes, they were asked another question: “Would you define yourself as the leader of your team?” (Yes/No). After this one, they rated the

leaders' effectiveness using the scale, regardless of their answer to the second question.

After completing the leader-related section, all participants were asked to fill out a form, which was later used to calculate nationality variety diversity. They also rated the degree of virtuality of the team using a relevant scale. Next, the participants were presented with open-ended questions in which they were asked to define the in- and out-groups present in their teams. The participants also filled out the identification scale separately for their in- and out-groups. The open-ended question, which was developed for checking the potential issues at the national level, was seen after the in- and out-group identification scales. The scales and forms are included in the Appendices.

The last scale was an absenteeism scale. In line with the suggestions of Lindell and Whitney (2001), this scale was irrelevant to the hypotheses, and it was included in the questionnaire as a marker variable to examine how problematic common method variance was for the data. During data analysis, the correlations among the continuous study variables were analyzed by controlling for absenteeism scores to examine if they were significantly different from the original correlations.

Finally, the respondents picked a charity organization (Greenpeace, Unicef, or World Wide Fund for Nature) for their donation. During the first phase of data collection, the amount of the donation was 1.5 USD per each main respondent, only if they were also rated by a teammate. The teammates also picked one of the options for the same amount of donation. During the second

phase of data collection, the teammate requirement was removed and the amount was increased to 2 USD for each respondent.

Measures

Type of team. A multiple-choice question was used: "Please indicate which one of the types of teams below defines your team." The options were listed as time-limited project teams (e.g., consulting teams), management teams (e.g., steering committees), advisory groups (e.g., employee involvement groups), service groups (e.g., flight crews), and action and performing groups (e.g., musician groups), consistent with Sundstrom et al.'s (2000) typology. In addition, one option was included for student project groups.

Nationality variety diversity. The open-ended form for calculating the nationality variety diversity included two parts. The participants were asked to list the countries represented at the team and then the number of team members from each country**.** Nationality variety diversity was operationalized by using Blau's (1977) heterogeneity index, which is consistent with Harrison and Klein's (2007) suggestion. The index is formulized as $1 - \Sigma p_i^2$, where *p* is the proportion of group members in a certain category (i.e., nationality in the present study) and *i* is the number of different nationalities represented in the team. For a totally homogenous team, the value was 0, whereas the value approached 1 for increased variety diversity. The value was calculated for each respondent based on their responses to the relevant form (see Appendix C).

Degree of virtuality. The 2-item measure was developed based on Griffith and Neale's (2001) classification of teams. Accordingly, the respondents

rated two items. The first item was “Please indicate the time you spend together while working on your team tasks” and the respondents were asked to respond by using a 5-point scale ranging from 1 (*never*) to 5 (*always*). The second item was “Please rate how much you rely on face-to-face vs. electronic communication while working on your team tasks” and the respondents were asked to respond by using a 5-point scale ranging from 1 (*electronic communication only*) to 5 (*face-to-face only).* The scores were combined as a product term and the term was reversed. After this calculation, a higher product score indicated a more virtual team, whereas a lower product score indicated a more traditional team.

Collectivism orientation. The collectivism orientation scale developed by C. L. Jackson et al. (2006) was used for the individual-level measurement. The 15 items of the scale represent five different dimensions of psychological collectivism: preference, reliance, concern, norm acceptance, and goal priority. Reflecting on their time in present or past work groups, respondents rated items such as “I preferred to work in those groups rather than working alone” and “I followed the procedures used by those groups” (see Appendix D). Each item was rated on a 5-point scale ranging from 1 *(strongly disagree)* to 5 *(strongly agree*). An average was calculated for each respondent’s score on individual collectivism orientation, since it was used as a single construct in the study hypotheses consistent with the literature. The reliability score of the scale for the final data set was $\alpha = .83$. Later, facet scores were also calculated (as the average score of items) for exploratory analyses.

Diversity beliefs. Diversity beliefs was measured using the scale developed by van Dick et al. (2008), which is based on van Knippenberg et al.'s (2007) original conceptualization of the construct. The wording was adjusted for the present study to reflect the multinational team context. The scale consisted of four items, such as "Creating work groups that contain people from different national backgrounds is likely to lead to trouble" (reversed). The items were rated using a 5-point scale that ranged from 1 *(strongly disagree)* to 5 *(strongly agree*). After the first phase, one item of the scale was eliminated, however the reliability score was $\alpha = .47$ for the remaining items. To improve the reliability, two new items were added to the scale before the second phase of data collection (see Appendix E). The reliability score was $\alpha = .70$ for the data set gathered during Phase 2, which included the additional two items as well. Before the analyses, two negative items were reversed and an average score was calculated for each respondent. Higher average scores indicated pro-diversity beliefs and lower average scores indicated pro-similarity beliefs.

Team leader behaviors. Filling out this scale was conditional, depending on respondents' answers to the following question: "Is there a particular person you can consider as the leader of your present team?" Only the respondents who responded affirmatively completed the team leader behaviors scale. The participants were also asked if they were the team leader; if so, they were asked to rate their own behaviors as the team leader. The scale was developed for this study based on the previous literature. Recommendations regarding effective behaviors for leading multinational and virtual teams were identified (Kayworth

& Leidner, 2002; Malhotra et al., 2007; Sivunen, 2006); these behaviors were used to create a 12-item scale that assessed both MNT and virtual team leadership. Sample items of the scale were: "The leader of my current team communicates with team members regularly" and "The leader of my current team coordinates work-cycles and meetings." The list of the leadership behaviors were rated by respondents using a scale ranging from 1 *(never)* to 5 *(always)*, to indicate the degree the leader displays those behaviors. After the first phase, six items of the scale were removed and Cronbach's α was .89 for the remaining items based on the responses in the final data set (see Appendix F). An average score was calculated and higher scores indicated that effective leadership behaviors were more frequently used.

In-group vs. out-group categorization. An open-ended qualitative approach was employed to analyze the in-group vs. out-group distinction for each participant. This allowed for an in-depth analysis without priming the participants for cultural differences. The method developed by J. W. Jackson (2002) was adjusted for the present study. The participants were asked to select an in-group and an out-group within the team they are working with. Then they were asked to fill out two separate boxes with the basic demographic information of their teammates considered in-group vs. out-group members (see Appendix G). This information was examined separately for each team member to see if the basis for group formation is national background or other characteristics. In addition to the form, participants were asked to respond to an open-ended question: "Please try to define the main characteristic of the team members that served as a basis for in-

group vs. out-group distinction you have defined. In other words, what is the dominant characteristic that helps you distinguish the in-group from the out-group?"

Group identification. The scale developed by Doosje, Ellemers, and Spears (1995) was used to measure group identification. The scale consisted of 4 items (see Appendix H) such as "I define myself as a member of this group." The respondents rated the scale three times, once for the whole team, once for the in-groups and once for the out-groups. The scale was filled out for the whole team before the subgroup categorization process. After the categorization process, the participants were asked to fill out the scale first for the subset of team members they defined as their in-group and then for the subset of the team members they defined as their out-group. The items were rated using a scale ranging from 1 *(strongly disagree)* to 5 *(strongly agree)*, and average scores were calculated separately for in-group, out-group, and team identification. Higher scores indicated higher identification. For the final data set, Cronbach's α scores were .71 for whole team, .80 for in-group, and .88 for out-group.

Trust. The trust scale adapted from Pearce, Sommer, Morris, and Frideger (1992) by Jarvenpaa and Leidner (1999) was used after some further adaptation for the present study. The scale consisted of eight items, such as "Members of my team show a great deal of integrity." Each item was rated on a 5-point scale ranging from 1 *(strongly disagree)* to 5 *(strongly agree)*. Four items were removed after the first phase and Cronbach's α was .78 for the final data set

including 4 items (see Appendix I). An average score was calculated and higher average scores indicated higher trust in team.

Team member commitment. Commitment to the team was measured by using eight items based on the Affective Commitment Scale developed by Allen and Meyer (1990). Sample items from the scale included statements such as "This team has a great deal of personal meaning to me." Each item was rated on a 5-point scale ranging from 1 *(strongly disagree)* to 5 *(strongly agree).* After the first phase, four items were eliminated. Cronbach's α for the final data set was .85. An average of remaining four items was calculated after reversing the negative items, and it was treated as the commitment score (see Appendix J).

Demographics. Demographic questions for all respondents consisted of age, gender, level of education, and duration of work experience in total, in the present organization, and in the present team. Participants also stated the country they consider their home country and the country they primarily work in. The questionnaire also included a question asking whether the participant was a native speaker of English (Yes/No).

Control variable. The questionnaire also included an open-ended question about national-level issues that may impact the attitudes of team members toward each other. The question was stated as "Please think about the nationalities represented in your team and your own nationality. Are there any unique issues at the national level that may impact your attitudes toward the team members from certain countries, such as being members of European Union or having a historical conflict? Please explain briefly."

Absenteeism. During the first phase, the original scale developed by Hanisch and Hulin (1991) was used and consisted of three items such as "How often are you absent from work?" Each item was rated on a different scale ranging from 1 to 5 and Cronbach's α was .68. For the second phase, the items of the measure were revised. In the original version, the anchors represented by 1 and 5 were different for each item. For the second phase, the wording of the items were revised, while the meaning was kept the same, so that each item was rated on the same scale. For example, the original item "How likely is it that you will be absent from work?" was rated on a scale ranging from 1 (*very unlikely*) to 5 (*very likely*). It was revised as "It is likely that I will be late to work" and was rated on a five-point scale ranging from "*strongly disagree*" to "*strongly agree*" (see Appendix K). Cronbach's α was .81 for the second version of the scale. An absenteeism score was calculated based on the mean scores, separately for each version. Higher score indicated higher tendencies toward absenteeism.

Results

Preliminary Analyses

Item analyses were conducted for the final data set before the calculation of the scale scores. Based on these analyses, none of the remaining items (after the elimination after the first phase of data collection) were eliminated due to skewness or kurtosis, and scale reliability scores were satisfactory (i.e., Cronbach's alpha values ranged from .70 to .88). The scale scores were calculated for each variable and they were examined for normality; no problems were observed. Descriptive statistics, scale reliability scores, and correlations for all continuous study variables are presented at Table 2.

Data Preparation

Before the hypothesis testing procedure, a qualitative analysis of participants' responses to the questions about the subgroup formation was conducted. The answers were coded by two independent raters, the principle investigator and a graduate student in industrial-organizational psychology who was blind to the study's objectives. The coding was primarily based on the characteristics of in-group and out-group members listed separately by each participant. If the response was missing or insufficient, responses to the open-ended question about the distinguishing characteristic of in- vs. out-group members were used for categorization. Using the card sorting method, similar responses were gathered together independently by each rater. After the sorting process, the raters named each group of responses. During this process, there were

Table 2

Descriptive Statistics, Scale Reliability Scores, and Correlations for All Continuous Study Variables

Measure	*N*	*Mean*	*SD*	α	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	10	11
1. Variety Diversity	166	.59	.24												
2. Virtuality	175	14.17	4.88	-	.11										
3. Collectivism	184	3.72	.45	.83	-.02	-.12									
4. Diversity Beliefs	183	3.91	.53	.69	.07	-.03	.21**								
5. Leader Behaviors	113	3.80	.75	.88	.10	-.17	.19*	-.07							
6. In-group Identification	163	3.96	.57	.80	.09	-.04	.15	.14	.50**						
7. Out-Group Identification	136	2.78	.79	.88	-.07	.02	.24**	.01	.21	.05					
8. Team Identification	182	3.67	.73	.71	.09	-.11	.15*	.06	.37**	.46**	.17*				
9. Team Trust	184	3.96	.55	.78	.01	.07	.15*	.06	.42**	.50**	.17*	.55**			
10. Team Commitment	182	3.45	.75	.85	.03	-.05	.26**	.07	.43**	.49**	.22*	.64**	.54**		
11. Team Longevity *(months)*	180	27.17	22.5	-	.02	.07	-.04	.04	.04	.15	.12	.10	.09	.08	
12. Absenteeism	160	2.04	.74	.81	.12	-.04	-.12	.03	-.19	-.22*	-.19*	-.15	-.08	-.16*	-.16*

** Significant at the .01 level (2-tailed)
*Significant at the .05 level (2-tailed)

no previously prepared guidelines for the potential number or names of the categories. The category names assigned by the raters were later compared to ensure inter-rater reliability. Few conflicting categories were discussed and agreed upon.

A clear basis for categorization could be defined for 114 of the 184 participants. The remaining 70 participants did not respond to the open-ended question, and the basis for categorization could not be defined based on the lists of in-group and out-group members they provided. In those cases, the lists consisted of team members with a mix of characteristics. The participants listed people with very similar characteristics (e.g., nation, age, or gender) as both in-group and out-group members, thus the raters could not know the reason why one of them was an in-group member whereas the other one was an out-group member. At the end of the coding process, eight main bases for categorization were identified. They are listed in Table 3.

For a detailed examination of the level of nationality variety diversity, multinational teams represented in the sample were grouped into three categories depending on their score on Blau's Index (1977), which ranged from 0 to 1, where 0 indicated low levels of variety diversity and 1 indicated high levels of variety diversity. Accordingly, teams with scores ranging from 0 to .33 were categorized as low variety diversity teams (n = 27), teams with scores ranging from .34 to .66 were categorized as moderate variety diversity teams (n = 58) and teams with scores ranging from .67 to 1 were categorized as high variety diversity teams (n = 79). As the final step in data preparation, all continuous variables and two-way

and three-way interaction terms necessary for testing the hypothesized relationships were centered for the regression analyses.

Table 3

Distribution of Bases of Subgroup Categorization

Category	Percent	Sample Reasons
Personal characteristics	23.9%	- Attitude - Integrity
Communication	23.0%	- Personal communication - Language
Shared tasks and goals	19.5%	- Common goals - Position requirements
Contribution to teamwork	14.2%	- Collaboration - Dedication
Demographic characteristics	7.1%	- Age - Education level
Nationality	6.2%	- Nationality
Trust	3.5%	- Trust
Perceived similarities	2.7%	- Common emotions - Common ideas

n = 114

Hypothesis Testing

Members of MNTs with moderate levels of variety diversity were expected to be more likely to define their in- and out-groups based on nationalities, whereas members of MNTs with low or high levels of diversity were expected to define their in- and out-groups based on different attributes (Hypothesis 1). Among 114 participants for whom the basis of the categorization could be identified, personal characteristics, such as attitude, warmth, and integrity, and ease of communication appeared as the most frequent bases (see Table 3). Nationality could be defined as the basis for categorization for only

6.2% of those participants. Among the three variety diversity categories of teams, members from low diversity teams were less likely to provide or indicate a basis for in-group vs. out-group categorization; thus, the basis could be defined for 37% of those team members, whereas it could be identified for 70.7% of members of moderately diverse teams, and 70.9% of members of highly diverse teams.

To test the first hypothesis, a multiple logistic regression analysis was conducted to analyze whether the level of nationality variety diversity influenced the likelihood of defining subgroups based on nationality versus other characteristics. For this test, the basis of categorization was dichotomously coded as nationality or other criteria for the participants for whom a basis was defined. In order to examine the curvilinear relationship, nationality diversity and the square of nationality diversity were defined as the independent variables. Results of the analyses of model fit were nonsignificant, $\chi^2(2, N = 108) = 1.93$, $p = .38$. It can be concluded that the odds of defining the subgroup based on nationality versus other characteristics did not change depending on the degree of nationality variety diversity at the team. Thus, Hypothesis 1 was not supported.

The lack of support for the first hypothesis impacted the data analysis strategy. Since nationality was not found as one of the main determinants of subgroup categorization, several hypotheses were not tested. Potential direct as well as indirect effects of the level of nationality variety diversity would be very difficult to interpret since in- and out-group identification had various bases within the sample. Specifically, the hypotheses about the expected direct effects of nationality variety diversity on in-group, out-group, and team identification

(Hypothesis 2), the moderating effects of collectivism orientation on the relationship between nationality variety diversity and different types of identification (Hypothesis 4), and the moderating effects of diversity beliefs on the relationship between nationality variety diversity and out-group identification (Hypothesis 5) were not tested. After testing the remaining hypotheses, exploratory regression analyses were conducted for an in-depth examination of the data, excluding the nationality variety diversity variable.

Hypothesis testing continued with Hypotheses 3 and 6. Hypothesis 3 stated that degree of virtuality was (a) positively related to identification with in-group and (b) negatively related to identification with out-group and (c) the whole team. According to Hypothesis 6, the relationship between virtuality and team identification was expected to be moderated by leader's behaviors. Multivariate Analysis of Variance (MANOVA) was conducted for testing the expected effects. This analyses contained degree of virtuality, leader behaviors, and their interaction term as the independent variables, and in-group, out-group, and team identification as the dependent variables.

Results revealed that leader behaviors had a significant effect on identification variables, F (3,81) = 14.06, p = .00. Wilk's Λ = .64. Specifically, effective leadership was likely to increase in-group identification [F (1,81) = 33.03, p = .00, partial η^2 = .29], out-group identification [F (1,81) = 4.47, p = .04, partial η^2 = .05], and team identification [F(1,81) = 16.57, p = .00, partial η^2 = .17]. Degree of virtuality of the team and the interaction of leadership effectiveness with virtuality did not have significant effects on the identification

variables, F (3,81) = 1.13, p = .34; Wilk's Λ = .96 and F (3,81) = 1.55, p = .21; Wilk's Λ = .94, respectively.

Moderated regression analyses were conducted first to test Hypothesis 7 and later for exploratory purposes. Regression assumptions were tested separately for each regression equation. Specific examinations included heteroscedasticity, multicollinearity, and influential observations. For heteroscedasticity, the normality of the distribution was checked through the residuals' distribution and the mean of errors equaled zero for each regression. Visual inspections of the plots of regression residuals also did not reveal any problems. For testing multicollinearity, collinearity statistics were calculated for all predictors and this assumption was also met at all regressions since none of the tolerance values were less than .10. Finally, Cook's distance was used to detect influential observations. For each regression, the values larger than $4/(n-k-1)$ were identified as influential observations and they were further examined to detect if there are any problems arising from data entry or calculation problems (Chatterjee & Hadi, 1988). Since no such problems were detected, influential observations were removed and regression analyses were conducted once more without them. Post-hoc power analyses were conducted for each regression based on the anticipated effect size (.15) and observed sample sizes. Results of all analyses will be reported for each regression analysis.

The first regression equation was employed to test the direct effects of the three different dimensions of identification on team trust. Team trust was expected to be predicted by team identification (Hypothesis 7a), in-group

identification (Hypothesis 7b), and out-group identification (Hypothesis 7c). The hypothesized relationship was a positive association for team- and out-group identification and a negative association for in-group identification. All of the predictors were entered to the regression at a single step and results revealed that it was a significant model, F (3,131) = 27.66, p = .00, explaining 37.4% of the variance. Specifically, in-group identification (β = .32, p = .00) and team identification (β = .38, p = .00) predicted team trust significantly, whereas the effect of out-group identification (β = .09, p = .17) was not significant. The results did not change substantially after the removal of six influential observations (see Table 4). Based on these analyses, Hypotheses 7a was supported and Hypothesis 7c was not supported. Results revealed a significant positive relationship for in-group identification whereas the relationship was expected to be negative. Thus, Hypothesis 7b was not supported. Results of post- hoc power analyses revealed that the statistical power was .97 for the regression model for an anticipated effect size of .15 and probability level of .05.

Table 4

Summary of Regression Analysis of Team Trust

	Coefficients			Model Statistics		
	B	SE B	β	N	R^2	F
				134	.37	27.66**
In-group Identification	.31	.08	.32**			
Out-group Identification	.07	.05	.09			
Team Identification	.37	.06	.38**			
	Reanalysis without Influential Observations					
				128	.42	32.21**
In-group Identification	.32	.07	.38**			
Out-group Identification	.06	.05	.09			
Team Identification	.28	.05	.42**			

** Significant at the .01 level (2-tailed)

Hypotheses 8a and 8b were originally planned to be tested with MANOVA to examine the effects of team trust on two dependent variables, commitment to team and backup behaviors. Since backup behaviors could not be included in the data set due to challenges in the data collection process, only Hypothesis 8a could be tested. The strong positive correlation between team trust and commitment to team (r = .55, p = .00) revealed support for this hypothesis, indicating that as team trust increases, so does commitment to the team.

Exploratory Analyses

Exploratory analyses were primarily conducted with the purpose of developing and testing an alternative model based on the IMOI model of team effectiveness (Ilgen et al., 2005) that excluded nationality variety diversity as an input variable. With this purpose, three regression analyses for examining the predictors of (i) team commitment, (ii) team identification, and (iii) team trust were conducted. The results of those analyses were later combined to develop an alternative model for the study and the model was further examined via path analysis.

The first regression analysis included team commitment as the criterion variable and in-group identification, out-group identification, team identification, and team trust as the predictors (see Table 5). The regression model was significant, F (4,130) = 29.29, p = .00, explaining 45.2% of the variance. Specifically, team identification (β = .44, p = .00) and team trust (β = .24, p = .00) predicted commitment to the team, whereas in-group and out-group identification were not predictors of this output. Results did not change substantially after the

removal of six influential observations. Results of post- hoc power analysis revealed that the statistical power was .96 for the regression model for an anticipated effect size of .15 and probability level of .05.

Table 5

Summary of Regression Analysis of Team Commitment

	Coefficients			Model Statistics		
	B	SE B	β	N	R^2	F
				134	.45	29.29**
In-group Identification	.13	.11	.09			
Out-group Identification	.09	.06	.09			
Team Identification	.44	.08	.44**			
Team Trust	.34	.11	.24**			
		Reanalysis without Influential Observations				
				128	.52	35.18**
In-group Identification	.10	.11	.07			
Out-group Identification	.08	.06	.08			
Team Identification	.49	.08	.47**			
Team Trust	.40	.11	.28**			

** Significant at the .01 level (2-tailed)

Given that team identification and team trust were the only determinants of team commitment, further analyses focused on examination of the input variables predicting them. Focusing on the effects of two key mediators functioning simultaneously rather than looking for a path from team identification to team commitment through team trust was also consistent with the IMOI model of team effectiveness (Ilgen et al., 2005), given that the model insists that the mediators exist at the same level. Lack of in-group identification as a predictor of team commitment may also be expected since there were various bases of in-group identification among the participants and the specific basis was unknown for 38% of the participants.

Multiple moderated regressions for team identification and team trust were conducted separately. Both analyses involved collectivism orientation, diversity beliefs, degree of virtuality, leader behaviors (Step 1), time (Step 2), interaction of virtuality and leader behaviors (Step 3) and two-way interaction terms for time and each input (Step 4) as the predictors. These analyses involved time spent with the team as one of the direct and moderating predictors to control for its potential effects on the criterion variable in question; this was based on the premises of the team compilation model (Kozlowski et al., 1999) and results of former studies (e.g., Dierdorff et al., 2011), which showed that certain characteristics of team members or teams might be more influential during the earlier phases of team compilation. Results of these two regression analyses were later incorporated with the previous findings when developing the final model.

During the analysis of team identification (see Table 6), the first model, which included only the main effects of the inputs, had the most significant results, F (4,101) = 5.78, p = .00, explaining 15.9 % of the variance. Accordingly, team identification was predicted by collectivism orientation (β = .19, p = .05) and frequency of leader behaviors (β = .32, p = .00): Higher collectivism orientation of team members and higher frequency of observed leader behaviors increased team commitment. The results did not change substantially after the removal of three influential observations. Results of a post-hoc power analysis

Table 6

Summary of Hierarchical Regression Analysis of Team Identification

	Coefficients			Model Statistics				
	B	SE B	β	N	R^2	F	ΔR^2	ΔF
Step 1				101	.16	5.78**		
Collectivism	.31	.16	.19*					
Diversity Beliefs	.07	.14	.05					
Virtuality	-.02	.01	-.10					
Leader Behaviors	.32	.09	.32**					
Step 2				101	.16	4.73**	.00	1.05
Collectivism	.30	.16	.18					
Diversity Beliefs	.07	.14	.04					
Virtuality	-.01	.01	-.08					
Leader Behaviors	.32	.09	.33**					
Time	.00	.00	-.07					
Step 3				101	.15	3.91**	.01	.82
Collectivism	.30	.16	.18					
Diversity Beliefs	.06	.14	.04					
Virtuality	-.01	.01	-.08					
Leader Behaviors	.32	.09	.33**					
Time	.00	.00	-.07					
Virtuality x Leader Behaviors	.00	.02	-.02					
Step 4				101	.19	3.41**	.04	.50
Collectivism	.25	.17	.15					
Diversity Beliefs	.05	.14	.03					
Virtuality	-.01	.02	-.07					
Leader Behaviors	.39	.10	.40**					
Time	.00	.00	-.21					
Virtuality x Leader Behaviors	-.01	.02	-.05					
Collectivism x Time	.00	.01	.00					
Diversity Beliefs x Time	.01	.00	.28					
Virtuality x Time	.00	.00	.29					
Leader Behaviors x Time	.01	.00	.20					

Table 6

Summary of Hierarchical Regression Analysis of Team Identification (continued)

	Coefficients			Model Statistics				
	B	SE B	β	N	R^2	F	ΔR^2	ΔF
	Reanalysis without Influential Observations							
Step 1				98	.18	6.28**		
Collectivism	.35	.18	.20*					
Diversity Beliefs	.00	.16	.00					
Virtuality	-.02	.02	-.11					
Leader Behaviors	.33	.01	.33**					
Step 2				98	.17	5.07**	.01	1.21
Collectivism	.33	.18	.19					
Diversity Beliefs	.00	.16	.00					
Virtuality	-.02	.02	-.10					
Leader Behaviors	.34	.01	.37**					
Time	.00	.00	-.06					
Step 3				98	.16	4.21**	.01	.86
Collectivism	.33	.18	.19					
Diversity Beliefs	.01	.16	.00					
Virtuality	-.02	.02	-.10					
Leader Behaviors	.34	.10	.34**					
Time	.00	.00	-.07					
Virtuality x Leader Behaviors	.01	.02	.04					
Step 4				98	.25	4.25**	.09	.04
Collectivism	.30	.19	.17					
Diversity Beliefs	-.05	.16	-.03					
Virtuality	-.02	.02	-.11					
Leader Behaviors	.47	.11	.47**					
Time	-.01	.00	-.20					
Virtuality x Leader Behaviors	.01	.02	.02					
Collectivism x Time	.00	.01	-.07					
Diversity Beliefs x Time	.01	.00	.24					
Virtuality x Time	.00	.00	.12					
Leader Behaviors x Time	.02	.01	.19					

** Significant at the .01 level (2-tailed)

* Significant at the .05 level (2-tailed)

revealed that the statistical power was .87, .84, .81, and .71 respectively for the regression models for an anticipated effect size of .15 and probability level of .05.

During the analysis of team trust (see Table 7), the first model, which included only the main effects of the inputs, had the most significant results, $F(4,102) = 7.02$, $p = .00$, explaining 19.1 % of the variance. Accordingly, team trust was predicted by collectivism orientation ($\beta = .26$, $p = .07$) and frequency of leader behaviors ($\beta = .35$, $p = .00$): Higher collectivism orientation of team members and higher frequency of observed leader behaviors increased trust in team. The results did not change substantially after the removal of two influential observations. Results of a post-hoc power analysis revealed that the statistical power was .86, .83, .80, and .69 respectively for the regression models for an anticipated effect size of .15 and probability level of .05.

Results of the regression analyses conducted for exploratory purposes revealed that collectivism orientation and leadership behaviors predict team trust, identification, and commitment to team. The final model was developed by combining these results; the model included direct and indirect relationships. This model was tested via path analysis (see Figure 3) using MPlus.

Results revealed that the model fit was at acceptable levels based on the criteria defined by Kline (2011). Based on these criteria, a good model fit can be identified by a non-significant chi-square value (for the null hypothesis that the model fits the covariance matrix), the TLI should be close to 1, the CFI should be higher than .90, the RMSEA should be lower than .10, and the SRMR should be lower than .08. The alternative model tested in this study had a good model fit

Table 7

Summary of Hierarchical Regression Analysis of Team Trust

	Coefficients			Model Statistics				
	B	SE B	β	N	R^2	F	ΔR^2	ΔF
Step 1				102	.19	7.02**		
Collectivism	.34	.12	.26**					
Diversity Beliefs	.03	.11	.03					
Virtuality	.00	.01	.02					
Leader Behaviors	.27	.07	.35**					
Step 2				102	.18	5.56**	.01	1.46
Collectivism	.34	.12	.26**					
Diversity Beliefs	.03	.11	.03					
Virtuality	.00	.01	.02					
Leader Behaviors	.27	.07	.35**					
Time	.00	.00	.01					
Step 3				102	.19	5.12**	.01	.44
Collectivism	.32	.12	.28**					
Diversity Beliefs	.01	.11	.01					
Virtuality	.00	.01	.02					
Leader Behaviors	.27	.07	.35**					
Time	.00	.00	.02					
Virtuality x Leader Behaviors	-.02	.01	-.14					
Step 4				102	.16	2.98**	.07	2.14
Collectivism	.33	.13	.26**					
Diversity Beliefs	.00	.11	.00					
Virtuality	.00	.01	.02					
Leader Behaviors	.28	.08	.36**					
Time	.00	.00	.01					
Virtuality x Leader Behaviors	-.02	.01	-.15					
Collectivism x Time	.00	.01	.04					
Diversity Beliefs x Time	.00	.00	-.01					
Virtuality x Time	.00	.00	.00					
Leader Behaviors x Time	.00	.00	.03					

Table 7

Summary of Hierarchical Regression Analysis of Team Trust (continued)

	Coefficients			Model Statistics				
	B	SE B	β	N	R^2	F	ΔR^2	ΔF
	Reanalysis without Influential Observations							
Step 1				100	.21	7.72**		
Collectivism	.31	.12	.24*					
Diversity Beliefs	.03	.11	.03					
Virtuality	.00	.01	.00					
Leader Behaviors	.30	.07	.38**					
Step 2				100	.20	6.12**	.01	.16
Collectivism	.31	.12	.24*					
Diversity Beliefs	.04	.11	.03					
Virtuality	.00	.01	.00					
Leader Behaviors	.30	.07	.38**					
Time	.00	.00	.01					
Step 3				100	.20	5.23**	.00	.89
Collectivism	.31	.12	.24*					
Diversity Beliefs	.03	.11	.02					
Virtuality	.00	.01	.00					
Leader Behaviors	.29	.07	.37**					
Time	.00	.00	.02					
Virtuality x Leader Behaviors	-.01	.02	-.08					
Step 4				100	.18	3.22**	.02	2.01
Collectivism	.28	.14	.22*					
Diversity Beliefs	.06	.12	.05					
Virtuality	.00	.01	-.03					
Leader Behaviors	.35	.09	.44**					
Time	.00	.00	.05					
Virtuality x Leader Behaviors	-.01	.02	-.08					
Collectivism x Time	.00	.01	-.01					
Diversity Beliefs x Time	.00	.00	.08					
Virtuality x Time	.00	.00	-.05					
Leader Behaviors x Time	.01	.00	.16					

** Significant at the .01 level (2-tailed)

* Significant at the .05 level (2-tailed)

according to these criteria: $\chi^2(5, N = 112) = 3.00$, $p = .70$, TLI = 1.04, CFI = 1.00, RMSEA = .00, RMSEA 90%CI = .00 - .09, SRMR = .02

Since the model fit was at an acceptable level, the direct and indirect effects between key inputs (collectivism orientation and leader effectiveness), key mediators (team identification and team trust) and the output (commitment to team) were further examined. Consistent with the results of the previous regression analyses, collectivism orientation predicted team identification (β = .22, p = .01) and team trust (β = .25, p = .00). Similarly, leader's behaviors also predicted team identification (β = .33, p = .00) and team trust (β = .38, p = .00). These inputs had significant direct and indirect effects on team commitment, thus their effects were partially mediated via team identification and team trust. The standardized estimates for the direct effect of collectivism orientation was .18 (p = .01) and the direct effect of leader behaviors was .14 (p = .05). Thus, increase in collectivism orientation of the team members and increase in the frequency of leader's behaviors led to higher identification with the team, higher trust in the team, and a higher commitment to the team. As expected, commitment to the team was predicted by team identification (β = .38, p = .00) and team trust (β = .25, p = .00), so that higher identification and trust resulted in higher commitment.

Further exploratory analyses were conducted to examine the data in depth with regard to other potential trends. First, the participants working in their home countries (n = 101) and the participants working in foreign countries (n = 82) were compared on the basis of their psychological collectivism, diversity beliefs, in-group identification, out-group identification, team identification, team trust,

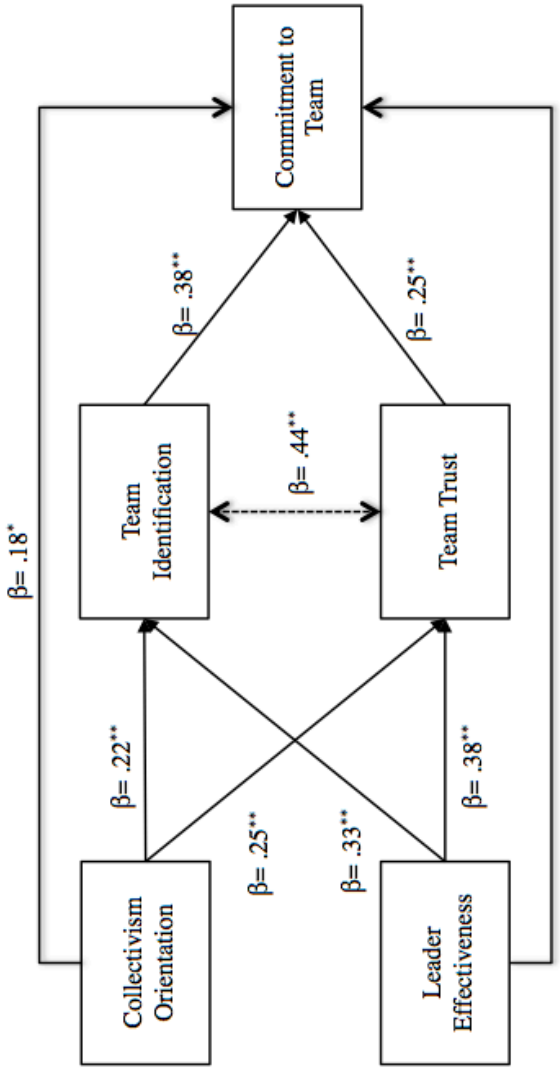

Figure 3. The path analysis results for the final model

and team commitment scores through t-tests. Among those comparisons, significant differences were found only for diversity beliefs: The participants working in a countries different than their home countries had higher pro-diversity beliefs (M = 4.00, SD = .48) in comparison to the participants working in their home countries (M = 3.82, SD = .55), $t(180) = 2.30$, $p = .02$. (see Table 8 for all comparisons).

Table 8

Comparison of Mean Values of Study Variables for Participants Working in Their Home Countries vs. Participants Working in a Foreign Country

	Working at Home Country (n = 101)		Working at a Foreign Country (n = 82)			
	M	*SD*	*M*	*SD*	*t*	*p*
Psychological Collectivism	3.71	.47	3.73	.43	.41	.68
Diversity Beliefs	3.82	.55	4.00	.48	2.30	.02
In-Group Identification	3.97	.57	3.94	.57	-.39	.69
Out-Group Identification	2.76	.77	2.79	.81	.18	.86
Team Identification	3.65	.77	3.69	.69	.39	.70
Team Trust	3.97	.56	3.95	.54	-.20	.84
Team Commitment	3.49	.82	3.41	.66	-.72	.47

For further analyses, correlations of diversity beliefs with the mediators and the output were examined separately for each group of participants to see if diversity beliefs had a relationship with those variables. Results did not reveal any significant correlations among diversity beliefs and in-group identification, out-group identification, team identification, and team trust (see Table 9).

Table 9

Correlation of Diversity Beliefs with Mediators and Output for Participants Working in Their Home Countries vs. Participants Working in a Foreign Country

	Working at Home Country (n = 101)	Working at a Foreign Country (n = 82)
In-Group Identification	.20	.05
Out-Group Identification	.09	-.09
Team Identification	.02	.13
Team Trust	.11	.01
Team Commitment	.09	.06

A similar comparison was made for the participants who were native (n=46) versus nonnative (n=138) speakers of English. The t-test results did not reveal any significant differences among those groups with regard to their scores on psychological collectivism, diversity beliefs, in-group identification, out-group identification, team identification, team trust, and team commitment (see Table 10). Furthermore, the correlations among team size (number of team members), duration of experience (length of working with the team), and the study variables were examined; the results did not reveal any significant correlations (Table 11). Thus, it can be concluded that location of work, being a native versus nonnative speaker of English, and the number of team members were related to neither the key mediators (i.e., identification, trust, and commitment) nor the output (i.e., team commitment).

Table 10

Comparison of Mean Values of Study Variables for Native vs. Nonnative Speakers of English

	Native Speakers (n = 101)		Nonnative Speakers (n = 82)			
	M	*SD*	*M*	*SD*	*t*	*p*
Psychological Collectivism	3.62	.45	3.75	.45	-1.81	.07
Diversity Beliefs	3.86	.56	3.92	.52	-.65	.52
In-Group Identification	3.88	.64	3.99	.55	-1.09	.28
Out-Group Identification	2.80	.68	2.77	.82	.20	.84
Team Identification	3.66	.77	3.67	.73	-.06	.95
Team Trust	3.96	.65	3.96	.52	.00	1.00
Team Commitment	3.44	.77	3.46	.74	-.12	.90

Table 11

Correlation of Team Size with the Mediators and the Output

	Team Size (n = 184)
In-Group Identification	.03
Out-Group Identification	-.11
Team Identification	-.07
Team Trust	-.13
Team Commitment	-.02

The degree of virtuality of the team was measured by using two items. The first item focused on spending time together while working on team tasks (ranging from never to always), whereas the second item focused on the dominant means of communication (ranging from electronic communication only to face-to-face communication only). The product term was created as a measure of the degree of virtuality and it was reversed for the analyses. Results of the previous analyses did not reveal any significant effects of the degree of virtuality on team identification and team trust.

For a more in-depth examination, the two items measuring virtuality were included in regression analysis as separate variables. The first regression analysis tested the main effects of the two dimensions of virtuality, variety diversity, psychological collectivism, diversity beliefs, and leader behaviors as predictors of team identification (see Table 12). Results revealed that the model was significant, F (6, 99) = 4.31, p = .00 and that the time-based component of virtuality was significantly related to team identification (β = .25, p = .02). According to these results, an increase in the amount of time spent together while working on team tasks was related to an increase in team identification. The communication-based component of virtuality did not have a significant main effect.

Table 12

Summary of Regression Analysis of Team Identification for Different Components of Virtuality

	Coefficients			Model Statistics		
	B	SE B	β	N	R^2	F
				99	.17	4.31**
Virtuality – Time	.20	.08	.25**			
Virtuality – Communication	-.11	.08	-.14			
Variety Diversity	.05	.29	.02			
Collectivism Orientation	.30	.16	.18			
Diversity Beliefs	.07	.14	.05			
Leader Behaviors	.25	.09	.26**			
	Reanalysis without Influential Observations					
				96	.23	5.67**
Virtuality – Time	.21	.08	.26**			
Virtuality – Communication	-.09	.08	-.11			
Variety Diversity	.15	.29	.05			
Collectivism Orientation	.31	.16	.19			
Diversity Beliefs	.09	.14	.06			
Leader Behaviors	.29	.09	.30**			

** Significant at the .01 level (2-tailed)

The same regression analysis was conducted for team trust as the criterion variable, but the results were not significant (see Table 13). Both analyses were repeated after the removal of influential observations; however, the results regarding the components of virtuality did not change. Results of post-hoc power analyses revealed that the statistical power was .81 for both regression models for an anticipated effect size of .15 and probability level of .05.

Further analyses were also conducted to more fully examine the five facets of psychological collectivism and their effects on team trust and team identification. All five facets (preference, reliance, concern, norm acceptance, and goal priority) were examined as predictors of team trust (see Table 14) and team identification (see Table 15), separately, since they were the key mediators in this study.

For team identification, the model was significant, F (5,177) = 2.43, p = .04, explaining 3.9 % of the variance. Only the preference facet of psychological collectivism predicted team identification (β = .23, p = .02). The results did not change after the removal of the influential observations. In the analysis of the predictors of team trust, the analyses with the influential observations did not reveal any significant effects. However, the model used for the reanalysis without the influential observations [F (5,163) = 3.77, p = .00] revealed that reliance (β = .20, p = .05) and concern facets (β = .22, p = .01) were predictors of team trust. Results of post-hoc power analyses showed that the statistical power was .98 and .99 respectively for these regression models for an anticipated effect size of .15 and probability level of .05.

Table 13

Summary of Regression Analysis of Team Trust for Different Components of Virtuality

	Coefficients			Model Statistics		
	B	SE B	β	N	R^2	F
				100	.20	5.07**
Virtuality – Time	.01	.06	.02			
Virtuality – Communication	-.05	.06	-.09			
Variety Diversity	-.06	.22	-.02			
Collectivism Orientation	.35	.12	.27			
Diversity Beliefs	.01	.11	.01			
Leader Behaviors	.27	.07	.36**			
	Reanalysis without Influential Observations					
				94	.33	8.66**
Virtuality – Time	.00	.05	.00			
Virtuality – Communication	-.01	.05	-.01			
Variety Diversity	-.16	.19	-.07			
Collectivism Orientation	.36	.11	.31			
Diversity Beliefs	-.00	.09	.00			
Leader Behaviors	.32	.07	.45			

** Significant at the .01 level (2-tailed)

Table 14

Summary of Regression Analysis of Team Identification for Facets of Collectivism Orientation

	Coefficients			Model Statistics		
	B	SE B	β	N	R^2	F
				177	.04	2.43**
Preference	.21	.09	.23*			
Reliance	-.07	.10	-.07			
Concern	.09	.11	.07			
Norm Acceptance	.13	.10	.11			
Goal Priority	-.06	.07	-.06			
	Reanalysis without Influential Observations					
				165	.05	2.93*
Preference	.19	.09	.22*			
Reliance	-.02	.10	-.02			
Concern	.14	.10	.12			
Norm Acceptance	.08	.09	.08			
Goal Priority	-.06	.07	-.07			

* Significant at the .05 level (2-tailed)
** Significant at the .01 level (2-tailed)

Table 15

Summary of Regression Analysis of Team Trust for Facets of Collectivism Orientation

	Coefficients			Model Statistics		
	B	SE B	β	N	R^2	F
				179	.03	2.22
Preference	.05	.07	.07			
Reliance	.07	.07	.10			
Concern	.06	.08	.06			
Norm Acceptance	.12	.07	.13			
Goal Priority	-.07	.05	-.10			
	Reanalysis without Influential Observations					
				163	.08	3.77**
Preference	-.01	.06	-.02			
Reliance	.13	.06	.20*			
Concern	.18	.07	.22**			
Norm Acceptance	.06	.06	.07			
Goal Priority	-.08	.05	-.13			

* Significant at the .05 level (2-tailed)
** Significant at the .01 level (2-tailed)

Finally, common method variance was examined, in line with the recommendations of Lindell and Whitney (2001). The absenteeism scale was included in the questionnaire to use absenteeism as a marker variable; the scale was revised during data collection to improve its psychometric qualities. The scores based on the first and second versions of the scale were calculated for each respondent and the correlations with other variables were examined separately for both versions.

The first version of absenteeism scale correlated significantly with team identification (r = -.23, p = .05) and team commitment, (r = -.24, p = .04) whereas the second version of the scale correlated significantly with in-group identification (r = -.26, p = .02) and out-group identification (r = -.26, p = .03). However, absenteeism scores did not correlate with any of the team member

characteristics (psychological collectivism and diversity beliefs), which were likely to suffer from social desirability motives in the multinational team context. Moreover, absenteeism tendencies may be related to identification with team (van Dick, 2001; Wegge, van Dick, Fisher, Wecking, & Moltzen, 2006) trust in team (Cunningham & MacGregor, 2000; Laschinger, Finegan, & Shamian, 2001), and commitment to team, given that all these variables are indicators of satisfaction with team members and a willingness to work with the team. Thus, it can be concluded that absenteeism was a good marker variable, especially for detecting common method variance affecting the predictors included in the study.

Further analyses showed that common method variance was a not a serious risk for the present study. Analyses revealed that among all continuous study variables, 19 pairs correlated significantly (see Table 2). The significant correlations were further examined separately controlling for the first and second versions of the absenteeism measure. First, all correlations were recalculated controlling for the first version of the scale. Ten out of 19 correlations were still significant after partialing out the marker variable. For the second version of the absenteeism scale, 18 out of 19 correlations remained significant. Given that the second version of the scale had better psychometric qualities, the results indicated that common method bias was not a major issue.

Discussion

Multinational teams are used frequently in global organizations and trying to understand the mechanisms that increase their effectiveness is an important endeavor (Connaughton & Shuffler, 2007; Haas & Nüesch, 2012; Stahl et al., 2010a). This effort is also consistent with the main arguments of Categorization-Elaboration Model (CEM; van Knippenberg et al., 2004a), which states that researchers should focus on defining the conditions maximizing the effectiveness of work groups, rather than trying to reach rigid conclusions about their effectiveness. The present study aimed at defining key team and team-member characteristics that contribute to the effectiveness of MNTs. Findings of this study provided further information about the functioning of such teams, especially with regard to the in-group versus out-group categorization mechanisms of MNT members and the effects of psychological collectivism orientation and leader behaviors on commitment to team via team trust and team identification.

The primary finding of the study was that nationality was not a determinant of subgroup formation in MNTs even though this was expected to be the main basis, given that nationality variety diversity is the defining characteristic of MNTs (Earley & Gibson, 2002). This basis was expected to be most prominent, especially in moderately diverse teams, in which the distinction among different national backgrounds is salient. Results revealed that nationality was reported as the basis of group formation by only 6.2% of the participants for whom the basis could be identified (62 % of the whole sample), and it was not observed more frequently in responses of MNT members from moderately diverse

teams. Ease of communication with certain team members and personal characteristics such as warmth appeared as the most frequent bases of subgroup formation.

Previous research on teams showed that diversity in deep-level characteristics such as personality, values, and abilities have stronger effects on performance in comparison to surface-level characteristics such as nationality and race (S.T. Bell, 2007; Harrison et al., 2002). Based on the findings of the study, it can be concluded that within MNTs, deep-level team-member characteristics constitute more important criteria for subgroup formation in comparison to surface-level characteristics.

The reason of reliance on deep-level characteristics can be explained via the premises of CEM (van Knippenberg et al., 2004a), which states that the salience of the basis of categorization of team members depends on cognitive accessibility of characteristics. In MNTs, national background was expected to be the most salient and accessible characteristic. However, results revealed that MNT members in this sample were more likely to rely on characteristics affecting interpersonal relationships and teamwork as categorization mechanisms, indicating that these characteristics may be cognitively more accessible. There are findings in the previous literature showing that the quality of interpersonal relationships and affective integration arising from it are the main determinants of effective functioning of MNTs (Cronin, Bezrukova, Weingart, & Tinsley, 2011; Oh, Labianca, & Chung, 2006; Zimmermann, 2011). Consistent with those findings, personal characteristics and ease of communication may constitute the

basis of subgroup formation since they seem directly relevant to team functioning and are salient, whereas national background cannot be easily tied to performance of a team member and to team performance.

The findings regarding subgroup formation led to a revision of the data analysis strategy; exploratory analyses resulted in a simplified model that revealed interesting results. First the mediators (three types of identification and trust) were analyzed simultaneously as predictors to compare their effects on the commitment to team. Results showed that team identification and team trust increase commitment to the team and the effect of team identification is stronger than the effect of team trust. Thus, focusing on two key mediators at the same level seemed to be a more fruitful approach than first testing the effects of identification on trust and then testing the effects of trust on commitment. Although in-group identification had a strong positive relationship with team trust, it did not appear to predict commitment to team. Similarly, out-group identification was not a predictor of team commitment either. Thus, it can be concluded that of the different components of identification only team identification is a key mediator in MNTs, in addition to team trust.

Within the final model, psychological collectivism and leader behaviors emerged as the key inputs impacting team commitment directly and indirectly through their positive effects on team trust and team identification. These findings were consistent with the IMOI model (Ilgen et al., 2005) and with the extant literature showing that collectivism orientation is a key personal value that positively impacts team members' perceptions of and attitudes toward teamwork

(Brown et al., 1992; Erez & Earley, 1993; Kirkman et al., 2001; Mockaitis et al., 2012). Similarly, leadership is crucial for all teams, regardless of the type of team, and results of the present study were consistent with the previous literature on team leadership which has shown that leaders play a substantial role in building and preserving trust (DeRosa et al., 2004; Malhotra et al., 2007) and group identification (van Knippenberg et al., 2004a; 2004b). Apart from the final model, leadership was also found to be a determinant of in-group and out-group identification during hypothesis testing.

An interesting finding of the study was that diversity beliefs were not a predictor of any of the criterion variables. This finding may be related to the basis of subgroup formation as well. Pro-diversity or pro-similarity beliefs of MNT members may be unlikely to affect the team members' identification with or trust in their teams, since a majority of the participants were not using national background as a basis of categorization of their team members. In other words, national diversity did not seem to be an important issue for team members. Instead, the ease of communication and the personal characteristics of team members were the main determinants of team members' perceptions of their teammates. Thus, MNT members' feelings about their teams do not necessarily depend on presence of people from different national backgrounds.

The degree of virtuality of the team was operationalized as a composite score (Griffith & Neale, 2001) and it did not have any effects on team identification and team trust. However, results of the exploratory analyses revealed that time spent together (the first dimension of virtuality) predicts team

identification even though the second component (based on medium of communication; only face-to-face vs. only electronic) does not have a relationship with team identification. This finding may arise from the fact that regardless of being a traditional or virtual team, the majority of business interactions are made via electronic media. Even if the team members do not need conference calls or online meetings, they still rely on e-mails to a high extent. Thus, operationalization of virtuality may be insufficient based on the method of which was used for the present study.

Based on the team compilation model (Kozlowski et al., 1999) deep-level individual characteristics such as collectivism orientation (Dierdorff et al., 2011) were expected to be more effective on team performance, especially during the early phases of team development. Similarly, virtuality was expected to be a challenge, especially during the early phases of team development since it increases social uncertainties based on the premises of media richness model (Daft & Lengel, 1986). In order to control for potential effects of team longevity in relation to key team and team member characteristics, all analyses conducted for hypothesis testing included time spent with the team as a covariate. Time was not a significant predictor and did not moderate any relationships with any of the predictors. Thus, the effects of the predictors (psychological collectivism and leader behaviors) were not dependent on team longevity.

Practical Implications

Based on the results of the study, some conclusions regarding the design of multinational teams can be drawn, especially in relation to selecting the right

team members and team leaders. First, psychological collectivism seems to be a key team member characteristic that contributes to team trust and team identification. Thus, member selection criteria could involve psychological collectivism to some extent. Focusing on collectivism orientation of team members might be even more crucial for MNTs given that this characteristic is more likely to vary in MNTs due to cultural diversity.

Second, the findings about subgroup formation may have implications for team member selection. Results showed that the primary basis of subgroup formation were personal characteristics (e.g., warmth or attitude) and communication (e.g., ease of communication or language). It can be concluded that regardless of their multinational and/or virtual characteristics, those features are important for team composition, given that they determine members' in-groups and out-groups. Thus, personal characteristics and communication should be involved in team member selection criteria to minimize the risks against team cohesion.

Finally, team leader's behaviors are also a crucial input that increases trust and identification with the team and commitment to the team. Based on this finding, we can conclude that selection and training of team leaders may increase team effectiveness since effectiveness of team leaders have positive effects on the mediators. Specifically, leader behaviors such as providing continuous feedback, communicating with team members regularly, explaining the tasks clearly, and specifying the priorities and the success criteria seem to be important for increasing team members' team trust, identification, and commitment. Therefore,

selection criteria for team leaders may involve the assessment of these competencies and training programs may target their development.

Limitations

The study had several limitations that should be addressed. First, since data used for the analyses were collected from single sources at a single time, common method variance was considered as a factor that may impact the reliability of the results (Lindell & Whitney, 2001). Obtaining ratings from other team members (i.e., multisource data) was a critical aspect of the initial study design but this was dropped due to difficulties in data collection, as explained before. Having multisource data would lead to higher confidence in results, since we would have the chance to compare team commitment reported by the participants to the observed frequency of actual backup behaviors, which were expected to be indicators of commitment. Based on this comparison and also the analysis of the determinants of backup behaviors, some conclusions of the study could have been different.

Self-report data may have led to some inflation in some ratings due to causes such as consistency motif (i.e., desire to maintain consistency in responses) and social desirability (i.e., tendency to respond in socially acceptable directions) (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Consistency motif of participants may have led to higher correlations among study variables, given that the participants may have adjusted their ratings of, for example, team commitment, in line with their ratings of team identification. Social desirability motif, on the other hand, may have resulted in higher ratings for variables such as

collectivism orientation or diversity beliefs, which can be assumed to be the desired attitudes in a multinational team.

Nevertheless, the analysis of common method variance showed that it was not a serious concern in this study. Literature also suggests that common method variance should not be overstated (Spector, 2006). The study design also reflected the intention to minimize the risks arising from self-report data; the participants were ensured about the confidentiality of the responses and no personal questions were asked to guarantee that the respondents could not be identified. The lack of organizational-level cooperation to collect data from the employees of certain organizations was a limitation against increasing the sample size; however, participants may have felt more comfortable since only a very small group of them received the questionnaire from a person who may be perceived as an authority figure in their organizations.

The cross-sectional design also entailed risks, especially for the tests of mediation. Collecting longitudinal data would be beneficial for a stronger analysis of the mediated relationships so that the relationships among the inputs, mediators, and output could be studied within a timeframe. Since the outputs are expected to be the end results of several team processes over time, analyzing long-term effects of inputs on outputs would provide a better analysis of the relationships that may be observed at a team.

Another limitation was low statistical power observed in a subset of the analyses; this was especially true in relation to the leader behavior variable. Within the whole sample, 15% of the participants indicated that they were the

leader and rated themselves accordingly; 18.5% of the participants stated that there was no particular leader in their team. Therefore, leader's effectiveness could be analyzed for only 111 participants; no-leader or self-rating cases could not be analyzed separately due to low numbers of participants representing those cases. Due to this problem, some regression analyses did not satisfy the expected level of statistical power (.80) based on Cohen's (1992) recommendations. The low power seemed to be a problem especially for the regression analyses testing the predictors of team identification and team trust; here, the power values were as low as .69 for the most complicated steps in the analyses, which included the two-way interaction terms for time and the predictors.

Another concern was the fact that the responses to the open-ended question about subgroup formation were very brief, which limited the opportunities for in-depth qualitative analysis. Moreover, 38.9% of the participants did not even respond to that question. It was speculated that they were either reluctant to share their ideas due to social desirability motives or they also did not openly know the actual reason behind their categorization of the team members.

During the recruitment process, primarily a snowballing method was used and it resulted in convenience sampling, despite the efforts to enrich the recruitment methods to reach a wide pool of potential respondents. Random sampling would lead to higher likelihood for obtaining generalizable results since the sample would be more representative. Moreover, the amount of the donation to charity organizations (USD 1.5 during the first phase, and USD 2 during the

second phase) might be perceived as a trivial contribution. Thus, that amount might have been insufficient to increase motivation to participate in the study. In addition, the participants did not have the freedom to choose a charity of their choice and the three options provided (Greenpeace, Unicef, or WWF) may not be known or liked by them.

Future Directions

Five main suggestions can be developed for future research. First of all, testing the final model with a nationally homogenous team may be beneficial. The primary purpose of such a study would be running a parallel model test to compare the strength of the effects of the key inputs (i.e., collectivism orientation and leader effectiveness) in MNTs versus nationally homogenous teams. For example, collectivism orientation might be more important at MNTs due to the variety in cultural backgrounds. Likewise, leadership might be more important in MNTs due to the multicultural and presumably virtual nature of those teams.

The second main suggestion would be gathering team level data to analyze the team level indicators of effectiveness based on the IMOI model (Ilgen et al., 2005). The present study focused on individual-level inputs, mediators, and outputs, since the individual perceptions were defined as the building blocks of team compilation processes (Kozlowski et al., 1999) and team effectiveness (Mathieu et al., 2008). Building on the findings of the present study, future research may address the effects of team-level inputs (i.e., psychological collectivism and perception of team leader's effectiveness) on team-level identification, trust, and commitment, based on the principles of multilevel

research (Chan, 1998). Gathering data about team performance and testing it as a key output would be also beneficial for a better analysis within the IMOI framework (Ilgen et al., 2005).

As the third suggestion, in the multicultural context of MNTs, team-level analysis of other culture-related variables such as cultural distance among countries represented in the team (Kogut & Singh, 1988; Shenkar, 2001) may be fruitful, since these variables may also serve as key inputs. For this purpose, a specific formula can be developed to calculate the cultural distance for each team member, based on the distances among cultures represented at the whole team, the in-group, and the out-group. Having such scores may provide a basis for further analyses regarding identification, trust, and commitment.

The results revealed that ease of communication and personal characteristics of team members constitute the basis of subgroup formation. As the fourth suggestion, future research may address the specific underlying features of MNT members that may help the team members to better contribute to team functioning. For example, cultural intelligence is defined as “an individual’s capability to function and manage effectively in culturally diverse settings” (Ang et al., 2007, p. 336; Earley, 2002). Given the culturally diverse nature of MNTs, cultural intelligence of team members may be a key input, since it is likely to impact the quality of MNT members’ adjustment to their teams, their interaction with team members from different cultural backgrounds, and their contribution to team performance (Earley, 2002; Earley & Gardner, 2005). The impact of this

input on mediators and outputs can be analyzed both at individual- and team-levels.

Finally, the basis of subgroup formation can be measured via different methods. For example, semi-structured in-depth interviews can be conducted without using the in-group vs. out-group categorization form, to minimize priming. Such interviews can provide rich insight about the subgroup formation mechanisms in multinational teams. Alternatively, relying on the responses to the categorization form, the bases mentioned by the participants (e.g., communication) can be questioned further via interviews, since the open-ended questions used in the study produced brief responses mostly consisting of few words. Such efforts may be also helpful for improving the form used in this study or developing new tools for examining the basis of subgroup formation.

Another target may be the analysis of attitudes via implicit measures rather than asking explicit questions about attitudes toward team members from other nationalities (Fazio & Olson, 2003; McConnell & Leibold, 2001). The participants of the present study consisted of people working for global organizations in multicultural contexts. Therefore, their explicit statements about the basis of subgroup formation might be guided by their social desirability motives.

The present study provided insight into the subgroup formation mechanisms in MNTs, which can be examined further in future research based on the findings. The results of the final model based on the IMOI model are consistent with the previous literature on teams. However, they provide a

direction for future research, especially if the bases of subgroup formation can be examined deeper with a strong focus on individual characteristics that are determinants of categorization at the MNT context.

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Appendix A

Recruitment Announcement for Participants

(Phase 1)

Dear members of the list (**or** to whom it may concern),

You are invited to participate in a research study about the experiences of people working at teams consisting of members from different national backgrounds. You should be able to read, speak, and understand English to participate in the study.

You are eligible for being a participant if you are collaborating with people from different cultures on a regular basis to accomplish a work-related task interdependently. You can participate if you are part of a team that can be classified as one of the following types:

- A time-limited project team (e.g., consulting teams, class project groups)
- A service group (e.g., flight crews)
- A management team (e.g., steering committees)
- An advisory group (e.g., employee involvement groups)
- An action and performing group (e.g., musician groups)

The questionnaire will take almost 15-20 minutes to fill out. After your complete this questionnaire, you will be asked to send the link for a second questionnaire to a teammate. Your responses will not be seen by your teammate and you will not see the responses of that person either. The second questionnaire will only take 10 minutes to fill out. If you complete all requirements, the research team will donate a small amount of money to your choice of UNICEF, WWF or Greenpeace.
If you qualify for being a respondent, please follow the link to reach the questionnaire:

http://depaul.qualtrics.com/SE/?SID=SV_8ohHklTnC9SKyc5

Thank you for your help.

Gamze Arman
Ph.D. Candidate in Industrial/Organizational Psychology
DePaul University, Chicago IL

(Phase 2)

Dear members of the list (**or** to whom it may concern),

You are invited to participate in a research study about the experiences of people working at teams consisting of members from different national backgrounds. You should be able to read, speak, and understand English to participate in the study.

You are eligible for being a participant if you are collaborating with people from different cultures on a regular basis to accomplish a work-related task interdependently. You can participate if you are part of a team that can be classified as one of the following types:

- A time-limited project team (e.g., consulting teams, class project groups)
- A service group (e.g., flight crews)
- A management team (e.g., steering committees)
- An advisory group (e.g., employee involvement groups)
- An action and performing group (e.g., musician groups)

The questionnaire will take almost 15-20 minutes to fill out. If you complete all requirements, the research team will donate a small amount of money to your choice of UNICEF, WWF or Greenpeace.

If you qualify for being a respondent, please follow the link to reach the questionnaire:

http://depaul.qualtrics.com/SE/?SID=SV_8ohHklTnC9SKyc5

Thank you for your help.

Gamze Arman
Ph.D. Candidate in Industrial/Organizational Psychology
DePaul University, Chicago IL

Appendix B

Informed Consent Form

(Phase 1)

Team members' perceptions and experiences in multinational teams

Principal Investigator: Gamze Arman, Graduate Student
Institution: DePaul University, USA
Faculty Advisor: Dr. Suzanne Bell, Psychology Department

We are conducting a research study because we are trying to learn more about how team members in multinational teams perceive the team. We are asking you to be involved in the research because you are employed full-time, currently work as multinational team member, and are over 18 years of age. If you agree to be in this study, you will be asked to complete a survey regarding your attitudes toward your team and forward a link to one of your teammates to complete a brief survey. You will be given a numeric code to be shared with your teammate. This code will allow us to link your survey responses to the responses of your teammate. Your survey will include questions about your beliefs about teamwork and diversity and how you feel about your team. We will also collect some personal information about you such as age, ethnicity, gender, and work tenure. Your teammate's survey will include questions about your behaviors as a teammate. The study will be completed online and although your data will be linked by researchers to that of your teammate through the code unique to you, your teammate will not have access to your answers and you will not have access to his/her answers. We will not have any identifying information on either participant and all data will be collected in an anonymous fashion.

This study will take about 15-20 minutes of your time. Your participation is voluntary, which means you can choose not to participate. There will be no negative consequences if you decide not to participate or change your mind later after you begin the study. You can withdraw your participation at any time prior to submitting your survey. If you change your mind later while answering the survey, you may simply exit the survey. Once you submit your responses, we will be unable to remove your data later from the study because all data is anonymous and we will not know which data belongs to you, unless you share your unique code with us.

In exchange for your participation in this study, a small donation of money will be made to a charity organization of your own choice among different options, if you complete and submit the survey and your teammate submits the second questionnaire. You will have the chance to donate 1.5 US Dollars to either

Greenpeace, Unicef or WWF, and your teammate will have the chance to donate 1.5 US Dollars to one of these organizations.

You must be 18 or older to be in this study. This study is not approved for the enrollment of people under the age of 18. If you have questions, concerns, or complaints about this study or if you want to get additional information or provide input about this research, please contact Gamze Arman at garman@depaul.edu or Dr. Suzanne Bell at sbell11@depaul.edu.

If you have questions about your rights as a research subject you may contact Susan Loess-Perez, DePaul University's Director of Research Compliance, Office of Research Protections in the Office of Research Services at 00-312-362-7593 or by email at sloesspe@depaul.edu. You may also contact DePaul's Office of Research Protections if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.

I Agree Go to the Survey	I Do Not Agree Exit the Survey

(Phase 2)

Team members' perceptions and experiences in multinational teams

Principal Investigator: Gamze Arman, Graduate Student
Institution: DePaul University, USA
Faculty Advisor: Dr. Suzanne Bell, Psychology Department

We are conducting a research study to learn more about how team members in multinational teams perceive the team. We are asking you to be involved in the research because you are employed full-time, currently work as multinational team member, and are over 18 years of age. If you agree to be in this study, you will be asked to complete a survey regarding your attitudes toward your team.

The survey will include questions about your beliefs about teamwork and diversity, and how you feel about your team. We will also collect some personal information about you such as age, ethnicity, gender, and work tenure. Your responses are anonymous. This study will take about 15-20 minutes of your time. Your participation is voluntary, which means you can choose not to participate. There will be no negative consequences if you decide not to participate or change your mind later after you begin the study. You can withdraw your participation at any time prior to submitting your survey. If you change your mind about participating while answering the survey, you may simply exit the survey. Once you submit your responses, we will be unable to remove your data later from the study because all data is anonymous and we will not know which data belongs to you.

In exchange for your participation in this study, we will donate 2 US Dollars to your choice of Greenpeace, UNICEF, or WWF. You must be in this study. This study is not approved for the enrollment of people under the age of 18. or if you have questions you want to get additional information or provide input about this research, please contact Gamze Arman at garman@depaul.edu or Dr. Suzanne Bell at sbell11@depaul.edu. If you have questions about your rights as a research subject you may contact Susan Loess-Perez, DePaul University's Director of Research Compliance, Office of Research Protections in the Office of Research Services at 001-312-362-7593 or by email atsloesspe@depaul.edu. You may also contact DePaul's Office of Research Protections if:

- Your questions, concerns, or complaints are not being answered by the research team
- You cannot reach the research team.
- You want to talk to someone besides the research team.

I Agree Go to the Survey	I Do Not Agree Exit the Survey

Appendix C

Nationality Variety Diversity Scale

Instructions: Using the form below, please indicate your team members' national backgrounds, using the column on the left, regardless of the country in which you or your teammates are currently working. For each country, please indicate the number of team members from that nationality. Please include your country and yourself in the form.

Countries represented in the team	Total number of team members from that nationality including yourself

Appendix D

Psychological Collectivism Scale

Instructions: Think about the work groups to which you currently belong, and have belonged to in the past. The items below ask about your relationship with, and thoughts about, those particular groups. Respond to the following questions, as honestly as possible, using the response scale provided.

1: Strongly disagree
2: Disagree
3: Neither agree nor disagree
4: Agree
5: Strongly agree

1. I preferred to work in those groups rather than working alone.
2. Working in those groups was better than working alone.
3. I wanted to work with those groups as opposed to working alone.
4. I felt comfortable counting on group members to do their part.
5. I was not bothered by the need to rely on group members.
6. I felt comfortable trusting group members to handle their tasks.
7. The health of those groups was important to me.
8. I cared about the well-being of those groups.
9. I was concerned about the needs of those groups.
10. I followed the norms of those groups.
11. I followed the procedures used by those groups.
12. I accepted the rules of those groups.
13. I cared more about the goals of those groups than my own goals.
14. I emphasized the goals of those groups more than my individual goals.
15. Group goals were more important to me than my personal goals.

Appendix E

Diversity Beliefs Scale

Instructions: Think about the work groups consisting of team members from multiple nationalities. The items below ask about thoughts about such groups. Respond to the following questions, as honestly as possible, using the response scales provided.

1: Strongly disagree
2: Disagree
3: Neither agree nor disagree
4: Agree
5: Strongly agree

1. I think that work groups benefit from the involvement of people from different national backgrounds.
2. *Creating work groups that contain people from different national backgrounds is likely to lead to trouble. [reversed]
3. I think that work groups should contain people with similar national backgrounds. [reversed]
4. A good mix of group members' national backgrounds helps doing the task well.

Items added in Phase 2:

5. Having members from diverse national backgrounds can strengthen a work group.
6. Work groups that are diverse in national background are stronger than work groups in which everyone is from the same country.

*: Item was removed after the first phase.

Appendix F

Leader Behaviors Scale

Instructions: Please rate each item using the scale below, focusing on your feelings regarding the team you are currently working in. You should use the scale below to reflect how much you agree with each statement.

1: Never
2: Rarely
3: Sometimes
4: Frequently
5: Always

The leader of my current team…

1. … provides continuous feedback.
2. … communicates team members regularly.
3. … explains the tasks clearly.
4. *… is sensitive to the schedules of team members.
5. *… respects the ideas and suggestions of team members.
6. *… pays attention to the problems of team members.
7. *… defines our responsibilities clearly.
8. *… mentors team members.
9. … coordinates work-cycles and meetings.
10. … monitors team progress.
11. … specifies the priorities and success criteria.
12. *… highlights the common goals of the team.

*: Item was removed after the first phase.

Appendix G

In-Group vs. Out-Group Categorization Form

Instructions: We all belong to various groups. Some groups are especially valuable to us. Please take a moment and think about the group you belong to within your current team, in other words the teammates who are important and valuable to you. We will refer to this group as **YOUR IN-GROUP** since it is a group you are in.

In the form below please write down the basic information about all **team members who you consider to be YOUR IN-GROUP** without reporting their names. If you consider all team members to be in your in-group then list all team member names here.

Please check the small box (☑) if you don't know this information about a specific person.

	Age	Gender	Nationality
Team Member 1	☐	☐	☐
Team Member 2	☐	☐	☐
Team Member 3	☐	☐	☐
Team Member 4	☐	☐	☐
Team Member 5	☐	☐	☐
Team Member 6	☐	☐	☐
Team Member 7	☐	☐	☐

In most cases, a group we belong to may be contrasted to a parallel group that we do not belong to. The group we do not belong to is called **OUT-GROUP** Please try to think of the teammates in your current team who you consider to be out-group members. In the box below about **all team members you can count as OUT-GROUP MEMBERS** without reporting their names. If you consider all team members to be in your out-group then list all team member names here.

Please check the small box (☑) if you don't know this information about a specific person.

	Age	Gender	Nationality
Team Member 1	☐	☐	☐
Team Member 2	☐	☐	☐
Team Member 3	☐	☐	☐
Team Member 4	☐	☐	☐
Team Member 5	☐	☐	☐
Team Member 6	☐	☐	☐
Team Member 7	☐	☐	☐

Please try to define the main characteristic of the team members that served as a basis for in-group vs. out-group distinction you have defined. In other words, what is the dominant characteristic that helps you distinguish the in-group from the out-group?

Appendix H

Group Identification Scale

Instructions 1 (in-group): Please rate each item using the scale below, focusing on your feelings regarding the team members you defined as ***in-group*** **members** (i.e., the group you belong to) in the previous question. You should use the scale below to reflect how much you agree with each statement.

Instructions 2 (out-group): Please rate each item using the scale below, focusing on your feelings regarding the team members you defined as ***out-group*** **members** in the previous question. You should use the scale below to reflect how much you agree with each statement.

Instructions 3 (team): Please rate each item using the scale below, focusing on your feelings regarding your team. You should use the scale below to reflect how much you agree with each statement.

1: Strongly disagree
2: Disagree
3: Neither agree nor disagree
4: Agree
5: Strongly agree

1. I define myself as a member of this group.
2. I am pleased to be a member of this group.
3. I feel a strong connection with members of this group.
4. I feel a shared identity with other members of the group.

Appendix I

Team Trust Scale

Instructions: Please rate each item using the scale below, focusing on your feelings regarding the all team members in your current team. You should use the scale below to reflect how much you agree with each statement.

1: Strongly disagree
2: Disagree
3: Neither agree nor disagree
4: Agree
5: Strongly agree

1. Members of my team show a great deal of integrity.
2. *I can rely on those with whom I work in this team.
3. Overall, the people in my team are very trustworthy.
4. We are usually considerate of one another's feelings in this team.
5. The people in my team are friendly.
6. *There is no "team spirit" in my group. [reversed]
7. *There is a noticeable lack of confidence among those with whom I work.
8. *We have confidence in one another in this team.

*: Item was removed after the first phase.

Appendix J

Team Member Commitment Scale

Instructions: Please rate each item using the scale below, focusing on your feelings regarding your team. You should use the scale below to reflect how much you agree with each statement.

1: Strongly disagree
2: Disagree
3: Neither agree nor disagree
4: Agree
5: Strongly agree

1. *I would be very happy to spend the rest of my career with this team.
2. *I enjoy discussing my team with people outside it.
3. *I really feel as if this team's problems are my own.
4. *I think that I could easily become as attached to another team as I am to this one. [reversed]
5. I do not feel like "part of the family" at my team. [reversed]
6. I do not feel "emotionally attached" to this team. [reversed]
7. This team has a great deal of personal meaning for me.
8. I do not feel a strong sense of belonging to my team. [reversed]

*: Item was removed after the first phase.`

Appendix K

Absenteeism Scale

(Phase 1)

Instructions: Please respond to the following questions using the scales to reflect how much you agree with each statement.

How often are you absent from work?

1	2	3	4	5
Never	Rarely	Sometimes	Often	All of the time

How desirable is being absent from work?

1	2	3	4	5
Very undesirable	Undesirable	Neutral	Desirable	Very desirable

How likely is it that you will be absent from work?

1	2	3	4	5
Very unlikely	Unlikely	Undecided	Likely	Very likely

(Phase 2)

Instructions: Please respond to the following questions using the scale below to reflect how much you agree with each statement.

1: Strongly disagree
2: Disagree
3: Neither agree nor disagree
4: Agree
5: Strongly agree

1. I am often late to work.
2. It is important to always be on time to work. [reversed]
3. It is likely that I will be late to work.