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Affective conflict and identification of knowledge sources in MNE teams

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ABSTRACT

How does affective conflict influence identification of knowledge sources in MNE teams? We apply social exchange theory and consider the effect of two types of affective interpersonal conflict: relational tension and self-interest on identification of knowledge sources in MNE teams. We further analyse how these effects are related to geographic and nationality differences. We test our hypotheses with a field study of 1181 dyadic interactions between 160 members within 40 MNE teams engaged in product innovation, human resources, and operational improvement in three large diversified MNEs. We find that affective conflict has a direct negative relationship to identification of knowledge sources in MNE teams. This relationship is further negatively moderated by geographic differences and nationality differences. Our study contributes to theoretical and empirical micro-foundations of conflict and identification of knowledge sources in MNE teams.

Keywords: Knowledge identification, knowledge-based view, conflict, teams and team-work, cross-cultural teams, multicultural teams

Affective conflict and identification of knowledge sources within MNE teams

1. Introduction

Identification, search, and transfer of knowledge are key challenges for any multinational corporation (MNE) as they significantly influence innovation, product development, and learning on global scale (Kogut & Zander, 1993; Nohria & Ghoshal, 1997). As a consequence, MNEs are often organised through heterogeneous MNE teams, which have been argued to represent a key source of transnational capabilities (Morris, Hammond, & Snell, 2014). We define MNE teams as two or more individuals working towards long-term common goals across geographical, cultural, and linguistic boundaries, who often interact through computer-mediated communications (Connaughton and Shuffler, 2007). An important foundation for MNE success is based on how team members identify, share, distribute, and coordinate knowledge flows (Tortoriello, Reagans, & McEvily, 2010). Social exchanges such as identifying and sharing knowledge in MNEs is primarily complicated by working in different locations and diversity among team members (Ghoshal, Korine & Szulanski, 1994). However, as recently noted by several scholars (e.g. Morris, Hammond, & Snell, 2014; Haas & Cummings, 2015), little attention has been directed towards microfoundations of leveraging knowledge-based assets at global level. Hence, we have limited understanding of how individuals identify knowledge sources residing within MNE teams (Foss & Pedersen, 2004). Given that identifying knowledge sources is a precondition for knowledge exchange to occur, this study investigates the determinants of identifying knowledge sources in a MNE setting.

Specifically, little research in the MNE context has focused on the nature of various relationships between team members (Bell & Zaheer, 2007). Yet, it is well documented in general that relationships across MNE operations can be arduous and challenging (Monteiro, Arvisson, & Birkinshaw, 2008), and often described by conflicts and faultlines (Vora, Kostova, & Roth, 2007). Indeed, conflicts are often cited as one of the biggest challenges in international business (Dong & Liu, 2010; Hennart & Zeng, 2002). Despite this, we have a limited understanding on how conflict between MNE team members may affect organizational outcomes such as identifying knowledge sources. This study introduces relational tension and perceived self-interest of others as two primary types of *affective* conflict as important governing mechanisms of identification of knowledge sources in MNE teams. In line with extant research (Jehn, 1995), we define affective conflict as unfriendly relationships between

MNE team members, where individuals perceive others to be driven by self-interest, or relationships where people feel anxious and uncomfortable when working with one another. In comparison to other types of conflict (e.g. task and process related), previous studies have argued that there are no beneficial aspects involved in such affective conflict (see De Dreu & Weingart, 2003 for a meta-analysis).

In contrast to affective conflict, geographic and nationality differences have been empirically and theoretically much analysed in MNEs (Hinds & Bailey, 2003; Hinds & Mortensen, 2005). However, we do not know to what extent they may influence the link between affective conflict and identification of knowledge sources in MNE teams. We further elucidate whether geographic and nationality differences moderate *different types* of affective conflict and knowledge source identification in same way. Thus, in order to advance our theoretical understanding on identification of knowledge sources in MNEs, we ask: how does affective conflict influence identification of knowledge sources in MNE teams, and to what extent do geographic and nationality differences moderate this relationship?

We add to the literature on accessing knowledge residing within MNE teams. Our data shows that affective conflict between team members plays a paramount role in a process of international knowledge identification (cf. Hinds & Bailey, 2003; Hinds & Mortensen, 2005). Second, our finding that geographic and nationality differences moderate the relationship between affective conflict and identification of knowledge sources contributes to the discussion on balancing distance and heterogeneity in MNE team knowledge identification and search at the micro-foundational level (Morris, Hammond, & Snell, 2014; Haas & Cummings, 2015). By specifying that this moderation depends on *type* of affective conflict we further contribute to our understanding on conditions promoting and hindering MNE team outcomes.

The remainder of this paper is organized as follows. First, we review the literature and develop our main hypotheses. Then we describe our sample, operationalisation of variables, and methods. Finally, findings, implications, and contributions are discussed.

2. Theory and hypotheses

2.1 Identification of knowledge in MNE teams

MNE teams consist of individuals who have a common purpose and are interconnected by official work flow structure (Salas et al., 1992). There are several fundamental differences between traditional domestic teams and MNE teams such as linguistic differences (Peltokorpi & Vaara, 2014), time management (Saunders, van Slyke, & Vogel, 2004), virtual communication (Zimmerman, 2011), cultural diversity (Stahl et al., 2010), geographic dispersion (Gibson & Gibbs, 2006), general underlying dynamics (Gibson and Cohen, 2003; Maznevski and Chuboda, 2000), and level of conflict (Hinds & Bailey, 2003), amongst other things. In this article we focus on identification of knowledge in MNEs, the critical part of knowledge search where a person first estimates the usefulness of others for acquiring work-related information, new ideas, initiatives, opportunities, and various organizational resources (Burt, 2004). It is well recognised that knowledge management and transfer strategies are rendered effectively useless unless the potential value of knowledge source is first accurately evaluated (Wakefield, 2005; Gavetti, 2012). Theoretically, *identification of knowledge sources*¹ therefore differs from active searching (Morris, Hammond & Snell, 2014), seeking (Haas & Cummings, 2015), transfer (Peltokorpi & Vaara, 2014), flows (Bell & Zaheer, 2007), sharing (Rosen, Furst & Blackburn, 2007), or diffusion (Singh, 2004). Thus, previous research has in general paid scant attention to the exploration phase of trying to identify potential exchange partners (Mariotti & Delbridge, 2012; Birkinshaw et al., 2007). However, we know that knowledge intensive work requires people to tap into different kinds of information and expertise as new opportunities and challenges arise. Capability to adapt to these complicated scenarios depends therefore not only on networks one is currently using to seek knowledge, but also a network that one could potentially utilize when faced with new challenges (Cross & Cummings, 2004). Thus, awareness of expertise of others is associated with seeking information from that person (Borgatti & Cross, 2003).

MNE context implies several issues for effective identification of knowledge sources. First, not being located in the same country means that team members have limited amount of face-to-face interaction which can hinder the development of mutual knowledge base (Cramton, 2001) and sharing of tacit and non-codifiable knowledge (Hall & Hall, 1987; Kogut & Zander, 1993). Indeed, increasing geographic distance has a negative effect on communication frequency as well as effectiveness (Van

¹ We would like to thank an anonymous reviewer for providing valuable insights into the theoretical positioning of our key construct.

den Bulte & Monaert, 1998; Allen, 1984), which in turn is likely to have implications of effectiveness of evaluating each other's knowledge in MNE teams. This is important from the perspective of identification of knowledge sources because potential new knowledge exchanges are restricted by the availability of codified information about each other, and people then decide whether to invest more heavily into the relationship (Mariotti & Delbridge, 2012). Second, communication effectiveness in MNE teams is further encumbered by temporal differences between locations which can make it difficult to coordinate communications such as video conferences (Saunders, van Slyke & Vogel, 2004). Due to absence of spontaneous communication (e.g. 'water-cooler discussions') and non-verbal and contextual cues, team members tend to lack knowledge of each other's situations and circumstances affecting their work (Rosen *et al.*, 2007). Hence, it is not surprising that diverse and distributed MNE teams present a different set of challenges for developing sustainable knowledge sharing relationships in comparison to co-located domestic teams (Gibson & Gibbs, 2006). In sum, coordinating knowledge in MNE teams is challenging due to divergent forces driven by differences in languages, nationalities, locations, and time-zones. These are argued to underpin high degree of conflict often observed in MNE teams (Hinds & Bailey, 2003; Gibson & Gibbs, 2006). Indeed, a review by Jonsen *et al.* (2012) found that effective leadership in global teams requires being able to build durable relationships, maintaining a high degree of communication, establishing trust, and managing conflict. Naturally, when discussing the nature of identification of knowledge sources, search, creation, and sharing in MNEs, we need to consider the specific nature and characteristics of knowledge (Penrose, 1980). Commonly, knowledge residing within individuals is referred to tacit knowledge that is hard to codify, explain, and verbalize (Lagerström & Andersson, 2003). How successful MNEs are in leveraging knowledge is often argued to hinge upon both quality and amount of communication and interaction between employees, as well as their willingness to search new knowledge, and share existing information with others (Cohen & Levinthal, 1990; Szulanski, 1996).

2.2 Social Exchange theory

Social exchange theory (henceforth referred to as SET) is one of the most influential paradigms explaining workplace behaviours (for a review, see Cropanzano & Mitchell, 2004). SET views social interaction as exchanges of tangible (e.g. money or resources) and intangible (e.g. advice and help) goods. Even though social exchanges mostly occur subconsciously in the background of informal interactions, these are often argued to lead to most significant outcomes (Blau, 1964). This is likely to be the case for MNEs whose success often hinges on informal leveraging of knowledge-based

resources (Bell & Zaheer, 2007; Foss & Pedersen, 2004). A key tenet of SET is that exchanges tend towards reciprocity. As such, people who would help others should also receive help back (Homans, 1958, p.606). Thus, relationships in various forms and contexts tend to evolve over time from relatively superficial connections to stronger ties involving higher levels of trust and commitment (Cropanzano & Mitchell, 2004). However, from a perspective of identification of knowledge, one does not need to have a strong pre-existing relationship in order to identify a co-worker as a good source of information, opportunities, and resources. For instance, a product engineer may search the firm's intranet for an expert on intellectual property rights and contact them directly without ever having met before. Indeed, communication and coordination within global teams has been argued to be dependent on the extent that computer-aided communications and computer systems are able to generate trust and commitment between team members (Jarvenpaa and Leidner, 1999). For instance, Majchrzak et al. (2000) described how successful virtual teams recognized and adapted technology structures in order to overcome ineffective group structures and problems in organizational environment. How exchange relationships specifically evolve depends on contextual factors such as rules, norms, reciprocity and obligations enforced by organizations and adopted by individuals (Cropanzano & Mitchell, 2004). This is why it has been argued that SET is particularly useful for studying effects of specific contexts (Blau, 1964), and will be utilized here to better understand how affective conflict influences identification of knowledge sources in MNE teams.

In line with SET and similar to Schulte, Cohen & Klein (2012), we adopt a view where team members' perceptions of others reflect and shape their behaviour with regards to identification of knowledge sources in MNE teams. Also consistent with SET's assumption of bidirectional exchanges and recent research on knowledge sharing in MNE teams (Haas & Cummings, 2015) we focus on the dyadic level of analysis. In contrast, much of the previous work in studying conflict (e.g. Drei & Weingart, 2003) has focused on the group as the level of analysis, while research on MNE knowledge flows has primarily been at the firm level, between subsidiaries, or used patents as a proxy for relationships (Singh, 2004; Foss & Pedersen, 2004). Similarly to emerging recent research in MNE knowledge flows (Haas & Cummings, 2015; Morris, Hammond & Snell, 2014), we argue that focusing on micro-level foundations of how MNEs leverage knowledge delivers a more nuanced view with strong theoretical and empirical benefits. First, identification of knowledge sources at the interpersonal level can naturally be both theoretically and empirically asymmetric in that one team member perceives another to be an excellent source of knowledge without these feelings being mutual (Kilduff & Krackhardt, 2008). This is important because SET emphasises that individuals react more

strongly to imbalances and unfair exchanges which are not in their favour than ‘normal’ balanced exchanges (Cook & Rice, 2003; Cropanzano & Mitchell, 2004). Thus, existing perceptions of others as exchange partners has implications on potential for future exchanges. For example, conflictual relationships may escalate into negatively reciprocal relationships (Eisenberger et al., 2004) where both parties withhold valuable information and opportunities as a result of problematic relationship. From a perspective of *identification* of knowledge sources, SET would suggest that a conflictual relationship makes the whole relationship unbalanced and therefore more difficult to recognize the other person’s ability to provide information, resources, and opportunities. The more troubled the relationship (e.g. tension, hate, sabotage etc.), the more likely it is that the other person is disregarded as a knowledge source. However, it also makes intuitive sense to imagine a scenario where one has a conflictual relationship with a co-worker characterized by tension and perceptions of self-interest, but yet, one has to grudgingly recognize the expertise and knowledge of they possess. It could be that this hypothetical relationship would never in reality be utilized for knowledge exchanges and problem solving due to relational conflict, but intuitively there could be overlap between having affective conflict and recognition of a person as a good source for knowledge, information and resources.

2.3 Affective conflict in MNE teams

Task or process conflict occurs when team members evaluate nature of tasks, discuss different viewpoints and ideas, or disagree on distribution of resources, specific policies or procedures (Hinds and Mortensen, 2005). In contrast, affective conflict reflects interpersonal incompatibilities echoed through dislike, animosity, and tension (Jehn, 1995; Qian, Cao & Takeuchi, 2013). While there has been an increasing recognition that task conflict can be, under certain conditions, beneficial to team effectiveness, affective conflict has been linked with only negative outcomes (De Dreu & Weingart, 2003). The reason is that task conflict may increase understanding of key issues being considered, while affective conflict primarily limits information processing capacity of team members by forcing them to focus energy on handling dysfunctional relationships rather than focus on task at hand (De Dreu & Weingart, 2003). Furthermore, affective conflict makes individuals less receptive to ideas of others (Jehn, 1995). In fact, affective conflict has such a strong influence on individuals in organizations that it is likely to have a larger impact on explaining workplace outcomes than positive interactions (Labianca, Brass, & Gray, 1998; Labianca & Brass, 2006; Jehn et al., 2008). Indeed, in social psychology, ‘negativity bias’ or ‘negative-positive asymmetry’ (tendency to experience negative events and relationships in a cognitively more significant way than positive ones) are well-established and empirically supported concepts (e.g. Labianca & Brass, 2006; Rozin & Royzman,

2001). The question of *why* the negative domain has such a large impact is still a topic for debate (Rozin & Royzman, 2001). However, one of the most commonly considered reasons is that people tend to expect positive information and interactions in their everyday life. Affective conflict thus sharply contradicts the expected norms and this makes it difficult for individuals to cope and adapt to a new situation. Consequently, affective conflict is likely to be perceived as more elaborate and discerned in comparison to positive interpersonal interactions (Labianca & Brass, 2006). Interestingly, the outcomes of affective conflict are also relatively universal in that it has been found to have similar significant impact across cultures (Scollon et al. 2005).

Co-occurrence of simultaneous types of affective conflicts are therefore more likely to influence wider array of outcomes such as forming of impressions, decision-making, escalation of conflicts and so on. SET similarly distinguishes between positive and negative exchange relationships, in that several overlapping negative relations are more likely to influence exchanges more than just one (Cropanzano & Mitchell, 2004). Consequently, there have been calls for research focusing on conflicts, challenges, and liabilities in organizational networks (e.g. Coviello, 2006; Jehn et al., 2008) and for MNE teams specifically (Hinds & Mortensen, 2005; Hinds & Bailey, 2003). Similarly, both Barclay & Kiefer (2014) and Lê, & Jarzabkowski (2015) have recently argued that prior research has ignored the *simultaneous* effect of negative and positive interactions, and we should isolate their differential impacts on organizational outcomes at the micro-foundational level. However, no prior research to our knowledge has empirically investigated the organizational outcomes of *different types of affective conflict*, especially from viewpoint of *knowledge identification* in MNE teams. This is an important knowledge gap as it fits well with the major issue of under what circumstances conflicts and negative relationships can be a significant threat to the effective functioning of organisations (Labianca & Brass, 2006), and how negative interactions can be minimised (Uzzi & Dunlap 2012).

2.4 *Affective conflict and identification of knowledge sources in MNEs*

As social exchanges often lack established common rules, trust is a well-established key to successful exchanges (Cook & Rice, 2003), especially from the perspective of knowledge flows in MNE teams (Bell & Zaheer, 2007). Social exchanges are based on individual's perceived cost-benefit analysis involved in that particular relationship (Blau, 1964; Homans, 1958). Thus, individuals are unlikely to engage in exchange of information, ideas, resources and opportunities where the costs are subconsciously identified to outweigh the benefits (e.g. assumption that partner will not reciprocate in a knowledge sharing relationship). Perceived reciprocity in knowledge sharing is likely an important

mechanism for continuous MNE team effectiveness. Thus perceptions are important underpinning of actual exchanges. Beyond these normative obligations, presence of *affective* conflict between team members negatively influences cost-benefit calculations in potential exchange relationships and hence influence whether knowledge identification and search will take place in MNE teams. As argued by Cameron and Webster (2011), negative perceptions lead to less successful exchanges as fairness, reciprocity, and common understanding cannot be counted upon. Unfair exchanges naturally link to further anger, frustration, disappointment, and in general less favourable perceptions of exchange partners (Homans, 1958). Importantly, individuals also tend towards “negative reciprocity” and return negative treatment in a similar manner and exact revenge according to the size of perceived wrongdoing (Eisenberger et al., 2004). Thus, all else being equal, social exchanges with negatively perceived partners are ambiguous, yield uncertain outcomes, and are considered as direct costs which we expect to lead to less favourable probabilities for further knowledge exchanges. At the same time, our focus in the current paper is on identification of knowledge sources rather than actual search or transfer. Therefore, it is plausible that a person has a conflict with another team member and still perceives them to be a good source of knowledge, opportunities and resources (e.g. recognition of skills and expertise).

We argue that there are three key mechanisms why affective conflict between people in MNE teams might negatively influence identification of another person as knowledge source. First, there is likely to be limited informal and spontaneous interaction between people who have affective conflict (Hinds & Mortensen, 2005), and these weaker connections decrease the degree to which people are aware of each other’s potential as a knowledge source (Yang & Mossholder, 2004). Second, negatively perceived people are considered as members out-groups (Hinds & Mortensen, 2005), whose knowledge has been found to be ranked as less differentiated, valuable, and credible in comparison to those who belong to in-groups (O’Leary and Mortensen, 2010). Similarly, it is well recognized that interpersonal conflict has been linked to lack of respect (Jehn & Mannix, 2001; Anicich et al., 2016), which may diminish perceptions of being a good knowledge source. Finally, extant research on halo effect bias (Thorndike, 1920) demonstrates that people tend to form unfavourable statements and impressions on people who they have a conflict with, and consequently find fault, disagree with, and reject their ideas and thinking (Eisenhardt & Bourgeois, 1988; Choi & Cho, 2011). These considerations taken together, we posit that people whose relationships are described by affective conflict are also likely to rate each other lower in terms of how good potential sources of knowledge, resources, and opportunities they are.

One of the key dimensions of affective conflict is *relational tension*; that is individuals feeling uncomfortable when working with others, leading them to experience frustration, strain, and uneasiness (Jehn, 1995). Continuous social exchanges in such an organizational environment are more likely to be difficult because expectations of reciprocity, rationality, and altruism are questioned (Rozin & Royzman, 2001). Individuals might therefore be unlikely to value knowledge where costs and benefits are ambiguous and overall worth of social transaction is difficult to calculate (Eisenberger et al., 2004). Researchers have found that increased levels of tension in organizations lead to rigidities in thinking, inefficiencies in communication and reduced problem-solving capabilities (Verbeke & Bagozzi, 2000). Greater levels of tension also have a direct negative effect on levels of trust in cross-cultural communications (Lee, Yang, & Graham, 2006). Individuals with high levels of relational tension are in general less satisfied with their teams because of anxiety and fear (Jehn, 1995), and tend to be irritable, suspicious, and resentful (Jehn, 1997). Hence, relational tension among MNE members manifests through anxiety, pressure, and feeling uncomfortable when working with others. These tensions in turn depreciate general goodwill and understanding towards others (Deutch, 1958) and may reduce the seeker's perception about the target being a good source of knowledge. We therefore expect that relational tension is negatively related to identification of knowledge sources in MNE teams.

H1 a) Affective conflict in terms of relational tension will be negatively related with the degree to which people are identified as knowledge sources in MNE teams

Opportunistic and self-centred behaviours of affective conflict are often seen as a destructive force that obliterates gains from social ties (Villena *et al.*, 2011). Williamson (1975) described self-interest as “lying, stealing, cheating” or “calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse”. *Self-interest* therefore manifests as opportunistic behaviour, zero-sum games (one's loss is another's gain), and pursuing of private benefits instead of what is advantageous for wider communities such as work units in MNEs. Self-interest and perceptions are also likely to be embedded within cultural norms, and therefore have strong implications on affective conflict in MNE teams. For instance, Chinese employees tend to place group goals before individualistic ones (Lam *et al.*, 2002; Triandis & Gelfand, 1998). From theoretical perspective, such behaviours are in clear violation of important exchange rules. As assumptions of reciprocity, equitability, and fairness between parties underpins the whole process of social exchange (Homans, 1958; Blau, 1964), it is

unlikely that members perceived as self-interested are perceived as excellent partners for knowledge exchanges. Hence, we expect that perceptions of others as self-interested will be negatively related to knowledge identification in MNE teams. Thus:

H1 b) Affective conflict in terms of self-interest will be negatively related with the degree to which people are identified as knowledge sources in MNE teams

2.5 Moderating effect of geographic and nationality differences

Affective conflict in teams has been argued to have larger influence relative to the degree to which team members rely on one another in order to complete their jobs (Jehn, 1995). Thus, increased need for interaction and dependence promotes more opportunities for both task-related and affective conflict (Gladstein, 1984; Yang & Mossholder, 2004). In line with Jehn (1995), findings of meta-analysis by Stahl et al. (2010) suggests that when group members are not required to work closely together, there will be fewer opportunities for conflict, and people can simply avoid working with group members they have conflicts with. Another stream of research contradicts this view by stating that it is precisely *lack of cohesion*, tight collaboration, and opportunities for social interaction that increases the impact of affective conflicts. For instance, Labianca, Brass, & Gray (1998), Hinds and Bailey (2003) and Hinds and Mortensen, (2005) all argue that low group cohesiveness increases perceptions of intra-group conflict, and that strong interpersonal connections (e.g. friendships) may help to reduce these perceptions. These arguments are well in line with so called contact hypothesis (c.f. Amir 1994) suggesting that increased contact between group members decreases the level of conflict between groups.

Thus, we are left with a question of whether divergent forces such as geographic differences between MNE team members alleviate effects of conflict, or make things even worse. Our theoretical positioning leans towards the latter explanation. According to SET, lack of cohesion within and across teams can be problematic because success of exchange relationship is largely determined by acceptance, understanding, and adoption of common behavioural norms (Cropanzano & Mitchell, 2004). These are particularly salient issues for MNE teams because of geographic distribution (Hinds & Mortensen, 2005; Gibbson & Gibbs, 2006). Furthermore, geographic dispersion implies absence of strong relationships (e.g. described by friendship, trust, and shared identity). It is now well established that lack of face-to-face interaction often leads to weaker bonds and lack of integrated goals (Fiol &

O'Connor, 2005). Technologically mediated communication used in MNE teams are poor mediums for forming strong relationships, building perceptions of knowledge sources, sharing knowledge, and coordination of complex tasks across the globe (Fiol & O'Connor, 2005; Hinds & Bailey, 2003; Hinds & Mortensen, 2005). This links to the earlier point about the degree to which members in distributed teams are even aware whether others are a good sources of knowledge or not (Yang & Mossholder, 2004).

In absence of strong relationships and shared norms established exchange relationships are also easier to break, especially in case if there is no direct harm to one's own team from doing so (Williams & O'Reilly, 1998). Similarly, exchange relationships are easy to break when people think they can get away with it for example due to difficulties in monitoring and enforcing such exchanges (Williamsson, 1975). Thus, geographic differences combined with affective conflict likely make it more difficult to evaluate potential benefits and costs of a potential exchange relationship (Blau, 1964). While it is possible to recognise a team member as a valuable source of knowledge no matter where they are located, we argue that when there is an affective conflict between team members, differences in member locations makes this even more harmful because it creates increased ambiguity for evaluating exchange transactions and partners and it places more strain for already potentially weak relationships. Similarly, all of the key mechanisms that might influence the link between affective conflict and identification of knowledge sources (namely; informal interaction, out-groups, and halo effect) are likely to be stronger as the geographic distance between team members increases. We thus hypothesise that:

H2) The relationship between affective conflict in terms of a) relational tension and b) self-interest and identification of knowledge sources in MNE teams will be negatively moderated by geographic differences between members

Similarly to geographic issues, MNE team member nationality differences can create barriers for knowledge identification.

A person can identify a colleague from a different cultural background as a good source of knowledge (e.g. in terms of technical specialisation) in spite of the affective conflict between them. However, we argue that the chances of this happening becomes less likely as the intensity of the

conflict and cultural differences increase. Indeed, cultural distance between team members especially increases relational uncertainty with regards to social information exchange partners (Ravlin, Ward & Thomas, 2014), complexity and potential risks involved in interaction (Koeszegi, 2004). These uncertainties in turn have been strongly linked with increased costs associated with search and identification of useful information (Munyon et al., 2011). Indeed, even increased use of various managerial tools and techniques for improving information flows did not facilitate cross cultural knowledge sharing or reduce the impact of conflict in MNE teams due to ambiguity and lack of face-to-face interaction (Sapsed & Salter, 2004). These findings are well in line with the concept of absorptive capacity (Cohen & Levinthal, 1990). This perspective emphasises that knowledge is embedded within shared norms and contextual understanding between the person identifying the knowledge source and the source. This stream of research emphasizes that tangible and non-codifiable information, such as commonly used in MNE teams, can be especially difficult to identify and transfer when members lack common norms and shared mindsets (Jensen & Szulanski, 2004). Hence, taken together, nationality differences make it more challenging to identify, transfer, and understand knowledge in MNE teams.

We previously argued that lack of informal interaction, in-group and out-group divisions, and halo effect are likely to lead to a negative relationship between affective conflict and identification of knowledge sources. Similarly, we argue here that nationality differences (and related relational uncertainty, increased search costs, and lack of shared norms) will exacerbate these mechanisms, and further moderate the relationship between conflict and identification of knowledge sources.

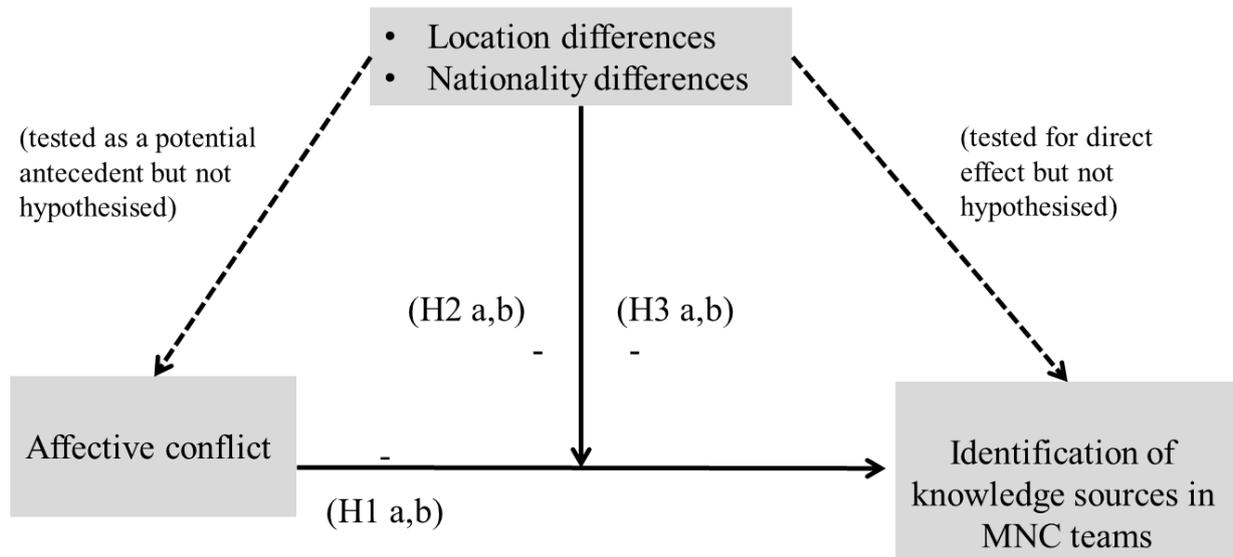
First, lack of spontaneous interaction and weak connections between people who have affective conflict (Hinds & Mortensen, 2005) creates problems for identification of knowledge (Yang & Mossholder, 2004). This is likely even worse when the people have cultural dissimilarities that decrease the general understanding and increases conflict between them (Fey & Beamish, 2000). Second, negatively perceived people are perceived as out-group members (Hinds & Mortensen, 2005) and their knowledge is considered less valuable (O'Leary and Mortensen, 2010). It is well documented that in-group and out-group divisions are further influenced by tendency towards homophily (e.g. tendency to bond with similar others) (McPherson & Smith-Lovin, 2001) and similar shared mindsets and values (Hofstede, 1991). Similarly, the prospects of development of stronger and deeper exchanges between partners hinges upon a combination of similarity and comparable attitudes towards the exchange, and the potential to offer valuable resources and knowledge (Mariotti &

Delbridge, 2012). If these requirements are not met, exchange relationships are likely to never develop, or remain as weak ties that decay over time. Thus, nationality differences might make the effect of already pertinent in-group and out-group divisions in MNE teams worse from perspective of knowledge identification. Finally, people disagree with and reject ideas and thinking of others they have a conflict with (Eisenhardt & Bourgeois, 1988; Choi & Cho, 2011). We posit this effect will get even worse when people come from different nationalities, because they lack shared mind-sets, have different rules and norms, and costs of identifying useful information are even higher (Cropanzano & Mitchell, 2004). We therefore hypothesise that:

H3) The relationship between affective conflict in terms of a) relational tension and b) self-interest and identification of knowledge sources in MNE teams will be negatively moderated by member nationality differences

Our model is summarized in the figure below.

Figure 1 Moderating role of location and nationality differences on conflict and identification of knowledge sources



3. Methods

3.1 Research setting and sample

Survey participants in this study came from three large Finnish MNEs (see table 1 below for more detailed description). All three companies are embedded within knowledge-intensive industries where tightening competition creates a need towards flexible customer solutions and organisational structures on a global scale. Working titles such as development manager, product manager, application specialist, sourcing manager, component engineer, and customer service manager are common in all three participating firms. Teams are therefore highly knowledge-based and draw their competitive advantage from effective transfer of knowledge resources and expertise of team members.

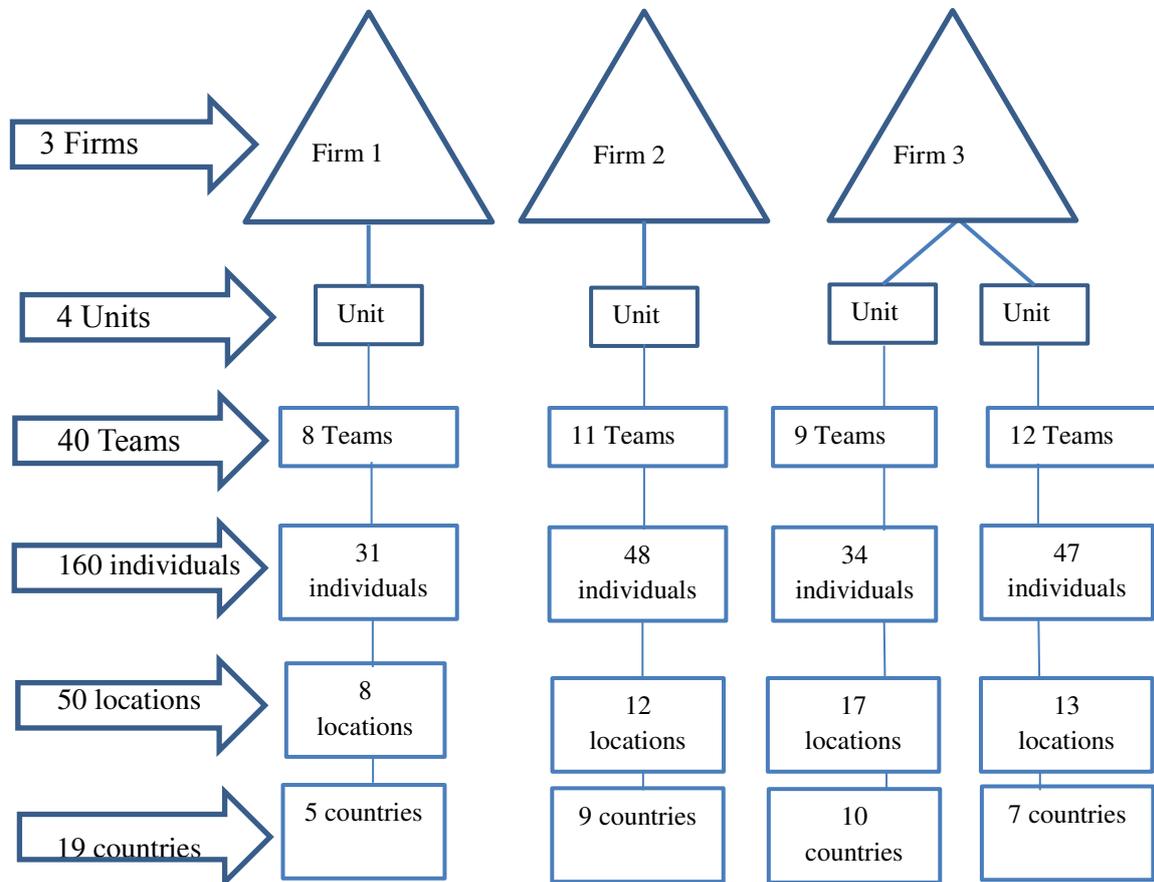
Table 1 Description of surveyed companies

	Industry	Core purpose	Size	Scope
Firm 1	Steel and construction	To provide innovative and energy efficient solutions for better living and working.	Net sales in 2012 totalled around 3 billion euros	9000 employees globally, network of dealers and distributors across 30 countries from Finland to South America
Firm 2	Indoor climate and plumbing	To provide innovative solutions (i.e. plumbing, heating, and cooling) which are sustainable, safe, and reliable, to both commercial and residential customers.	Turnover of 811 million euros in 2012 fiscal year	3200 employees globally
Firm 3	Telecommunications	Global contract manufacturer and systems supplier for communication and electronics (mobile phone and ADSL networks and testing and assembling of modules, electronic modules, circuit boards, and cables).	Turnover in 2012 was over 40 million euros	Production plants across Europe and China. Current number of employees is around 2000

The survey was administered in early 2012 to 160 employees and received an average response rate of 82 per cent, which is well within accepted boundaries when using such relational research design

(Wassermann & Faust, 1994; Kossinets, 2006). Employees within four units were asked to evaluate their relationships with all other people within their unit (see figure 2 below for more detailed breakdown of data sources). This produced four intra-unit networks. Naturally, these units were split between specific teams, which were identified through organisational charts from the participating companies. Thus, unlike most studies on micro-foundations of MNE teams (c.f. Haas & Cummings, 2015) this allowed us to also evaluate conflict and identification of knowledge sources within and between teams (e.g. teams embedded within these four units). Name rosters helped to reduce measurement error, assist with recall, and enhance overall measurement reliability (Mardsen, 1990). Sociometric questionnaires frequently utilise this type of one-item approach to identify each specific network relation (Borgatti & Cross, 2003). Despite potential validity issues, research has found one-item questions to be reliable when combined with the roster method (Mardsen, 1990) and relatively long-term interactions (Freeman et al., 1987). This is especially the case when collecting large amounts of data about total networks in a relatively short period of time and low cost (McCarty et.al., 1997; Fu, 2005). The respondents first identified the people with whom they “have regular communications, exchanges or dealings with”. Respondents were then asked to report on the extent to which they disagree or agree (on a Likert-scale of 1 to 6) to the statements they were presented with. This process resulted in 1181 dyad level observations on which we ran the analysis. Cultural distance indicator (discussed below) was not available for Slovakia. Therefore, in the models where the nationality difference is included (models 5 and 6) 1161 observations are used.

Figure 2 Breakdown of data sources



3.2 Measures

Worded loosely after previous studies in knowledge search (e.g. Haas & Cummings, 2015; Borgatti & Cross, 2003), we asked each team member to provide information on a question ‘This person is a good source of information, ideas, resources and opportunities’ (disagree-agree on a scale of 1-6) of all of their network members. Items measuring affective conflict proceeded in a similar manner. We are therefore measuring the extent to which a person is considered as a good source of knowledge by the potential knowledge seeker.

Prior studies in affective conflict have most commonly utilized four-item scales derived from Jehn (1995). We opted for an alternative measure for two reasons. First, our purpose was to analyse affective conflict at the interpersonal rather than group level. Our informal pilot testing indicated that having several scales is overly cumbersome and time-consuming for the respondents because

respondents would need to evaluate every individual they communicate with in terms of all four-scale items. Second, our purpose was to evaluate whether different types of affective conflict have similar effect on identification of knowledge sources in MNE teams. Thus, rather than following a broader measure of affective conflict in general, we wished to unravel the role of key dimensions of it: relational tension and self-interest specifically. We perceived this to be an important point because, as argued by a meta-analysis by De Dreu & Van Vianen (2001), it is unclear from extant research whether outcomes relating to conflict should be attributed to the *nature* of conflict or its *intensity*. While there are informative studies which focus on analysing organizational outcomes of relational problems at the interpersonal level, these tend to have a relatively superficial conceptualization of conflicting relationships. For instance, Schulte, Cohen & Klein (2012) provided interesting insights into coevolution of network ties and individual's perceptions, but their key empirical measure 'Do you have a difficult relationship with this person?' ignores both specific *nature* and *strength* of that relationship. As suggested by Rozin and Royzman (2001), most dramatic effects should occur when there are simultaneous manifestations of different types of affective conflict. Consequently, *relational tension*, 'I often feel uncomfortable when working with this person', was phrased after previous conflict studies (Jehn, 1995; Verbeke & Bagozzi, 2000; Hinds & Mortensen, 2005) utilizing measures of relational tension, anxiety, and uneasiness at the interpersonal level. *Self-interest* was similarly based on previous studies on opportunistic and self-centred behaviour (Villena et al., 2011; Das & Teng, 2000) as 'This person sometimes puts their own interests ahead of others'. Thus, these variables are at a dyadic-level and each respondent reported the extent to which they perceive their network members as sources of knowledge as well as affective conflict.

To capture geographic and nationality differences we utilized data provided by executives and human resources of our case companies. Examined teams were geographically dispersed across 19 countries and 50 locations. This information also included the official structure of the teams as presented in organisational charts (i.e. who reports to whom), as well as work location (city) and the nationality of each individual².

To measure *locational difference* we collected data on geographical distance between the locations of the participants in each dyad. The distance varied between 0 (co-located participants) and 7.4 thousand kilometres. However, the measure had the median of 393 kilometres and 90 percent of

² We did not further differentiate between native languages MNE team members because firm managers in all three companies indicated that, in all cases, this was the same as that person's nationality. Similarly, we asked the firm managers to report potential cases where a person's location is different from their country of origin, but we were informed that in all of the cases these were the same.

dyads were within 1862 kilometres distance. Traditional way of improving distributional properties of skewed variables is by applying logarithmic transformation. Given the distance has zero values, we use Inverse Hyperbolic Sine (IHS) transformation method rather than the traditional logarithmic transformation (Burbidge, Magee, & Robb, 1988). The transformation is calculated with a simple formula of $IHS(x) = \ln(x + \sqrt{x^2 + 1})$. IHS transformation gained popularity for its effectiveness in handling non-positive values, while both improving the normality of the variable and down weighting extreme values (Burbidge et al., 1988; Carroll, Dynan, & Krane, 2003; Nyberg et al., 2010).

To measure *nationality differences* we used the cultural distance indicator proposed by Berry et al., (2010). Cultural distance measure not only differences in nationality, but also account for the extent to which national cultures differ in multiple dimensions. The Berry et al. (2010) indicator consists of a multidimensional Mahalanobis distance based on the four cultural dimensions of power distance, uncertainty avoidance, individualism and masculinity measured by the World Values Survey. We attributed cross-country cultural distances to the dyads based on the distances between the nationalities of the participants. IHS transformation was applied to the measure of nationality differences as well.

Although the methodology applied in this study controls for actor and partner specific effects, following Haas and Cummings (2015) we included a number of control variables to avoid these effects from disguising as the impact of affective conflict. First, team difference measured whether individuals are embedded within the same teams. Second, gender difference measured whether there are differences in terms of knowledge identification and conflict with regards to actor gender. Third, we take into account whether the actor and partner are positioned in the headquarters (HQ). An actor located in the HQ may have more resources to access knowledge, hence require less knowledge seeking from others. Similarly, a partner may be identified as a good source of knowledge only because of their position in the HQ. In both cases the dummy variables take the value of 1 if the person is located at the HQ, and 0 otherwise. Fourth, we created dummy variables for the actor and the partner that equal 1 if the person is at a supervisory role. This is important, because their position may influence their evaluation of others as a knowledge source, or their being perceived as knowledgeable only because of their position. Finally, we control for actor and partner team sizes (measures in number of people). In large teams knowledge may be more dispersed among the team members, while in small teams knowledge may be perceived to be concentrated in certain persons. Hence, the actor and/or partner team sizes may influence perceptions about knowledgeability of specific individuals.

Table 2 Descriptive statistics

Variable	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12
Identifying knowledge source	4.60	1.08												
2 Relational tension	1.77	1.09	-0.37 ^{***}											
3 Self interest	2.42	1.22	-0.28 ^{***}	0.27 ^{***}										
Nationality difference	4.35	4.81	-0.08 ^{**}	0.06	-0.03									
5 Location difference	5.08	3.41	-0.01	-0.004	-0.06 [*]	0.73 ^{***}								
6 Team difference	0.77	0.42	-0.10 ^{**}	0.03	-0.03	0.07 [*]	0.07 [*]							
7 Gender difference	0.76	0.43	0.00	0.11 ^{***}	0.03	0.04	0.09 ^{**}	-0.03						
8 Actor supervisor	0.46	0.50	-0.01	-0.02	0.01	0.09 ^{**}	0.04	0.05 [†]	-0.01					
9 Partner supervisor	0.45	0.50	0.01	0.01	-0.01	0.06 [*]	0.03	0.01	0.04	-0.05				
10 Actor HQ	0.36	0.48	-0.03	0.00	-0.08 ^{**}	-0.26 ^{***}	-0.15 ^{***}	0.01	-0.04	-0.09 ^{**}	-0.01			
11 Partner HQ	0.42	0.49	0.05	-0.03	-0.10 ^{***}	-0.14 ^{***}	-0.07 ^{**}	0.08 ^{**}	-0.04	0.01	-0.05 [†]	0.43 ^{***}		
12 Actor team size	5.63	2.49	-0.04	0.19 ^{***}	0.11 ^{***}	-0.13 ^{***}	-0.13 ^{***}	-0.20 ^{***}	0.02	-0.12 ^{***}	0.00	-0.02	-0.01	
13 Partner team size	5.59	2.52	0.01	0.07 [*]	-0.01	-0.13 ^{***}	-0.13 ^{***}	-0.20 ^{***}	-0.01	0.00	-0.10 ^{***}	0.03	-0.02	0.13 ^{***}

N=1181 Dyads

3.3 Statistical approach

Traditional linear models of statistical analysis rely on the assumption of independence of observations. This assumption is violated when survey respondents are nested within groups (such as firm units, teams and dyads). Therefore, Social Relations Model (SRM) (Kenny, Kashy & Cook, 2006; Haas & Cummings, 2015) was used to test the hypotheses in this study. SRM is a special case of Hierarchical Linear Modelling designed for estimating models with complex nested structures in the data. Given that an *actor* (perceiver) gives response on multiple *partners* (targets), and a partner is assessed by multiple actors, dyad level responses may be affected by actor and partner effects causing non-independence of responses. SRM is designed to take account of such effects and estimate unbiased coefficients. Consequently, we can determine whether identification of knowledge sources in MNE teams depends on person's average perception of others in general (actor), how others in general perceive that person (partner), and how that person perceives a specific exchange partner (relationship) (Kenny, Kashy, & Cook, 2006). Thus, a team members' dyadic knowledge identification measures the extent to which that member perceives a specific exchange partner to be a good source of knowledge, whilst controlling for that members general tendency to perceive others as good sources as well, and the extent to which others perceive that team member knowledgeable. Furthermore, this approach allows us to examine simultaneous influence of affective conflict and knowledge identification from all these perspectives (see Figure 3 below for summary of main effects in our Social Relations Model). This is consistent with social exchange theory in that how social perceptions and exchanges take place depends on *totality* of various types of relationships – positive *and* negative – within the research context (Homans, 1958). This is important from theoretical point of view because affective conflict and difficult relationships can exist even in presence of more positive relationships (Labianca & Brass, 2006).

Figure 3 Effects of Social Relations Model

	SRM visualization	Description	Population
Actor effect	<p>MNC team 1</p> <p>MNC team 2</p>	<p>How A perceives others within and across MNC teams in general. Considers the variance of individual's consistent behaviour (e.g. general negativity and tendency to identify knowledge) across all exchange partners.</p>	<p>Relationships with network partners as reported by A</p>
Partner effect	<p>MNC team 1</p> <p>MNC team 2</p>	<p>How A is perceived by others in general. Considers the variance explained by individual's tendency to elicit a certain perceptions (e.g. how self-interested or knowledgeable others perceive that person).</p>	<p>Relationships with A as reported by everyone else</p>
Relationship effect	<p>MNC team 1</p> <p>MNC team 2</p>	<p>The way in which both sides of each dyad (A and B) adjust their behaviour (e.g. knowledge identification) when interacting with each other, whilst considering actor effect, partner effect, and different overlapping ties (e.g. affective conflict) between A and B.</p>	<p>Relationships as reported by A and B</p>

Following the well-established SRM procedures (e.g. Kenny, Kashy, & Cook. 2006; Haas & Cummings, 2015) we initially ran the NULL model (the model without the independent variables) to undertake the variance component analysis. The results of the model show that variance in knowledge identification can be attributed to its components as follows: actor team variance 0%, partner team variance 1.51%, seeker variance 25.01%, target variance 11.59%, dyadic variance 5.20% and residual variance 56.70%. These results show that a large part of variance in knowledge source identification is explained by seeker and target variances, emphasising importance of applying SRM method. Finally, following standard practice, measures of affective conflict were centred around the actor means (Hoffman & Gavin, 1998) and standardised, meaning that the intercept reflects expected level of knowledge identification for an average actor.

4. Results

Descriptive statistics in Table 2 show that the mean level of knowledge identification is 4.60 (measured in 6 point scale) with the standard deviation of 1.08. As expected, knowledge identification shows significant negative correlation with the two measures of affective conflict (relational tension and self-interest). Table 3 shows results of SRM estimations. Model 1 shows that hypothesis 1a is supported at 0.1% level of statistical significance, meaning that affective conflict in terms of relational tension inhibits knowledge identification. Model 2 supports hypothesis 1b, showing that affective conflict in terms of self-interest also has negative and statistically significant effect on knowledge identification within MNEs. Moreover, since the two measures of affective conflict are standardised with zero mean and unit variance, we can compare the marginal effects in the two models. This comparison shows that although both measures of affective conflict have a negative effect on knowledge identification, affective conflict in terms of relational tension has stronger impact than self-interest.

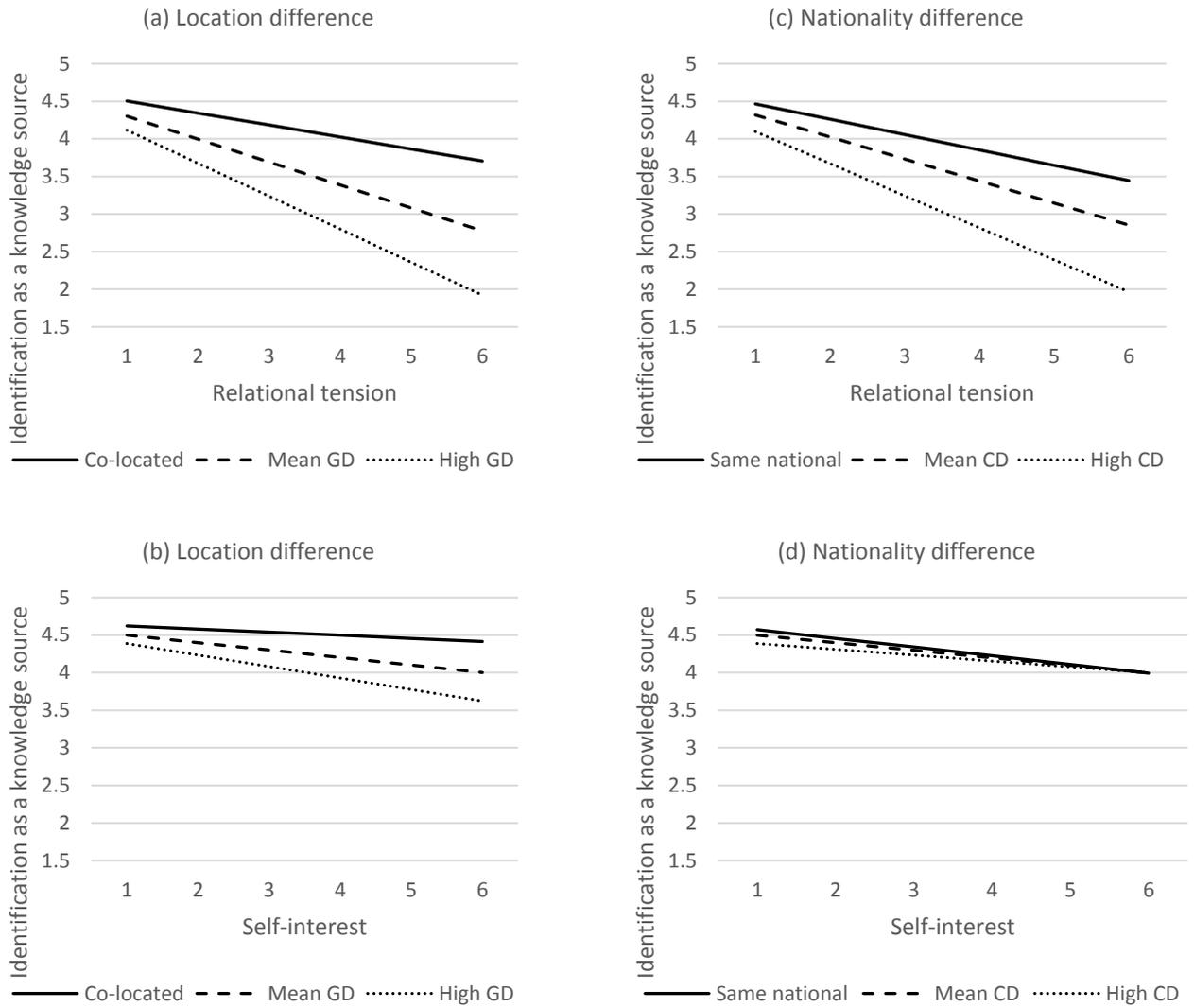
Testing hypotheses 2 and 3 required including geographic and nationality difference variables, as well as their interactions with the measures of affective conflict.

Table 3 Main effects for Social Relations Model predicting knowledge identification in MNE teams

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
H1a: Relational tension (RT)	-0.32***	(0.02)			-0.16***	(0.05)			-0.20***	(0.04)		
H1b: Self-interest (SI)			-0.10***	(0.03)			-0.04	(0.05)			-0.12***	(0.04)
Location difference (L)					-0.01	(0.01)	-0.01	(0.01)				
H2a: RT*L					-0.03***	(0.01)						
H2b: SI*L							-0.01	(0.01)				
Nationality difference (N)									-0.01*	(0.01)	-0.02**	(0.01)
H3a: RT*N									-0.02***	(0.06)		
H3b: SI*N											0.003	(0.01)
Team difference	-0.15*	(0.06)	-0.22***	(0.07)	-0.14*	(0.06)	-0.22***	(0.07)	-0.14*	(0.06)	-0.21**	(0.07)
Gender difference	0.07	(0.08)	0.09	(0.08)	0.09	(0.08)	0.10	(0.08)	0.10	(0.08)	0.08	(0.09)
Actor supervisor	-0.16	(0.12)	-0.16	(0.12)	-0.17	(0.12)	-0.16	(0.12)	-0.16	(0.12)	-0.15	(0.12)
Partner supervisor	-0.02	(0.08)	-0.04	(0.08)	-0.02	(0.08)	-0.03	(0.08)	-0.02	(0.08)	-0.04	(0.09)
Actor HQ	-0.20	(0.12)	-0.21	(0.13)	-0.21	(0.13)	-0.22	(0.13)	-0.23	(0.13)	-0.26*	(0.13)
Partner HQ	0.10	(0.09)	0.12	(0.10)	0.09	(0.09)	0.11	(0.10)	0.09	(0.09)	0.10	(0.10)
Actor team size	-0.02	(0.02)	-0.02	(0.02)	-0.02	(0.02)	-0.02	(0.02)	-0.02	(0.02)	-0.02	(0.02)
Partner team size	-0.01	(0.02)	-0.01	(0.02)	-0.01	(0.02)	-0.01	(0.02)	-0.01	(0.02)	-0.01	(0.02)
Constant	4.95***	(0.21)	4.99***	(0.22)	5.03***	(0.22)	5.08***	(0.23)	5.02***	(0.22)	5.12***	(0.22)
Cross-random components:												
Actor effects (variance):	0.29	(0.05)	0.28	(0.05)	0.29	(0.05)	0.28	(0.05)	0.29	(0.05)	0.28	(0.05)
Partner effects (variance):	0.12	(0.03)	0.14	(0.03)	0.12	(0.03)	0.14	(0.03)	0.13	(0.03)	0.15	(0.03)
Model fit: Wald χ^2 statistic	194.18***		32.03***		212.62***		36.35***		217.00***		40.81***	

Dependent variable: Knowledge identification. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. $N = 1181$ dyads in models 1-4; $N = 1161$ dyads in models 5 and 6.

Figure 4 Interaction plots showing the moderating impact of International Coordination Challenges on the effects of Affective Conflict on Knowledge identification



GD – Geographical distance; CD – Cultural distance

To ease interpretation and make size effects visible we depicted the findings in figures 4(a-d). The solid lines represent co-location in figures 4a and 4b, and the same nationality in figures 4c and 4d. Dashed lines represent the mean values of moderator variables and dotted lines represent their highest value in the sample.

Models 3 and 4 test hypotheses 2a and 2b. The interaction term between relational tension and location difference in model 2 is negative and statistically significant. However, the interaction between self-interest and location difference is, although negative, not statistically significant. These results can also be seen in figures 4a and 4b: while solid lines in both figures are sloped negatively, the marked lines, representing affective conflict between members in different locations, are even steeper than the solid lines. The slope increases when moving from mean to high level of geographical distance. These findings suggest that geographic differences between team members further increase the negative influence of affective conflict (in terms of relational tension) on identification of knowledge sources.

Models 5 and 6 test hypotheses 3a and 3b³. The impact of nationality difference on the relationship between relational tension and knowledge identification is similar to that of the geographic difference. However, this moderating effect on the effect of self-interest is statistically insignificant. These findings show that hypothesis 3a is supported but hypothesis 3b is not. In other words, if an MNE team member who evaluates the knowledge source perceives the target as self-interested, the degree to which knowledgeability a person is hindered remains approximately the same regardless of the nationality of the target. Figures 4c and 4d depict predictive margins from models 5 and 6. As expected, figure 4c shows that the negative effect of relational tension on identification of knowledge sources grows with the level of nationality difference (cultural distance) between the knowledge seeker and the target. However, the slopes of the solid and marked lines in figure 4d are not significantly different, indicating that the effect of self-interest on identification of knowledge sources is approximately similar regardless of the nationality difference.

³ It should be noted that in addition to moderation effects of geographic and nationality differences, we tested for their direct effects on affective conflict. Most direct effects (with and without controls) were insignificant. Exception was effect of nationality differences to relational tension, which was significant at $p < 0.05$ with control variables (but insignificant with controls).

We also tested for the possibility of a mediation effect present in the model. This test would eliminate the possibility that perceived levels of affective conflict are influenced by locational and nationality differences. Baron and Kenny (1986) suggested four step procedure to test for presence of a mediation effect. Step 1 tests the direct relationship between the independent variable (locational and nationality differences in our model) (IV) and the dependent variable (DV). Step 2 regresses the IV on the mediator variable (MV). Step 3 regresses MV on DV. If one or more of these three steps return statistically insignificant relationship, the test concludes absence of mediation effect. (If all three steps return statistically significant relationship, then step 4 is conducted to determine whether it is full or partial mediation). We undertook these steps using the same multilevel model specification and control variables used for the main analyses. Step 1 regression of geographical distance on DV returned statistically insignificant result, eliminating the possibility of the effect of locational difference being mediated by either of relation tension or self-interest. Cultural distance, however, returned statistically significant negative result, moving us to step 2. In step 2 we regressed nationality difference on relational tension and on self-interest. Both regressions returned statistically insignificant relationships. Thus, step 2 eliminated the possibility of nationality difference being mediated by either relational tension or self-interest. We also calculated the indirect effect as suggested by Krull and MacKinnon (2001) and used one thousand replication bootstrapping procedure to calculate the standard errors. All indirect effects were statistically insignificant, rejecting the presence of mediation effects.

6. Discussion

Extant research has increasingly recognized the importance of understanding how team members identify, share, distribute, and coordinate knowledge flows in MNEs (Kogut & Zander, 1993; Nohria & Ghoshal, 1997). While previous research has largely focused on knowledge sharing between MNE subsidiaries, in this research we have focused on micro-foundations of global knowledge identification between individual members of MNE teams. Previous research into exploration of knowledge sources has been rare (Birkinshaw et al., 2007), and the studies which address identification of potential exchange partners within networks have not addressed the role of conflict. SET perspective emphasised that troubled and conflictual relationships are unbalanced and may therefore make it more difficult to recognize the full potential embedded within these relationships. However, it also made intuitive sense to argue that even in a conflictual relationship one can grudgingly recognize the skills and expertise of the other person – even if there was no intention to ask that person for advice or help in solving a difficult problem. Our study helped to shed light on this

conundrum, and we broadly demonstrated that a higher degree of relational conflict reduces the degree to which others' potential for knowledge, resources, and opportunities is recognized.

In line with Zhao & Anand (2009), we posit that knowledge identification and transfer have differences in terms of nature, strategic status, and level of difficulty at various levels of analysis. In order to provide a more holistic understanding of knowledge in MNEs, it is vital to understand how knowledge residing in teams is identified and its key components also at the micro-level. In particular, focusing on the role that affective conflict plays in knowledge identification, and how this relationship is influenced by geographic location and nationality of team members, we contribute to better understanding of issues that may hinder effective functioning of MNE teams.

Specifically, we have shown that affective conflict has a direct negative relationship to MNE team knowledge identification. While both early and more recent research have found that conflict can limit productivity at the group level (Evan, 1965; De Dreu, 2008), we demonstrate the influence of affective conflict at interpersonal level, specifically for knowledge identification within MNE team context. Similar result was found for affective conflict described by perceptions of self-interest as well as relational tension. With this, we have taken a first critical step in unbundling outcomes related to different types of affective conflict. Beyond this, however, we asked whether geographic location and nationality of team members have a moderating effect on conflict and identification of knowledge sources. We find that the answer is not simply whether these geographic and nationality differences intensify the effect of conflict on knowledge identification. Rather, the answer depends on *type* of affective conflict between MNE team members. Specifically, we find that geographic differences have a significant negative moderating effect on relational tension and knowledge identification, but not on self-interest and knowledge identification. Similarly, team member nationality was only negatively significant for relational tension between team members, not for perceived self-interest. Thus, while perceptions of self-interest are directly harmful for knowledge identification in MNE teams, geographic differences and nationality differences do not make it worse.

This finding is particularly interesting because it somewhat contradicts our theory. We hypothesised that differences in nationalities of team members increase level of ambiguity. Specifically, we expected nationality differences to amplify social exchange uncertainty with regards to lack of shared mind-sets, having different rules and norms, and costs of identifying useful information (Cropanzano & Mitchell, 2004). We suggested that these would, in turn, intensify the effect of conflict on identification of knowledge sources. The second part of our argument was that because people in

general tend towards homophily (McPherson, Smith-Lovin & Cook, 2001) dissimilarity between team members may further escalate effects of negative interpersonal interactions (Schulte, Cohen & Klein, 2012). Both, ambiguity and dissimilarity was suggested to make people less likely to engage in evaluations and exchanges (e.g. evaluation and search of knowledge) where benefits and costs are difficult to evaluate (Blau, 1964). However, we only found evidence of these mechanisms for relational tension, and not self-interest. We offer two potential explanations on why both location difference and nationality difference do not moderate the effect of self-interest on knowledge identification, even though they do in the case of relational tension, is an interesting finding both empirically and theoretically.

First, one might posit similarly to Gouldner (1960) and Tsui and Wang (2002) that reciprocal exchanges, contributing to common 'pot', returning favours, and following established norms are relatively universal principles. As such, failure to follow such relational exchange guidelines (e.g. self-interest driven behaviour) is considered equally disruptive for a functioning team across nationalities. Thus, breaking these types of exchange rules functions in a similar manner in wide array of countries, and therefore MNE team members' nationalities and geographic locations would not further intensify the effect that conflict has on identification of knowledge sources.

Alternatively, social and political theorists have long argued that a near-universal 'norm of self-interest' significantly influences people's actions and opinions across wide array of settings (Miller, 1999; Schwartz, 1997). Self-interest according to these studies is not necessarily something that breaks rules of potential exchanges and collective cohesion, but is, in fact, a collectively shared cultural ideology in which in certain situations it is normatively acceptable to act in a self-interest manner (Kohn, 1990; Miller & Ratner, 1996). For instance, people pursue self-interest when such behaviour is expected of others (Snyder & Stugas, 1998). In fact, deviating from self-interest driven behaviour may itself provoke suspicion, dismay, and derogation (Miller, 1999). This is especially true in a group settings, where decisions made by groups versus individuals are often more self-interested due to potential anonymity and diffusion of responsibility (Schopler & Insko, 1992). Therefore, especially in the Western cultures, a certain degree of self-interest is often the expected norm (Miller, 1999). According to these arguments, it would not be particularly surprising that location and nationality differences do not significantly moderate the relationship between self-interest and identification of knowledge sources. Thus, rather than nationality and location differences having an intensifying effect on how perceptions of self-interest may influence one's perceptions of being

identified as a good source of knowledge, it could be that a certain degree of self-interest is often considered rational and appropriate. This could particularly be the case in Finnish MNEs. It should be noted that due to the national culture of Finland and characteristics of MNEs, Finnish MNEs might be likely to select or train individuals who do not have or show self-interest when they work with others⁴. For instance, Finland ranks high on Femininity dimension of Hofstede cultural values, emphasising caring for others and quality of life over competition, achievement, and success, which are intuitively more likely to be linked to acceptance of behaviour driven by self-interest.

In contrast, it is unlikely that there are such nearly-universal principles for relational tension. As argued earlier, relational tension relates to interpersonal style, attitudes, values, and personality (De Dreu & van Vianen, 2001). While there are substantial differences in these dimensions even within countries, these are likely to be emphasised in MNE teams consisting of many nationalities and geographic differences. As suspected, nationality differences further increased the negative effect of relational tension on identification of knowledge sources. Thus, nationality differences carry a significant influence on how frustrations and tensions influence important outcomes in MNEs.

7. Implications for international business research and managerial research

By examining the role of affective conflict in identification of knowledge sources in MNE team context, our study responds to several calls for how individuals identify and search knowledge residing within MNE teams at the micro-foundational level (Foss & Pedersen, 2004; Morris, Hammond, & Snell, 2014; Haas & Cummings, 2015). Similar calls have been recently made for unravelling micro-foundations of conflict in organizations (Lê, & Jarzabkowski, 2015). We thus contribute to greater understanding of identification of knowledge sources in MNE teams in three important ways. First, by analysing both affective conflict and identification of knowledge sources at the interpersonal level we are able to contribute to unearthing barriers that have been previously overlooked in international management literature. We, according to the best of our knowledge, are the first to demonstrate that affective conflict at the interpersonal level has a significant influence on MNE team outcomes. While the existence of this links seems intuitive, we provide a finer grained view on specific *types* of affective conflict in combination with geographic and nationality differences on identification of knowledge sources. Further, the fact that we concentrate on identification of knowledge sources rather than search (e.g. Haas & Cummings, 2015) or transfer (e.g. Peltokorpi &

⁴ We would like to thank an anonymous reviewer for suggesting this point.

Vaara, 2014) extends research on the determinants of a network that one *could* tap into when faced with challenges or opportunities. By demonstrating the link between affective conflict and identification of knowledge sources, we build empirically on research analysing the orchestration of knowledge identification and search activities in MNE teams (Haas & Cummings, 2015; Morris, Hammond, & Snell, 2014). Future theory and research on knowledge identification and transfer in MNE teams should carefully consider tensions and conflicts between team members, and study their antecedents and outcomes at multiple levels.

Second, our focus on identification of knowledge sources helps to contribute to one of the key debates in MNEs; how to find a balance between diverse and distant knowledge, and knowledge that is close and similar (e.g. Shapiro, von Glinov & Cheng, 2005; Levin & Barnard, 2013). We contribute to literature on balancing local and distant knowledge in MNEs by demonstrating the role of affective conflict for this process. Specifically, we demonstrate that geographic and nationality differences intensify the effect of affective conflict on identification of knowledge sources in MNE teams. On one hand, as the distance between team members increases, so does the negative influence of affective conflict on knowledge identification. On the other hand, nationality differences between team members only have a significant influence under specific type of conflict; relational tension. This is an interesting finding since research on distance and cultural differences is often inconclusive and contradictory (Brouthers & Brouthers, 2001), but social identity research consistently shows intergroup conflicts being intensified by cultural stereotypes and dissimilarities (Triandis & Trafimow, 2001). Our findings suggest that research analysing the balance and trade-offs between local/distant and homogeneous/diverse knowledge sources could greatly benefit from incorporation of conflict as an important variable determining outcomes. For instance, it would be interesting to study whether interpersonal conflict influences identification and transfer of distant (e.g. new, novel and unique) knowledge in a same way as local knowledge (more redundant and general), especially when other ties (e.g. friendship, trust, mentorship) between people are taken into consideration.

Finally, our findings have implications for MNE managers. In accordance with previous studies (Hinds & Bailey, 2003; Hinds & Mortensen, 2005), we emphasise that MNE teams are relatively fragile and require active management of conflict. Our findings especially highlight the role of careful management of geographic distribution of team members. Whilst our study does not specifically focus on reduction of affective conflict and its outcomes, previous studies have suggested that placing emphasis on spontaneous communication (Labianca, Brass & Gray, 1998; Hinds & Mortensen,

2005), development of openness norms (Yang & Mossholder, 2004) and strong ties and trust among team members (Bartel & Saavedra, 2000). In implementing appropriate tools for reducing the negative effects of conflict MNE managers face a significant challenge due to limited face-to-face interaction and inherent diversity. Reflecting findings of Ravlin, Ward & Thomas (2014), we posit that both geographic and cultural differences are likely to create uncertainty and ambiguity, which will have important implications on emergence of conflict and its outcomes for searching and sharing knowledge.

8. Limitations and future directions

While our study relied on detailed survey data, there are some limitations that provide pointers for future research. First, a common limitation to studies in MNE knowledge identification and search as well as team conflict, our cross-sectional data do not allow a causal direction to be established. As such, we cannot discern for certain whether problems related to how people are perceived as knowledge sources were at the root of affective conflict in the first place. As argued by Cropanzano & Mitchell (2004), relationships alter the nature of exchanges and vice versa. Results concerning the importance of affective conflict and identification of knowledge sources in MNE teams provide a foundation for further research addressing causality. For instance, future studies should include experimental longitudinal research designs which capture the directionality between variables and examine the dynamic nature of MNE team networks over an extended period of time (i.e. co-evolution of network structure and different types of conflict). Secondly, our results may have been influenced by other unknown variables. Similar to other studies in MNE team knowledge identification and search (e.g. Haas & Cummings, 2015), we were not able to fully capture contextual differences between teams. For instance, affective conflict might have a stronger negative influence on knowledge identification and search in R&D teams in comparison to sales due to a greater need to access, combine, and apply knowledge embedded within that team. We suggest that capturing these types of contextual differences in MNEs is an important future research avenue from both knowledge and conflict perspectives. Similarly, individual-based factors such as internal motivation to identify, search, and share knowledge might influence the degree to which existing conflict may affect a relationship (Foss & Pedersen, 2004). Finally, the types of ties that can arise within MNEs at different levels of analysis are numerous. Future studies could investigate various types of affective conflict (e.g. friction, disagreements, dislike) and their relationship to more helpful relationships (e.g. friendship, trust, reliance) and organizational outcomes. Similarly,

while we modelled knowledge in terms perceptions of others as good sources of resources, ideas, and information, future studies may extend our findings into more explicit knowledge dimensions including actual innovations, product development, and patent citations.

Our study also raises several interesting questions about how MNE team members identify sources of knowledge. While we focused on *perceptions* of others as knowledge sources, it would be interesting to know whether members *actually* use these people for help and advice. We posit that there are cases where MNE team members are perceived to be knowledgeable and experts in a specific area by others, but due to conflictual relationships (e.g. relational tension), people may not in actuality seek their knowledge. It would be an interesting future research avenue to analyse the conditions underpinning the paradoxical situation where MNE team members have identified another as a potential knowledge source, but choose *not* to seek their advice. Our research suggests that international business scholars and conflict theorists are ideally positioned to provide valuable insights into unlocking this important question.

Relating to our managerial implications, another direction to explore is the conditions that underpin reduction of conflict in MNE teams and its relation to relevant outcomes. In the MNE teams that we studied, we found that member geographic differences negatively moderated conflict and knowledge identification, while member nationality only did so partly. However, we do not know whether individuals' degree of international experience, cross-cultural training, global mindset, or emotional intelligence (e.g. Levy et al., 2007; Beck, Kabst & Walgenbach, 2009) could negate these effects. We posit that these under-examined contingencies may play a vital role in determining when and how conflict occurs, and the degree to which MNE team members allow it to influence how they identify, search, and access knowledge.

9. Conclusion

Knowledge identification and search are increasingly viewed as key aspects for any multinational corporations as they significantly influence innovation, product development, and learning on global scale. While conflict has been often argued to be one of the biggest challenges in international business, we have limited understanding how it can act as a barrier knowledge identification and transfer. Our findings help to shed light on how different types of affective conflict influence identification of knowledge sources in MNE teams. We further elucidate how geographic and

nationality differences influence this relationship. Ultimately, understanding the conditions that obstruct knowledge identification, search, transfer, and implementation, lies at the heart of realizing the full potential of a modern multinational firm.

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