

Dual Organizational Identification in Multinational Enterprises and Interpersonal

Horizontal Knowledge Sharing: A conceptual model

ABSTRACT

How does a subsidiary employees' dual organizational identification (DOI) – with both the local subsidiary and the overall corporation – shape the pattern of interpersonal horizontal knowledge sharing (IHKS) in multinational enterprises (MNEs)? This conceptual article develops a conceptual model demonstrating the relationships between subsidiary employees' DOI and their IHKS patterns (i.e., quantity, quality, and timing). We propose that subsidiary-oriented DOI is negatively associated with IHKS, while MNE-oriented DOI has the opposite effect. Building on this central argument, we posit that the geographic distance, relative competence, and interpersonal similarity between employees and colleagues at other subsidiaries can moderate the relationship between DOI and IHKS and cause unevenness in IHKS patterns that may aggregate at the corporate level, resulting in uneven knowledge flows in the whole MNE system. Our theorizing advances understanding of intra-MNE knowledge sharing by yielding novel propositions about the predictors of IHKS and uneven knowledge flows in MNE.

Keywords: Dual organizational identification, Interpersonal horizontal knowledge sharing, Multinational enterprises, Social identity theory, Uneven knowledge flows

1. INTRODUCTION

Researchers conceptualize multinational enterprises (MNEs) as a social community whose success is attributed to continuous knowledge sharing across the organization, including between subsidiaries (Kogut & Zander 1993). Recognizing this, much research has been devoted to the collective factors in inter-subsidiary knowledge sharing (e.g., Gupta & Govindarajan 2000; Shoham, Yaari & Brock 2003). However, current literature sometimes views individuals, central components within this social process, as interchangeable parts rather than inherently different (Felin & Hesterly 2007). As a result, how individual employees are motivated (or not) to share knowledge with geographically-dispersed others via inter-subsidiary knowledge sharing remains poorly understood (Foss & Pedersen 2019).

A central challenge in exploring how individual employees are motivated to share knowledge is understanding their perception, attitude, and behavior towards themselves and other participants. Some research has recognized organizational identification as a mechanism to generate cohesion throughout an MNEs' workforce, whereby employees' cooperative behavior can generate positive consequences for the organization, including knowledge sharing (Lindsay, Sheehan & De Cieri 2020; Spoor & Chu 2018). However, social identity literature (Tajfel et al. 1979; Turner et al. 1987) shows that individuals can hold multiple social identities simultaneously as long as the identities are compatible and correlated under certain circumstances (Hornsey & Hogg 2000). Since Brown & Williams (1984) uncovered employees' dual organizational identification (in their case, employees' identification with both their department and the corporate) in a single-country organization, the patterns of dual

identification with both a subunit and a superordinate identity have been broadly supported by empirical evidence (e.g., Kane, Argote & Levine 2005; Mell et al. 2020).

In the context of MNEs, researchers have examined subsidiary employees' dual identification with both the local subsidiary and the overall MNE (Reade 2001a, 2001b). Dual identification occurs because it satisfies the desire for positive self-esteem (Ashforth & Mael 1989) through the prestige and distinctiveness of membership to the subsidiary and MNE (Vora & Kostova 2007). In contrast to single identification, we argue that subsidiary employees' DOI may play an essential yet complex role in interpersonal horizontal (i.e., inter-subsidary) knowledge sharing because the various strengths of DOI (e.g., subsidiary- and MNE-oriented DOI) are likely to generate opposing effects. Our theorizing suggests that interpersonal horizontal knowledge sharing (IHKS) is open to influence from the salience of subsidiary employees' DOI with both the local subsidiary and the whole MNE due to the organizational boundaries and separation across subsidiaries (Dasi et al. 2017).

To help make this case, we adopt the concept of DOI (Reade 2001a, 2001b) from social identity theory (Tajfel et al. 1979) to theorize that the impact of subsidiary employees' subsidiary- or MNE-oriented DOI (Vora & Kostova 2007) on IHKS can be further moderated by the attributes of employees' relationships with colleagues in other subsidiaries. This framing suggests that the patterns of IHKS may not arise from the absolute level of dispersion or differentiation of subsidiaries and employees, as current literature suggests (e.g., Ambos & Ambos 2009; Haas & Cummings 2015), but that these features can moderate the relationship

between subsidiary employees' DOI and IHKS through influencing their ingroup favoritism and/or intergroup discrimination.

This conceptual article contributes to current research in several ways. First, we contribute to understanding intra-MNE knowledge sharing (Foss & Pedersen 2019; Haas & Cummings 2015) by discussing how individuals' perceptions and attitudes shape their behaviors in IHKS. Our theorizing is novel in applying DOI to illuminate the intricate dynamics among subsidiary employees in IHKS. We also explain how the relationship between DOI and IHKS can be influenced by the geographic distance between knowledge sharing partners and employees' perceptions of their counterparts' relative competence and interpersonal (dis)similarity.

Our theorizing also contributes to social identity theory. The current literature often suggests that identifying with a superordinate organizational entity (e.g., the overall MNE) facilitates knowledge sharing (Kane 2010; Mell et al. 2020). In our theorizing, we propose that identification with the overall MNE may also produce negative consequences. Perhaps counter-intuitively, we posit that the positive impact of subsidiary employees with MNE-oriented DOIs on IHKS is further strengthened by geographic distance, relative low-competence, and perceived interpersonal dissimilarity with colleagues in other subsidiaries. We argue the moderating effect stems from people's constant desire to enhance their self-esteem. Specifically, subsidiary employees' identification with overall MNE is strengthened towards colleagues with these features over others in other subsidiaries because interacting with them can further ensure the employees' positive self-esteem. However, the preference to share knowledge with particular subsidiaries and employees comes at a price; namely, reduced knowledge flows with colleagues who are not in those other subsidiaries. The aggregate effect

of such inconsistent knowledge-sharing behaviors with colleagues in other subsidiaries may lead to uneven knowledge flows within the whole MNE system.

Finally, our theorizing focuses on the understudied phenomenon of ‘unevenness’ in MNE knowledge-sharing. By *unevenness*, we mean inconsistent patterns in the quantity, quality, and timing of knowledge flows across various geographical locations of MNEs. Uneven knowledge flows are detrimental to MNEs (Haas 2010; Monteiro, Arvidsson & Birkinshaw 2008) as they impede MNEs’ core goal of reaching synergy and efficiency in a global range (Bartlett & Ghoshal 1999; Kogut & Zander 1993). For this reason, it is crucial to advance research on intra-MNE knowledge sharing by examining the causes of uneven knowledge flows.

2. CONCEPTUAL BACKGROUND

2.1 Social identity theory and implications within MNEs

Social identity theory and its extension of self-categorization theory (Tajfel et al. 1979; Turner et al. 1987) suggest that individuals tend to define themselves partially through membership in social groups that they perceive as meaningful and positive to their self-esteem (Hogg & Terry 2000). Two corollaries of social identity theory are relevant to this research. One is that people tend to categorize themselves into multiple social groups simultaneously as a means of social comparisons (George & Chattopadhyay 2005; Tajfel et al. 1979). Consequently, social group membership is perceived either with “positive or negative value connotations” (Tajfel et al. 1979, p. 59). The salience and value of a group membership rely on how well the positive distinctiveness from other reference groups can achieve or maintain positive self-esteem (Ashforth & Mael 1989). In other words, people tend to embrace the social identity(s) favorable to their self-esteem and discard those which threaten it.

The second corollary of social identity theory is concerned with people's behavior. Specifically, people tend to treat others whom they perceive as members in the same social group (ingroup members) more favorably than those that are outside the group (Tajfel et al. 1971). This ingroup favoritism highlights the positive distinctiveness from individuals in other reference groups (Turner, Brown & Tajfel 1979) and arises from people's desire to enhance their self-esteem (Tajfel 1978). It manifests as a tendency to reward, value, and be more patient with ingroup members' ideas than with outgroup members (Kane 2010; Kane, Argote & Levine 2005). It can also increase resentment and discrimination toward outgroup members (Balliet, Wu & De Dreu 2014). For example, individuals tend to assume the behavior of outgroups – that is, those with whom they perceive as having no shared identification - as unfavorable and less trustworthy (Fan & Harzing 2017). In other words, ingroup favoritism and/or intergroup discrimination acts as psychological mechanisms on the logic of individuals to shape their behavior.

Social identification can derive from multiple sources, among which organizations are especially critical (Ashforth & Mael 1989). Organizational identification is defined as a “cognitive form of psychological attachment whereby individuals define themselves in terms of the organization” (Vora & Roth 2007, p. 598). The psychological link between individuals and organizations demonstrates that individuals personalize the organization's typical features to define themselves (Dutton, Dukerich & Harquail 1994) and interweave the organizations' successes and failures with their own (Mael & Ashforth 1992). With the increasing recognition that employees can hold multiple identifications simultaneously (e.g., George & Chattopadhyay 2005; Mell et al. 2020), viewing MNE employees as holding a single

organizational identification becomes problematic as it overlooks the inherent differences among people. Individuals can concurrently identify themselves with different parts of the organization such as a business unit, work team or corporate entity (Ashforth, Harrison & Corley 2008). In relation to MNEs, empirical observations have shown subsidiary employees can develop ‘dual organizational identification’ with the overall MNE and the subsidiary simultaneously (Reade 2001a, 2001b; Vora & Roth 2007).

Scholars have identified a number of characteristics of DOI based on its form (i.e., degree of overlaps between the identification with two organizational entities) (Vora et al. 2021) and relative magnitude (Vora & Kostova 2007). The latter includes three situations based on the relative strength of identification between the two entities: a) *subsidiary-oriented DOI*, referring to the greater identification towards the subsidiary relative to MNEs; b) *MNE-oriented DOI*, indicating the greater identification towards the MNE in contrast to the subsidiary; and c) *comparable DOI*, implying equal strength of identification with the subsidiary and the MNE.

As pointed out previously, social identification can lead to ingroup favoritism and/or intergroup discrimination (Turner, Brown & Tajfel 1979). Scholars observe that individuals have greater comfort and willingness to cooperate with those whom they perceive as in-group members, but may also be more hesitant to cooperate with those they do not know or perceive as not one of ‘us’ (Balliet, Wu & De Dreu 2014; Kumi & Sabherwal 2019). However, with the growing investigation of DOI (Vora & Kostova 2007), the linkage between organizational identification and individuals’ positive behaviors has been questioned. Specifically, identification with different organizational entities, and the varying strengths of identification,

may have implications on individuals' interactions (e.g., Dokko, Kane & Tortoriello 2013). A recent experimental study found that individuals' identification with a whole organizational system facilitates equal knowledge sharing within the system, while identification with a sub-unit may constrain knowledge sharing across sub-units (Mell et al. 2020). In the MNE context, internal boundaries between subsidiaries highlight the intergroup context and differentiation among subsidiary employees (Dasi et al. 2017); nevertheless, a model of how DOI influences intra-MNE knowledge sharing patterns is missing from the literature.

2.2 Interpersonal horizontal knowledge sharing in MNEs

Our theorizing focuses on IHKS, defined as knowledge sharing that occurs between individuals located in globally dispersed subsidiaries, business units, or country operations in an MNE. Our conceptual model confines our theorizing to IHKS between employees in subsidiaries that are broadly hierarchically equal and are not involved in any structural activities (i.e., substitutive or complementary) (Andersson et al. 2015; Luo 2005). The research operationalizes IHKS as consisting of three knowledge-flow patterns – (i) quantity, (ii) quality, and (iii) timing (Tran, Mahnke & Ambos 2010). Quantity indicates the amount of knowledge that flows (e.g., Gupta & Govindarajan 2000); quality refers to the perceived benefit to the recipients through knowledge flows (Ambos & Ambos 2009) such as saved time or improved work quality (Haas & Hansen 2007); while timely knowledge flows – the gains of which have been described as of “paramount importance” (Tran, Mahnke & Ambos 2010, p. 498) – refers to knowledge-sharing speed or timing.

The unevenness of MNE knowledge sharing noted by researchers is that knowledge often flows better in some parts of the system than others (e.g., Monteiro, Arvidsson &

Birkinshaw 2008). Focusing on this unevenness diverges from most research on knowledge flows in MNEs (see the review of Michailova & Mustaffa 2012), which tends to emphasize the effectiveness or success of a knowledge-sharing project or activity between participants. In contrast, unevenness is concerned with the poor state of knowledge flows in the whole corporate system when some units and members lack access to knowledge flows while other units and members engage in high quantity, high quality, or timely knowledge flows.

Our reasons for focusing on IHKS in the context of MNEs are twofold. First, in contrast to domestic organizations, the dispersed and differentiated nature of MNEs (Ambos & Ambos 2009) amplifies the complexity of knowledge flows. The absence of similarity and familiarity between globally-dispersed subsidiary employees often generates intricate interpersonal dynamics (Ambos et al. 2016; Haas & Cummings 2015) and draws attention to how individuals are motivated to share knowledge with others based on perceived (dis)similarity or (lack of) common identification (Phookan & Sharma 2021). Second, Foss and Petersen's (2019) call for attention to the micro-foundation of knowledge sharing across the subsidiaries of MNEs is still yet to be picked up with vigor by IB researchers. Empirical and conceptual studies have shown that ingroup favoritism can enhance individuals' willingness to share knowledge (e.g., Lindsay, Sheehan & De Cieri 2020; Spoor & Chu 2018). Yet in contrast to domestic organizations, salient organizational boundaries in MNEs mean that subsidiary employees can develop identification with the local subsidiary and the whole MNE simultaneously, albeit to varying degrees (i.e., subsidiary- and MNE-oriented) (Reade 2001a; Vora & Kostova 2007). In response, we expect that the distinct strengths of DOI may have complex implications on IHKS.

We delve into the interpersonal side of knowledge sharing activities because the aggregate of an organization's knowledge flows comprises a large number of "individual transfer projects" (Andersson et al. 2015, p. 241). Our focus on IHKS is consistent with scholars who view it as a communicative, social, and interpersonal process (e.g., Heizmann, Fee & Gray 2018). Interpersonal knowledge sharing processes are sophisticated and occur within a social context that can influence whether, how, how effectively, and with whom knowledge is shared. A vast majority of literature on interpersonal knowledge sharing focuses on the effect of the relationship between participants, such as geographic distance, relative competence, and interpersonal similarity (Ambos et al. 2016; Zhang & Jiang Jane 2015). For example, some scholars associate geographic distance with the shortage of the communication channels and lack of knowledge relevance (Christensen & Pedersen 2018; Schulz 2003) where intensive and frequent interpersonal knowledge flows are less likely to occur. Conversely, some studies highlight the advantage of the non-redundant knowledge stock of geographically distant participants (Ambos & Ambos 2009; Luo, Maksimov & Bu 2020). Similarly divergent voices also emerge in arguing the effect of relative competence (Gupta & Govindarajan 2000; Zhang & Jiang Jane 2015), and interpersonal similarity (Hadjichristidis, Geipel & Surian 2017; Mäkelä, Kalla & Piekkari 2007) on knowledge sharing. Our theorizing addresses these contradictions head on by arguing that a reason for these mixed results is the relatively little attention given to inherent differences among individuals (Foss & Pedersen 2019). In this research, the concept of DOI, rooted in social identity theory, enables us to explore how individuals' various strengths on DOI (i.e., subsidiary- and MNE-oriented DOI) influence the

pattern of IHKS through the psychological mechanism of ingroup favoritism and/or intergroup discrimination.

Consequently, we focus on the challenges of knowledge sharing in MNEs beyond geographic dispersion and differentiation to theorize from the perspective of subsidiary employees, particularly how their subsidiary- or MNE-oriented DOI predicts the pattern of IHKS.

3. PATTERNS OF INTERPERSONAL HORIZONTAL KNOWLEDGE

SHARING IN MNEs

3.1 Subsidiary-oriented dual organizational identification

Employees of an MNE working in a subsidiary are said to have subsidiary-oriented DOI when they identify more with their subsidiary relative to the overall MNE in which they work (Vora & Roth 2007). This attraction to the local subsidiary (Reade 2001a, 2001b) may be associated with themes such as success (Ashforth & Mael 1989) or as “competence, power, efficacy, virtue, and moral worth” (Dutton, Dukerich & Harquail 1994, pp. 246-7), which are often viewed as desirable ways to define oneself and boost self-esteem (Turner et al. 1987). For example, a subsidiary’s autonomy may become a source of subsidiary-oriented DOI because it contributes to employees’ feeling important and independent, free from monitoring or control by head office (Vora & Kostova 2007). According to social identity theory (Tajfel et al. 1979) ingroup favoritism and/or intergroup discrimination act as the psychological mechanisms to shape the focal subsidiary employees’ behaviors towards local colleagues and colleagues at other subsidiaries in IHKS (De Dreu & Kret 2016). As a result, the presence of

subsidiary-oriented DOI may guide subsidiary employees to show favoritism towards local colleagues and/or, in contrast, discrimination towards colleagues in other subsidiaries in IHKS.

First, intergroup discrimination towards colleagues in other subsidiaries is likely to impede employees with subsidiary-oriented DOI from engaging in high-quality IHKS. High-quality knowledge sharing requires interactive communications whereby in-depth idea exchange can help decontextualize local knowledge and help recipients adapt it to their own operations (Schulz 2001). Employees with negative feelings towards colleagues in other subsidiaries may lack the psychological comfort necessary to participate in the types of highly communicative and cooperative social processes involved in interpersonal knowledge exchange (Heizmann, Fee & Gray 2018). Indeed, research shows that it is psychological safety that encourages individuals to be more willing to take the interpersonal risk of expressing disagreement or opposing perspectives that are parts of high-quality knowledge sharing (Singh, Shaffer & Selvarajan 2018). These features are important because of the inherent vulnerability (i.e., jeopardizing job security and exposing weakness) in knowledge-sharing processes (Riege 2005; Zhang et al. 2010).

Further, intergroup discrimination may hinder high-quantity knowledge exchange with colleagues in other subsidiaries. Large amounts of knowledge flows across subsidiaries requires trust, rapport and frequent communications (Hinds & Cramton 2014; Miao, Choe & Song 2011). In MNEs, fewer interactions and collaboration opportunities limit employees' ability to know their overseas colleagues' personal characteristics. The greater intergroup discrimination that subsidiary employees have about colleagues at other subsidiaries, the more likely they are to misinterpret the overseas colleagues' behaviors as hostile and suspicious

rather than trustworthy (Fan & Harzing 2017) which is a critical foundation for knowledge sharing (Szulanski, Cappetta & Jensen 2004).

Third, intergroup discrimination may also discourage employees with subsidiary-oriented DOI from engaging in timely IHKS. In competitive environments, timely knowledge flows can help recipients make timely decisions opportunely or solve problems quickly (Haas & Hansen 2007; Tran, Mahnke & Ambos 2010). However, for self-esteem reasons employees with subsidiary-oriented DOI tend to expect superior work performance of their subsidiary compared to other subsidiaries (Ashforth & Mael 1989). Consequently, employees are less likely to offer instant help to colleagues in other subsidiaries who are perceived as internal ‘rivals’. Also, timely knowledge sharing means that employees must prioritize colleagues’ needs over their own work, something that employees with subsidiary-oriented DOI are less inclined to do for (outgroup) colleagues in other subsidiaries. Accordingly,

Proposition 1: Subsidiary employees with subsidiary-oriented DOI are less likely to engage in IHKS than other employees.

3.2 MNE-oriented dual organizational identification

Employees with MNE-oriented DOI are those who identify more strongly with the overall MNE than their subsidiary (Vora & Roth 2007). MNE-oriented DOI occurs when the MNE has globally-acknowledged prestige and distinctiveness (Reade 2001a, 2001b). Subsidiary employees with MNE-oriented DOI tend to view overall MNE employees as ingroup members and show favoritism to them. The reason is that subsidiary employees with MNE-oriented DOI have personalized the goals of the MNE (Dutton, Dukerich & Harquail 1994) and so are more inclined to stand up for the MNE’s interests and implement its strategies

(Vora & Roth 2007). In contrast to employees with subsidiary-oriented DOI, who are more concerned about their internal position, employees with MNE-oriented DOI are more concerned about the whole MNE's synergetic payoff across the globe.

We suggest that IHKS will be enacted more readily by the ingroup favoritism that employees with MNE-oriented DOI feel towards their 'overall MNE colleagues' – i.e. colleagues who work in the MNEs' global operations outside the focal employees' subsidiary. Ingroup favoritism is conducive to generating positive expectations (Fan & Harzing 2017) toward the knowledge available from colleagues in other subsidiaries, a fundamental prerequisite for people to strive to share knowledge, especially across national borders (Gupta & Govindarajan 2000). It may also lead employees with MNE-oriented DOI to share high-quality knowledge with colleagues in other subsidiaries. Different operating contexts of colleagues from various subsidiaries makes it challenging to determine the quality of knowledge and its implications. In this case, we posit that ingroup favoritism can motivate a more thorough consideration of the value of knowledge from colleagues in other subsidiaries, even when the quality of the knowledge may be less apparent (Kane 2010). Occupying different contexts creates environmental uncertainty that can limit opportunities to create shared understanding (Hinds & Mortensen 2005). Nonetheless, positive evaluation towards ingroup members, even when globally dispersed, can nurture interactions with features more conducive to knowledge sharing by eliciting favorable interpersonal feelings that encourage interactions (Fan & Harzing 2017). Such psychological comfort can foster greater willingness for individuals to talk through issues that arise (Hinds & Bailey 2003) and assists recipients to digest and adapt the knowledge to their operations.

Moreover, ingroup favoritism towards the overall colleagues may enable timely knowledge sharing with colleagues in other subsidiaries. Timely knowledge sharing signals subsidiary employees' commitment to helping colleagues in other subsidiaries and saves extensive workforce and time costs in exploring new knowledge. More importantly, ingroup favoritism can help erode organizational boundaries (Pillai et al. 2017) and bridge the geographic separation (Hinds & Mortensen 2005) between subsidiary employees and colleagues in other subsidiaries. Psychological attachment to internal group members can alleviate the strangeness (Tanis & Postmes 2005) caused by the lack of personalized information among employees of various subsidiaries. The feeling of familiarity is essential for the readiness to communicate (Hinds & Cramton 2014; Nardi 2005), shortening the decision time and offering quick responses to the knowledge request from the colleagues in other subsidiaries. Therefore,

Proposition 2: Subsidiary employees with MNE-oriented DOI are more likely to engage in IHKS than other employees.

3.3 Attributes of the relationship between overseas colleagues that moderate IHKS

Individuals enhance self-esteem by partitioning others according to their most salient features (Hogg & Terry 2000). We expect that the level of ingroup favoritism and/or outgroup discrimination, as psychological mechanisms of subsidiary employees' DOI, may vary when their self-esteem is enhanced by certain salient features of colleagues in other subsidiaries. Next, we theorize the moderating effect of geographic distance, relative competence, and interpersonal similarity of colleagues in other subsidiaries (e.g., Ambos et al. 2016; Monteiro,

Arvidsson & Birkinshaw 2008) on the employees' DOI-IHKS relationship, due to variations in the level of ingroup favoritism and/or intergroup discrimination.

3.3.1 Geographic distance

Geographic distance refers to the spatial distribution of knowledge-sharing participants (Ambos & Ambos 2009). The relationship between geographic distance – which we operationalize as encapsulating differences in time zone and more limited opportunities for face-to-face interactions - and knowledge sharing is complex. On the one hand, the geographic distance is often negatively related to the richness of communication and the relevance of knowledge to local conditions (Boschma 2005; Hansen 2002). On the other hand, the same stream of knowledge-sharing literature also acknowledges that geographic distance has significant implications for the success of MNEs by sharing non-redundant and heterogeneous knowledge (e.g., Luo, Maksimov & Bu 2020). We argue that, on balance, it is not persuasive to predict that knowledge will necessarily flow better between physically proximate colleagues without knowing how geographic distance influence employees' ingroup favoritism and/or intergroup discrimination when they decide to participate in IHKS.

In the presence of subsidiary-oriented DOI, we posit that geographic distance exacerbates employees' intergroup discrimination towards colleagues in other subsidiaries because their interactions with geographically distant colleagues are less favorable to enhance their self-esteem than with geographically proximate colleagues. Employees with subsidiary-oriented DOI tend to defend the subsidiary's interests (Dutton, Dukerich & Harquail 1994). Subsidiaries' bargaining power is strong because once a subsidiary's knowledge is the primary source for

their peer subsidiaries, “the opportunity costs to other subsidiaries (and headquarters) of not cooperating with this subsidiary are very high” (Mudambi & Navarra 2004, p. 391).

We argue that, for employees with subsidiary-oriented DOI, IHKS with geographically distant colleagues may damage their efforts to win the bargaining power of their subsidiary. Chiefly, the cost of IHKS is expected to grow as the geographic distance increases. Although technologically-mediated communication overcomes some inconvenience arising from physical absence, in general, the fewer forms of communication available for contact with colleagues in distant locales and different time zones limits the chance to know each other as individuals rather than as stereotypes of a particular culture or location. Besides, telecommunication-assisted mechanisms (i.e., email, online communities, video conference) are rarely helpful for forming strong relationships (Fiol & O'Connor 2005; Hinds & Mortensen 2005). Face-to-face interactions are more challenging between geographically distant colleagues than proximate ones due to the cost of time and money in travel. Employees with a history of (face-to-face) interpersonal interactions are more likely to participate in the types of highly communicative social processes that foster the psychological comfort necessary for knowledge exchange (Heizmann, Fee & Gray 2018). These interactions also make employees more accessible compared to those with no previous contact (Cross & Cummings 2004). Even worse, insufficient communication may impede participants' understanding of the value of the knowledge and thus hinder assimilation and application of the knowledge. Therefore, the geographic distance increases the challenges of employees helping their subsidiary achieve a strong bargaining position.

In addition, IHKS with colleagues at geographically distant subsidiaries renders predicting the relevance and value of knowledge more difficult (Schulz 2003). Uncertainty arises where information is missing or asymmetrical (Krishnan, Martin & Noorderhaven 2006); it can stem from the relatively insufficient and delayed interactions among remote colleagues (Contractor, Yang & Gaur 2016), which can hamper the establishment of trust (Breuer et al. 2020) and reduce the predictability of geographically-dispersed intercultural contact (Krishnan, Geyskens & Steenkamp 2016). Although overseas colleagues at geographically distant subsidiaries may provide useful new knowledge, uncertainty about whether the knowledge is context-specific or more readily useful in the other subsidiary is relatively high. Thus,

Proposition 3a: The geographic distance of the target subsidiary strengthens the negative relationship between subsidiary-oriented DOI and IHKS.

In contrast, in the presence of MNE-oriented DOI, we suggest that geographic distance fuels employees' ingroup favoritism towards colleagues in other subsidiaries. Geographic distance is often positively associated with knowledge heterogeneity in MNEs (Reagans & McEvily 2003). The arguments on the relationship between knowledge heterogeneity and knowledge sharing are yet to reach a consensus. The advantage of diverse knowledge storage from distant subsidiaries may reinforce ingroup favoritism of subsidiary employees with MNE-oriented DOI and help overcome what Levinthal & March (1993) refer to as 'learning myopia'. On the other hand, some research shows that overly different knowledge frustrates the attempts to share knowledge (e.g., Schulz 2003). In light of these findings, some scholars have suggested sharing moderately heterogeneous knowledge that is sufficient to enable mutual learning but avoids the risk of incompatibility resulting from low relevance (Zhang et al. 2020).

While acknowledging this debate, we argue that subsidiary employees with MNE-oriented DOI are unlikely to compromise to a moderate level of knowledge heterogeneity. First, their higher identification with the overall MNE means that they demonstrate less bias when processing heterogeneous knowledge (Westjohn et al. 2009) and so are prone to extend their standards of excellence beyond their proximal community (Cannon & Yaprak 2002). On the one hand, IHKS with colleagues at geographically distant subsidiaries conforms to MNE's strategy of harvesting and exploiting new and existing knowledge from employees across their globally-dispersed business units (Luo, Maksimov & Bu 2020), a critical mechanism in MNEs success (Kogut & Zander 1993). In these situations, employees with MNE-oriented DOI are more likely to see the benefits accrued from the heterogeneous knowledge in terms of yielding novel insights, creating new knowledge to solve problems (Cummings 2004; Smith, Collins & Clark 2005), or improving organizations' innovation performance (Santoro, Bresciani & Papa 2020). On the other hand, a large geographic distance implies that subsidiaries may compete in different markets, reducing internal friction across subsidiary employees (Luo 2005). Even though subsidiary employees tend to prioritize the benefits of the overall MNEs in the presence of MNE-oriented DOI, it would be strategically beneficial to minimize the conflicting interests of their local subsidiary. Consequently, we propose that subsidiary employees' desire to enhance self-esteem is expected to encourage them to show more ingroup favoritism to colleagues in geographically distant subsidiaries in IHKS.

Proposition 3b: The geographic distance of the target subsidiary strengthens the positive relationship between MNE-oriented DOI and IHKS.

3.3.2 Relative competence

Previous research finds that intra-MNE knowledge sharing “typically occur between highly capable members of an in crowd, and the isolated minority rarely, if ever, engages in knowledge-sharing activities” (Monteiro, Arvidsson & Birkinshaw 2008, p. 90). However, in large global organizations, it is difficult to determine the competency of colleagues in other subsidiaries, especially strangers. Instead, we suggest that the competency of another subsidiary as a unit is more straightforward to assess than its employees’ competency. Therefore, we propose that employees project their perception of other subsidiaries’ competency on its residing employees. In line with Monteiro, Arvidsson & Birkinshaw (2008), we highlight that employees’ evaluation of another subsidiary’ competence will rely less on its absolute level and more on individuals’ subjective comparison with their local subsidiary. This comparison can either derive from formal internal benchmarks that identify a leading subsidiary (e.g., internal communication of results or awards) or the informal recognition from the rest of the MNE’s units, such as recommendations from staff (Andersson, Forsgren & Holm 2002), or the subsidiary’s ability to influence decisions from head office (Phookan & Sharma 2021). Extending this, we expect that perceived high competence may dampen employees’ intergroup discrimination towards colleagues in other subsidiaries in the presence of subsidiary-oriented DOI.

On the one hand, establishing social ties with highly competent others helps to advance one’s self-esteem. For example, Toyota vehicle suppliers feel superior to other firms when they reside in Toyota’s knowledge-sharing network (Dyer & Nobeoka 2000). Also, colleagues at highly-competent other subsidiaries tend to be perceived as credible knowledge sources (Reinholt, Pedersen & Foss 2011), and so participating in IHKS with them will lead to

expectations of more productive knowledge and validation that their knowledge is seen as valuable and so reinforce self-esteem (Wong, Ho & Lee 2008).

On the other hand, seeking knowledge comes with social costs that can be damaging to an individual's or a subsidiary's reputation (Burgess 2005) because it can involve "publicly acknowledge(ing) incompetence, inferiority, and dependence in front of another person, which can be highly threatening to one's public impressions within organizational settings" (Lee 2002, p. 19). In these cases, highly competent colleagues in other subsidiaries may mitigate such pressure of protecting the unit's reputation since it conforms to the regular pattern of knowledge flows from high-competence subsidiaries to low-competence ones (Gupta & Govindarajan 2000). Low competence accentuates these employees' intergroup discrimination towards colleagues in other subsidiaries. The appreciation of extra-unit knowledge may acknowledge their weakness and harm their subsidiary's reputation (Hussinger & Wastyn 2016; Lee 2002). Also, reciprocity is a key facilitator to horizontal knowledge sharing in MNEs (Schulz 2003), and reciprocal expectations towards colleagues in low competence subsidiaries have higher uncertainty than those in high competence subsidiaries. Employees with a subsidiary-oriented DOI tend to evaluate their knowledge as productive and valuable. However, what they can benefit from the knowledge sharing with colleagues in low competence subsidiaries is unclear. Consequently, their motivations to maintain their subsidiary's significance in the MNE (which is associated with protecting their self-esteem) are likely to lead them to share knowledge with colleagues in high competence subsidiaries. Thus,

Proposition 4a: The perceived competence of the target subsidiary moderates the negative relationship between subsidiary-oriented DOI and IHKS.

In contrast, we advocate that in the presence of MNE-oriented DOI, low competence accentuates their ingroup favoritism towards colleagues in other subsidiaries. The underlying reasons are twofold. First, the uncertainty of whether their knowledge would be taken as important in IHKS is lower with colleagues in low competence subsidiaries. Colleagues in low-competence subsidiaries may have more pressure to improve their subsidiary's performance than those in high competence subsidiaries. Performance goals are often positively associated with knowledge seekers' motivation to learn from others (Szulanski 1996). A motivation to learn can compensate for the low competence of colleagues in other subsidiaries and encourage employees to engage in IHKS (Zhang & Jiang 2015).

Second, enhancing the work productivity of colleagues in low competence subsidiaries via IHKS fulfills the need for self-esteem of employees with MNE-oriented DOI. MNE-oriented DOI motivates employees to be concerned with the overall benefit of the MNE; therefore, instead of pursuing growth of their knowledge base, the likelihood of improving the work productivity of colleagues in low competence subsidiaries through IHKS is more in line with their pursuit of the MNE's overall benefit. Prior studies showing that employees' organization-based self-esteem contributes to organizational citizenship, altruism, and organizational commitment also echoes our arguments (e.g., Bowling et al. 2010). Moreover, subsidiary employees with MNE-oriented DOI are concerned about the sustainable and balanced development of their organization. Knowledge gaps between low competence and high competence subsidiaries may cause an imbalance in the allocation of resources or attention from the head office and threaten the cohesion or success of the MNE. To redress the imbalance in knowledge stock, our theorizing suggests that employees with MNE-oriented DOI are more

likely to carry out IHKS with colleagues in low competence subsidiaries than those in high competence subsidiaries. Consequently,

Proposition 4b: The perceived competence of the target subsidiary moderates the positive relationship between MNE-oriented DOI and IHKS.

3.3.3 Interpersonal similarity

The principle of homophily argues that interpersonal similarity, that is, the common characteristics between individuals, can naturally breed connections (McPherson, Smith-Lovin & Cook 2001). We follow the literature operationalizing interpersonal similarity as *perceived (interpersonal) similarity*, which is shown to have strong predictive ability on similarity-driven attractions (Montoya, Horton & Kirchner 2008) .

Researchers have extended the construct of interpersonal similarity into IB literature and suggest that interpersonal similarity, especially similar organizational function, language, or national-cultural background is often positively associated with better knowledge flows in MNEs (Mäkelä, Andersson & Seppälä 2012). Even though similarity-attraction also takes place in domestic organizations, “the dispersed nature of the MNC amplifies its importance” (Mäkelä, Kalla & Piekkari 2007, p. 10). Previous research suggests that the selection of knowledge-sharing partners does not always derive from a rational comparison of knowledge-sharing activities’ outcomes but often depends on interpersonal connections. For example, researchers note that individuals “preferred to approach people they knew rather than people who knew related technologies well” (Hansen & Løvås 2004, p. 801). This is because the understanding of personal characteristics and interpersonal ties can mitigate the fear of being judged or rejected. However, in MNEs it is less likely that employees will have acquaintances in other

subsidiaries. In these cases, similarities offer clues about relatively predictable common attitudes or behavioral norms (Reagans 2011).

In the presence of subsidiary-oriented DOI, we expect that interpersonal similarity alleviates employees' intergroup discrimination towards colleagues in other subsidiaries. Similarities can help employees understand and anticipate the behavioral principles of colleagues in other subsidiaries. For example, employees can predict the behaviors of colleagues in other subsidiaries who share similar national-cultural backgrounds by following shared cultural norms (Fan & Harzing 2017) which can guide social interactions and reduce stress. In a similar vein, subsidiary employees belonging to the same functional area (e.g., finance, human resources) are likely to have common work practices and related knowledge that enhance expectations to acquire practical solutions (Hansen 2002; Schulz 2003) and reduce suspicions about the value of the knowledge (Pacharapha & Ractham 2012). Also, communication with overseas colleagues who speak the same language makes sharing knowledge in more depth easier (Reiche, Harzing & Pudelko 2015). It thus improves the likelihood of co-creating high-quality knowledge, improving the employees' work productivity and exhibiting their value in the subsidiary. The predictability of behavioral norms or likely outcomes can reduce ambiguity in interactions and increase the propensity to trust (Tsai & Hung 2019; Williams 2001), facilitating more frequent interactions. This, in turn, increases the amount of firsthand information that employees have of colleagues in other subsidiaries (McKnight, Cummings & Chervany 1998), reducing the negative emotions derived from intergroup discrimination.

Nevertheless, another stream of literature advocates that interpersonal similarity can also encumber knowledge sharing due to the increased competition and lack of knowledge diversity (Luo & Deng 2009). Because overseas colleagues belong to different subsidiaries, we believe that perceived interpersonal competition would be limited. Additionally, employees and their overseas colleagues reside in different contexts and so knowledge congruence is less likely to occur. On the other hand, even though dissimilar overseas colleagues may possess a diverse knowledge pool, the uncertainty of the value of knowledge may consume more fruitless time and effort in verifying the relevance of knowledge. Consequently, for employees with subsidiary-oriented DOI, the perceived interpersonal similarity could weaken their negative expectations and attitudes towards colleagues in other subsidiaries and normalize a predictable environment for knowledge sharing. We therefore propose:

Proposition 5a: Perceived interpersonal similarity with target colleagues in other subsidiaries weakens the negative relationship between subsidiary-oriented DOI and IHKS.

Conversely, from a MNE-oriented DOI's perspective, we expect that interpersonal similarity weakens employees' ingroup favoritism towards colleagues in other subsidiaries. First, interactions with diverse overseas colleagues fulfill the subsidiary employees' expectations of being a member of a 'global' organization. In return, the psychological attachment to the whole MNE can motivate them to be more open to new knowledge from foreign cultures (Weick & Roberts 1993). Even though communicating and interacting with overseas colleagues who work at distinct organizational functions, speak different languages, or have divergent cultural backgrounds inevitably requires an investment of time and effort,

such IHKS allows broad access to heterogeneous knowledge and can enhance the employees' reputation, social networks and esteem. For example, while overcoming linguistic barriers consumes vast amounts of energy that can deplete cognitive resources (Volk, Köhler & Pudelko 2014), communicating in a foreign language may improve decision making (Hadjichristidis, Geipel & Surian 2017). The knowledge that is co-constructed with dissimilar colleagues in other subsidiaries is also unlikely to be directly adapted to local competitors. Therefore, employees have more certainty in controlling their knowledge and avoiding free riders (Dyer & Nobeoka 2000).

Along with the advantage of sharing knowledge with dissimilar colleagues in other subsidiaries, its disadvantages primarily arise from the discarded opportunities to benefit the focal subsidiary. For example, sharing knowledge with overseas colleagues of various organizational functions may limit opportunities to perform value-related activities in the local subsidiary. However, employees with an MNE-oriented DOI are prone to act toward the MNE's global integration goals even if it may harm their subsidiary's interest. Therefore,

Proposition 5b: Perceived interpersonal similarity with target colleagues in other

subsidiaries weakens the positive relationship between MNE-oriented DOI and IHKS.

3.4 Aggregate effect of inconsistent interpersonal horizontal knowledge sharing

In addition to the consequences of IHKS, we suggest that employees' subsidiary- or MNE-oriented DOI, and the attributes of the relationship with colleagues in other subsidiaries, may generate an aggregate effect at the corporate level. We posit that a subsidiary- or MNE-oriented DOI of employees is influenced by features of the context such as subsidiary autonomy and the prestige and distinctiveness of the local subsidiary or the MNE (Reade 2001a; Vora &

Kostova 2007). This means that a DOI oriented toward the subsidiary or the MNE could be a collective tendency of local subsidiary employees who work in the same environment. When ingroup favoritism and/or intergroup discrimination at the employee level extends to the corporate level – that is, when subsidiary employees all highly identify with the local subsidiary relative to the whole MNE or vice versa - it may impact the evenness of knowledge flows within the whole corporate system. Specifically, the inconsistent patterns of IHKS may yield an aggregate effect on the state of knowledge flows within the MNE, resulting in both spatial and temporal unevenness of knowledge flows.

When spatial unevenness occurs, some units and members lack access to knowledge while other units and members are recipients of a high quantity of knowledge flows throughout the MNE's global subsidiaries. When temporal unevenness occurs, some units and members are likely to receive delayed or perfunctory responses to knowledge requests (i.e., one-way knowledge transfer by sending electrical documents instead of co-constructing knowledge in a cooperative manner); while other units and members are recipients of high-quality and timely knowledge flows. The success of MNEs relies not just on broad access to knowledge sources but also on timely responses from the knowledge sources (Phene, Madhok & Liu 2005) as well as cooperation in a way that might create new knowledge between participants (Heizmann, Fee & Gray 2018). From this perspective, spatial, qualitative and temporal unevenness of knowledge flows may threaten an MNE's competitive edge (Grant 1996).

We expect that when large numbers of employees in a subsidiary hold a subsidiary-oriented DOI, personal bias against colleagues in geographically distant subsidiaries, low competence subsidiaries, or dissimilar colleagues in other subsidiaries is likely to extend to

subsidiary-level behavioral norms. Similarly, when a large number of employees in a subsidiary hold MNE-oriented DOI, personal favoritism towards certain overseas colleagues may also be aggregated into subsidiary-level behavioral norms. This bias or favoritism towards certain peer subsidiaries over others is likely to influence the patterns (i.e., quantity, quality, and timing) of knowledge flows, resulting in unevenness across the MNE system. We propose:

Proposition 6: The inconsistent patterns of IHKS aggregates at the corporate level of an MNE, resulting in uneven knowledge flows in the whole system.

Distilling these propositions, our theorizing leads us to posit a model, represented in Figure 1, which shows the relationship between employees' DOI and IHKS in MNEs.

INSERT FIGURE 1 ABOUT HERE

4. DISCUSSION

4.1 Theoretical implications

Prior studies on knowledge sharing in MNEs have identified the dispersion and differences between subsidiaries and employees as the key challenge to cross-border interactions and knowledge sharing (e.g., Dasi et al. 2017; Haas & Cummings 2015). While there have been some studies taking social identity or identification as a motivational mechanism for cross-border knowledge sharing (Lindsay, Sheehan & De Cieri 2020; Reiche, Harzing & Pudelko 2015), employees' dual identification with both subsidiary and MNE remains largely overlooked in intra-MNE knowledge sharing. To fill this theoretical void, we

adopt the concept of subsidiary- and MNE-oriented DOI (Reade 2001a; Vora & Kostova 2007) to posit their impact on IHKS in MNE.

Our research contributes to the theoretical development of extant literature in three ways. First, we offer new insight into the antecedents of intra-MNE knowledge sharing (Haas & Cummings 2015). By theorizing how employees' various degrees of DOI generate inconsistent IHKS patterns under the influence of geographic distance, relative competence, and interpersonal similarity with colleagues in other subsidiaries, we suggest that dispersion and differentiation across organizational units and individuals are not necessarily unfavorable conditions; instead, their impacts depend on employees' social identities. Our conceptual model illustrates how subsidiary employees' DOI affects IHKS patterns in MNEs and how DOI's impact on IHKS is weakened or strengthened by the perceived attributes of, and their relationship with, colleagues in other subsidiaries. Our efforts advance understanding how individuals are motivated to share knowledge with colleagues across borders and provide a new theoretical plank upon which research into the micro-foundation of intra-MNE knowledge sharing, an understudied phenomenon (Foss & Pedersen 2019), can be built.

Second, our research responds to calls to rediscover social identity theory in IB phenomena (Raskovic 2020; Raskovic & Takacs-Haynes 2020) by applying this theoretical lens to explain the relationships between subsidiary employees' DOI and IHKS in MNEs. Unlike prior studies that have examined identification with a superordinate organizational entity (i.e., the whole MNE) as a facilitator to knowledge sharing, our theorizing proposes the novel insight that identification with the whole MNE may also generate *negative* consequences

to the MNE by biasing knowledge sharing with particular subsidiaries and colleagues that results in certain knowledge flows being optimized at the expense of others. The aggregate effect of such inconsistent IHKS patterns is likely to result in spatial and temporal unevenness of knowledge flows that can harm subsidiaries that are excluded.

Third, our conceptual model focuses on the understudied phenomenon of uneven knowledge flow. We propose that variations in the strength of employees' DOI, whether conscious or not, can be especially problematic for MNEs because it disrupts the quantity, quality, and timing of knowledge sharing from which individuals and subsidiaries can benefit. On the one hand, the benefits that come with sharing knowledge across broad and heterogeneous networks are well documented (Cross & Cummings 2004). These include improved individual creativity (Dong et al. 2017) and work performance (Henttonen, Kianto & Ritala 2016), subsidiaries' innovation capability (Crespo, Lages & Crespo 2020), and firms' innovative performance (Kotabe et al. 2007) as well as transnational capabilities (Morris, Hammond & Snell 2014). Consequently, the micro-level 'diversity bottlenecks' suggested by our theorizing represent ostensibly innocuous but potentially significant impediments to the quality of knowledge flows with the potential to impact firms' capabilities directly. On the other hand, advantages accrued from timely and in-depth knowledge sharing (Kogut & Zander 1993) may also be unevenly distributed across subsidiaries. The subsidiaries that rarely receive timely responses to their knowledge request or have no access to knowledge sources that are willing to share knowledge interactively and cooperatively are likely to be isolated from the knowledge-sharing activities in MNEs. Additionally, the uneven patterns of IHKS should be of particular concern since the isolation of subsidiaries in MNEs could be a bottom-up process

because “isolation of a member affects the perceptions of knowledge sharing in the whole team (not only the focal individual)” (Ambos et al. 2016, p. 328). This, in turn, may lead to some individuals or entities being trapped in a negative loop of knowledge and resource deficiency, as their isolation manifests through uneven knowledge flows (Monteiro, Arvidsson & Birkinshaw 2008).

4.2 Managerial implications

Our findings are a reminder that managers within MNEs need to understand inherent differences among their employees, including their employees’ DOI, and to be aware of how this might invoke attitudes that – consciously or subconsciously - can influence their intra-MNE knowledge sharing behaviors. Although employees’ DOI is just one factor that can influence their proclivity to share knowledge, its importance is magnified by the the aggregated uneven knowledge flows that can disrupt the whole MNE system. This takes higher priority for managers of MNEs in sectors or with strategic orientations where cross-subsidiary knowledge is highly valued; for instance, for MNE’s seeking to maximize benefits from global integration (Bartlett & Ghoshal 1999).

To the extent that an individual employees’ DOI is malleable to organizational interventions or prompts, MNE managers could consider what organizational processes might best ensure that the identification orientation of individuals or business units is not weighted in ways that are detrimental to the interests of either the subsidiary or the MNE as a whole. For instance, practices that are used to mitigate intergroup discrimination of employees with strong subsidiary-oriented DOI might include personal contact through site visits (Hinds & Cramton

2014), outcome-based incentives (i.e., financial outcomes, performance appraisal, and project goals) (Morris, Zhong & Makhija 2015), and/or transnational projects or task forces (Lagerström & Andersson 2003), with the aim of increasing opportunities for cross-cultural cooperation and interdependence across subsidiaries (Zhao & Luo 2005).

Alternatively, employees' DOI might become a pertinent feature when they expatriate to subsidiaries where knowledge flow patterns are a priority. By way of example, subsidiaries might benefit from expatriating well-respected employees with particular DOI dispositions to the subsidiaries where this may be deficient. As Fee and Michailova (2021) suggest, local employees can adjust themselves in long-term intercultural interactions with expatriates. Therefore, regular interactions with (expatriate) colleagues holding different DOI orientations may nurture local employees to adjust their perceptions towards colleagues with different DOI dispositions.

Our articulation of some of the moderators of IHKS (propositions 3-5) highlights ways in which structural solutions might be used to overcome unevenness in knowledge flows - notably, adjusting perceptions of employees concerning geographic distance, relative competence, or interpersonal similarity. For instance, efforts to share information about employees' characteristics, achievements, and/or expertise in a remote unit may reduce unfamiliarity (Hinds & Cramton 2014) and reshape the unfavorable bias into positive perceptions that lead to a greater willingness to share (propositions 4-5). Similarly, organizational interventions to draw attention to employees' shared professional domains may overcome perceived

dissimilarity (e.g., ethnic, cultural) (Vough 2012) and so facilitate IHKS that leads to more even knowledge flows (proposition 5).

Finally, managers within MNEs may draw on our analysis to monitor the ‘balance’ in the spatial and temporal flow of knowledge across borders in an MNE’s overall system to identify bottlenecks in terms of quantity, quality and timeliness of knowledge flows (proposition 6). Indeed, our theorizing leads us to caution practitioners against overly focusing on measuring the effectiveness or success of knowledge-sharing activities between participants that may occur at the expense of its evenness across the whole MNE system. On the back of such monitoring, being conscious of employees’ DOIs and the relational attributes identified in our conceptual model can assist managers in diagnosing (and remedying) unevenness in the firm’s IHKS.

4.3 Limitations and further research

The theoretical model proposed in this paper has three limitations. Firstly, we propose relationships influencing IHKS for just those employees who possess subsidiary- and MNE-oriented DOIs, and exclude discussion of employees possessing *comparable DOI* - i.e., equal strength of identification with subsidiary and overall MNE (Vora & Kostova 2007). Admittedly, it is challenging to theoretically predict ingroup favoritism and/or intergroup discrimination when subsidiary employees develop a comparable DOI. Future research may adopt an abductive approach to first empirically identify the level of ingroup favoritism and/or discrimination of the subsidiary employees with comparable DOI and then theorize how this orientation influences the pattern of their IHKS. Alternatively, further research that draws on

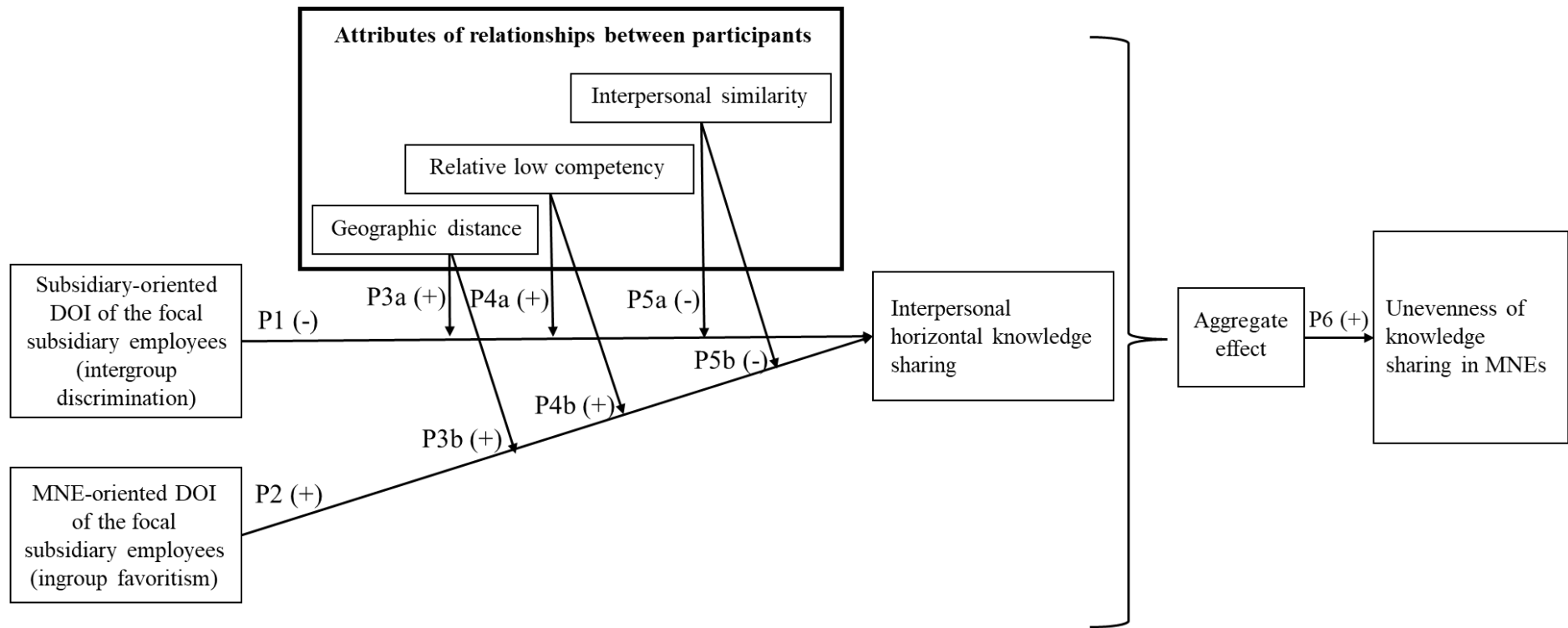
compatible theoretical foundations may lead to additional hypothesis beyond ingroup favoritism and/or discrimination which may shape employees' behaviors and so explain psychological mechanisms operating on the IHKS behaviors of employees with comparable DOI.

Second, even though we have considered the DOI impact on IHKS from multiple levels (i.e., MNE level, subsidiary level, interpersonal level), our theoretical positioning confined us to a small number of factors for each level (i.e., geographic distance, relative competency, interpersonal similarity). Future research that takes into account other contextual factors is warranted.

Third, as discussed previously, while the likelihood of a focal subsidiary having an equal number of employees with subsidiary- and MNE-oriented DOI is low in reality, we cannot exclude the possibility that low variability may constrain our proposition on the aggregate effect of unevenness of knowledge flows in MNE systems. In this case, proposition 6 may lack predictive power. Besides, we posit that uneven knowledge flows may exist across the whole MNE system resulting from the aggregate effect on the timeliness and depth of IHKS. Examining the effects of temporal patterns of IHKS requires rich data, especially continuous-time data, to investigate further the causal relationship between the temporal sequence of IHKS activities and the quality of knowledge flows in the whole MNE system. However, understanding the temporal patterns of IHKS and its consequences could be a fruitful avenue for further research.

5. CONCLUSION

The conceptual framework developed in this study contributes to the international business and organizational identification literature by showing how subsidiary employees' dual organizational identification with the local subsidiary and the whole MNE can impact IHKS in MNEs. Our model shows how subsidiary employees' various degrees of DOI lead to inconsistent patterns of knowledge flows. Moreover, the theoretical model we derive also underscores the significance of the attributes of relationship between subsidiary employees and colleagues in other subsidiaries (i.e., geographic distance, relative competence, and interpersonal similarity) on IHKS patterns. By illustrating the significance of DOI in intra-MNE knowledge sharing, we expect more insightful research to extend or test our model, and further explore the impact of employees' DOI on the micro-foundation of knowledge-sharing in MNEs.



(-) represents a negative relationship
 (+) represents a positive relationship

Fig. 1. Relationship between employees' dual organization identification (DOI) and interpersonal knowledge sharing in MNEs

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