

## **When does global mindset affect headquarter-subsidiary relationship?**

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### **ABSTRACT**

Drawing on the dynamic managerial capabilities perspective, we examine the effects of the global mindset of frontline managers on headquarters-subsidiary relationships and the moderating effects of their cognitive flexibility, overseas study experience, and exchanges with headquarters managers on the relationship. The analysis of dyadic data collected from managers at headquarters and subsidiaries of 312 Chinese multinational enterprises reveals that the frontline managers' global mindset positively affects headquarters-subsidiary relationships. This effect is stronger when frontline managers exhibit higher cognitive personality flexibility and more overseas study experience but weaker when exchanges with headquarters managers become more frequent.

**Keywords:** Headquarters-subsidiary relationships, dynamic managerial capabilities, global mindset, Chinese multinational enterprises

### **1. Introduction**

Headquarters-subsidiary (HQ-Sub) relationships are important to the growth and performance of multinational enterprises (MNEs) because they can influence how the headquarters internalizes global activities within an MNE and how a subsidiary overcomes disadvantages by obtaining support for resources from the headquarters and other parts of the MNE (Luo, 2003). Over the last fifty years, the determinants of HQ-Sub relationships in MNEs have been studied extensively. Prior studies on HQ-Sub relationships have primarily focused on the impacts of organizational design and control systems (Chandler, 1962; Martinez & Jarillo, 1989), home and host country institutions (Kostova & Roth, 2002; Li, Jiang, & Shen, 2016), industry conditions and dynamics (Gates & Egelhoff, 1986; Hewett, Roth, & Roth, 2003), subsidiary roles and regional structures (Doz & Prahalad, 1984; Ghoshal & Bartlett, 1990), knowledge creation and transfer (Edwards & Tempel, 2010; Williams & Lee, 2009), firm resource endowment (Hoenen & Kostova, 2015; O'Donnell, 2000), headquarters control (Doz & Prahalad, 1984;

Roth & Nigh, 1992), and global human resource management (Ambos & Schlegelmilch, 2004; Harzing, 2001). These prior studies on HQ-Sub relationships have essentially explained how HQ-Sub relationships are affected based on the assumption that HQ-Sub relationships are determined by MNEs' external environments, internal resources, organizational arrangements, and managerial practices with the aim of enhancing MNEs' competitiveness, efficiency, and control over their business operations. However, we know little about how the managerial capabilities of senior managers may help them to make sense of macro- and meso-level institutional environments in shaping HQ-Sub relationships. In particular, the current literature has not adequately examined how the dynamic managerial capabilities of frontline managers in foreign subsidiaries, including their cognition (Hambrick & Mason, 1984), social capital (Geletkanycz, Boyd, & Finkelstein, 2001), and human capital (Castanias & Helfat, 2001), affect the quality of HQ-Sub relationships.

The perspective of dynamic managerial capabilities — the capabilities that enable managers to build, integrate, and reconfigure organizational resources and competencies (Adner & Helfat, 2003) — stems from the theory of dynamic capabilities of firms (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997) and is an extension of the dynamic capabilities (of firms) with a focus on the roles of managers in explaining managerial impacts on organizational behaviors and outcomes (Helfat & Martin, 2015). The underlying dimensions of dynamic managerial capabilities — the cognition, social capital, and human capital of managers — help explain the relationship between the quality and heterogeneity of managerial decisions, actions, and organizational performance and outcomes in response to events and shifts in the environment (Adner & Helfat, 2003; Kor, Mahoney, & Michael, 2007). Therefore, the study of dynamic managerial capabilities may help us to determine 'what makes managers different' to answer the question of 'What makes firms different?' (Adner & Helfat, 2003). In line with this logic, studying the quality of HQ-Sub relationships from the dynamic managerial capabilities perspective may enable us to understand why the quality of HQ-Sub relationships varies among MNEs even when they operate in the same or similar business environment with similar resource endowment as well as why the relationships between headquarters and different foreign subsidiaries vary, even within the same MNE.

MNE headquarters rely not only on high-quality HQ-Sub relationships for deployment and exploitation of existing capabilities (Luo, 2003) but also on frontline managers' sense-making of the host country's market environment, such that MNEs' resource deployment and development meets the needs of the organization and the host country's market conditions (Teece et al., 1997). Hence, an understanding of how frontline managers making sense of their external environment affects the quality of HQ-Sub relationships is of great importance to MNEs in managing their geographically dispersed and globally integrated operations. A lack of understanding of such insights between the capabilities of frontline managers and the nature of HQ-Sub relationships may lead to biased conclusions that mislead both academics and practitioners. In this paper, we examine how and when the quality of HQ-Sub relationships is affected by a number of important but underexamined underlying factors of the dynamic managerial capabilities of frontline managers, including managerial global mindset (cognition), cognitive personality flexibility (cognition), leader-member exchange (LMX) (social capital), and overseas study experience of managers (human capital).

Applying the dynamic managerial capabilities perspective, this paper investigates two related research questions: (1) *How does the global mindset of frontline managers affect the quality of HQ-Sub relationships?* (2) *How do the cognitive personality flexibility, LMX, and overseas study experience of frontline managers interact with their global mindset in affecting the quality of HQ-Sub relationships?* In so doing, this paper makes three major contributions. First, this study adds to the headquarters and subsidiary relationships literature by explaining how frontline managers' global mindset, i.e., managerial cognition, enables them to make sense of macro- and meso-level information and how it affects the quality of HQ-Sub relationships. Further, in addition to explaining headquarters' strategic decision making on internationalization and foreign market entry strategies in the global mindset literature, this is one of the first studies to explain how frontline managers' global mindset can contribute to managing headquarters and subsidiary relationships during the implementation stage of internationalization of firms. Second, this study extends the literature on both HQ-Sub relationships and dynamic managerial capabilities by explaining how the interactions and dynamics between frontline managers' dynamic managerial capabilities underpinnings – including cognitive personality flexibility

(cognition), LMX (social capital), and overseas study experience (human capital) – and their global mindset may inform the process of sense-making and consequently shape HQ-Sub relationships. Third, the current literature on the dynamic capabilities of firms suggests that dynamic capability functions are performed by top managers, but the literature does not explicate the locus for performing the functions within the MNEs. This study helps to shed light on the actual allocation of MNEs' dynamic capability functions (i.e., sensing, seizing, and reconfiguring) between subsidiaries and headquarters.

## **2. Theoretical background**

### *2.1 Theoretical framework*

We draw on the dynamic managerial capabilities literature (Adner & Helfat, 2003; Kor & Mesko, 2013) and follow the logic of the sense-making process (Nadkarni, Herrmann, & Perez, 2011; Weick, 1995) to study how dynamic managerial capabilities affect the quality of HQ-Sub relationships. The quality of HQ-Sub relationships can be captured by the levels of communication effectiveness, commitment, mutual trust, and satisfaction between headquarters and a subsidiary (Johnston & Menguc, 2007; Li et al., 2016). Our dynamic managerial capabilities theoretical framework of HQ-Sub relationship quality, as shown in Fig. 1. follows the logic of the managerial sense-making process (Daft & Weick, 1984; Nadkarni et al., 2011). This theoretical framework endeavors to explain how the global mindset of frontline managers affects the quality of HQ-Sub relationships and how this process is informed by the underpinnings of dynamic managerial capabilities, including personality flexibility (cognition), LMX (social capital), and overseas study experience (human capital).

Central to this model is the global mindset of frontline managers, an important element of the cognitive underpinning of dynamic managerial capabilities (Adner & Helfat, 2003; Helfat & Peteraf, 2015). This global mindset plays a significant role in shaping firms' responses to the external environment in foreign host countries where their subsidiaries operate and to the expectations of headquarters (Jiang et al., 2018; Thomas, Clark, & Gioia, 1993). Hence, frontline managers in subsidiaries operating in foreign countries are faced with complex managerial roles involving both the interests and demands of the headquarters and subsidiaries of MNEs (Vora, Kostova, & Roth, 2007). A

global mindset consists of two functional dimensions – conceptualization and contextualization (Arora et al., 2004; Kefalas, 1998). Conceptualization signifies the way of thinking of managers and their ability to understand themselves as a part of an operating environment with a global scope, whereas contextualization illuminates managers’ ability to adapt their way of thinking and strategies to the context in which their firms operate (Kefalas 1998).

Frontline managers in subsidiaries need to respond to local demands in foreign host country markets and manage interorganizational relationships with a diverse group of stakeholders (Rosenzweig & Singh, 1991), which increases the volume, variety, and disunity of information that they must address (Nadkarni et al., 2011). Frontline managers in subsidiaries also often face internal pressure to institutionalize headquarters’ practices in order to implement and accommodate their headquarters’ global integration strategies (Kostova & Zaheer, 1999; Westney, 1993). Hence, not only do frontline managers analyze the local situation in host country markets and communicate this to the headquarters, but they also transfer the views of headquarters to the subsidiary. Thus, managers must understand and be sensitive to the demands in the markets of the host country, and they must be familiar and comfortable with the corporate global strategies and objectives of the headquarters. In such circumstances, frontline managers are likely to use their global mindset as ‘reference points’ (Jeannet, 2000), ‘cognitive filters’ (Gupta & Govindarajan, 2002), or ‘knowledge repertoires’ (Vermeulen & Barkema, 2001) to make sense of external and internal environmental stimuli and to guide their actions. Therefore, variances in organizational outcomes are often likely to be explained by differences in managerial actions stemming from the global mindset of frontline managers (Levy et al., 2007).

The literature on global mindset suggests that managers’ global mindset affects their behaviors through three sense-making stages: noticing, interpreting, and identifying appropriate actions, especially under conditions of dynamism, uncertainty, and complexity in the global operating environment (Kiesler & Sproull, 1982; Weick, 1995). In the *noticing* stage, the global mindset functions as a lens through which frontline managers filter all available information by directing their attention toward certain pieces of information while obstructing others (Levy et al., 2007). Thus, the global mindset of frontline managers affects their perceptions by selectively directing their attention to

multiple and diverse sources of information regarding the global and local market environments (Levy et al., 2007).

In the *interpretation* stage, frontline managers' global mindset affects how information is perceived, interpreted, assimilated, and understood (Daft & Weick, 1984). The differentiation and integrative capabilities embedded in the global mindset enable frontline managers to synthesize information from varied and unlikely sources and to incorporate diverse interpretive frameworks into the decision-making process (Levy et al., 2007). This, in turn, can lead to the construction of a new and more complex understanding of the environment (Barr, Stimpert, & Huff, 1992), which subsequently affects frontline managers' actions.

In the *action* stage, frontline managers, especially those in senior positions, possess the power needed to make choices and take actions based on their interpretation via their global mindset (Hambrick & Mason, 1984; Levy et al., 2007). Because frontline managers' global mindset equips them with the adequate cognitive capability to make sense of global business environmental complexity (Kedia & Mukherji, 1999), it enables them to have a more comprehensive conceptualization of their firms' strategy and better contextualization of it in the local market environment. This, in turn, requires them to better leverage and integrate resources among different units within the MNE, which may lead to a higher level of HQ-Sub information exchange. This information exchange affects the quality of HQ-Sub relationships by influencing communication effectiveness (Roth & Nigh, 1992), commitment (Currall & Judge, 1995), mutual trust (Gulati & Sytch, 2007) and satisfaction (Thomas, 1992).

Research on organizational behavior highlights that frontline managers' idiosyncratic sense-making processes are subject to their psychological characteristics (Taylor, 1984), such as their cognitive personality flexibility (Gul, 1984; Hough & Ogilvie, 2005; Taggart & Robey, 1981), because different cognitive personality traits develop and display discrete preferences for certain modes of gathering information and generating and evaluating alternatives (Haley & Stumpf, 1989). Furthermore, frontline managers' social capital, such as their LMX quality derived from their interactions with close network members, could also impact how they perceive and interpret information about the external environment (Kor & Mesko, 2013), as this social capital can influence frontline managers in terms of which

environmental stimuli to focus on, what information to collect, and how to process data in an efficient and coherent manner (Mintzberg, 2009). In addition, frontline managers' human capital, including their overseas study experience, can shape the key assumptions and heuristics that they use to notice, interpret, and evaluate a particular business environment (Kor & Mesko, 2013). Overseas study experience in a foreign country can be an important means of acquiring knowledge and information that can be socialized and transferred to headquarters. This knowledge and information can then be reconfigured and integrated into the cognitive structure of managers. Since managers' cognition, social capital and human capital are often intertwined in affecting the managerial sense-making process and outcomes (Kor & Mesko, 2013), we propose that personality flexibility, LMX, and overseas study experience may jointly facilitate the sense-making process of frontline managers, which may shape the quality of HQ-Sub relationships.

Insert Fig. 1. about here

## *2.2 Hypotheses*

### *2.2.1 Global mindset and quality of headquarters-subsidiary relationships*

The dynamic managerial capabilities perspective suggests that managerial cognition (including managerial mindset) is critical for firms' strategic response, as it affects how managers interpret and react to the environment (Hambrick & Mason, 1984; Helfat & Martin, 2015). The global mindset of managers has been conceptualized as the possession of a global view and the capacity to adapt to local environments (Kefalas, 1998).

When operating overseas, MNEs are likely to face dynamic and complex environments characterized by information overabundance, ambiguity, and uncertainty. Under those circumstances, MNEs need to rely on their frontline managers' sense-making of the host country environments via managerial global mindset so that they can align host country environmental dynamics before appropriately deploying firms' resources and capabilities (Luo, 2000; Sirmon & Hitt, 2009). In the first step of the sense-making process (i.e., *noticing*), frontline managers usually scan environmental stimuli based on their perception of the need for information (Pfeffer & Salancik, 1978). Hence, their attention is directed toward certain aspects of the environment while blocking others (Levy et al., 2007). Given

that frontline managers' global mindset allows them to simultaneously consider local and global cultures and markets (Govindarajan & Gupta, 2001; Gupta & Govindarajan, 2002), we suggest that frontline managers with a stronger global mindset are likely to direct their attention toward multiple, diverse sources of information about not only local but also global environments (Levy et al., 2007). This increased information noticing grants frontline managers more raw material to assist in their interpretation (Knight & McDaniel, 1979), which facilitates the creation of a base of new knowledge (Bogner & Barr, 2000; Nadkarni & Narayanan, 2007) and reduces the likelihood of frontline managers having discounting bias, i.e., oversimplifying their environments and failing to notice less salient but important and powerful environmental stimuli (Kiesler & Sproull, 1982).

Moreover, a stronger propensity for information noticing gives frontline managers a sense of mastery (Eisenhardt, 1989) and makes them more likely to perceive factors as 'controllable' (Thomas et al., 1993). Because more comprehensive information noticing contributes to the early detection of environmental disturbances (Jackson & Dutton, 1988), frontline managers may believe that they are more capable of predicting long-term foreign investment outcomes and thus experience a greater sense of control (White, Dittrich, & Lang, 1980). Additionally, research reveals that managers who use additional information are more confident in their ability to ensure a fit between their firms and the environment (Aldrich, 1979) and are therefore more likely to notice and emphasize the positive aspects of an issue (e.g., overseas operation) (Thomas & McDaniel, 1990). This finding implies that more information noticing could increase the likelihood of positive *interpretation* by frontline managers regarding their firms' operations in the host country market, allowing them to label those operations as 'opportunity' or 'gain' rather than 'threat' or 'loss'. We suggest that these positive interpretations by frontline managers could associate host country operations (i.e., subsidiaries) with positive outcomes and expectations of gain (Jackson & Dutton, 1988), which will in turn stimulate a higher level of information (including knowledge, practices, skills, and experiences) exchange (i.e., *action*) between headquarters and subsidiaries for their resource and capability deployment.

The HQ-Sub information exchange concerns the extent to which the headquarters and subsidiary share information (including inbound and outbound knowledge, practices, skills, experiences), and it



has strong implications for the dynamic capabilities of MNEs (Luo, 2000) and the HQ-Sub relationships (Birkinshaw & Morrison, 1995). Subsidiaries rely heavily on HQ-Sub information exchanges to access headquarters' firm-specific advantages (FSAs) so they can exploit the FSAs and alleviate the host country's market threats, i.e., existing capability deployment and exploitation. MNE headquarters depend on subsidiaries to seize emerging rent-generating opportunities and acquire host country specific knowledge, i.e., new capability building and upgrading via HQ-Sub information exchanges (Luo, 2000, 2003).

A higher level of HQ-Sub information exchange can have a positive impact on HQ-Sub communication effectiveness, as the increased level of HQ-Sub information exchange could lead to the use of interorganizational coordination mechanisms, which enhances the speed and quality of information received (Roth & Nigh, 1992) and reduces the cost of communication (Grandori & Soda, 1995; Luo, 2003). A higher level of HQ-Sub information exchange could lead to the increased accuracy of information processing and analysis on both sides and thereby encourage increased commitment from both headquarters and subsidiaries to solve external problems (Currall & Judge, 1995; Van de Ven, 1976). Furthermore, mutual trust between headquarters and subsidiaries can be enhanced by higher-level HQ-Sub information exchange, as it shapes shared understanding and expectations (Gulati & Sytch, 2007) and discourages opportunistic behaviors (Lui & Ngo, 2005). In addition, higher-level HQ-Sub information exchange can better align headquarters and subsidiaries' performance and the learning expectations of the host country markets, which could have a positive impact on their satisfaction (Thomas, 1992). In summary, an increased level of HQ-Sub information exchange leads to higher levels of communication effectiveness, commitment, mutual trust, and satisfaction between headquarters and subsidiaries, i.e., a higher quality of HQ-Sub relationships. Therefore, we present the following hypothesis:

**Hypothesis 1 (H1).** The global mindset of frontline managers positively affects the quality of HQ-Sub relationships.

### 2.2.2. Moderating effects of cognitive personality flexibility

When frontline managers have higher cognitive personality flexibility, they tend to be more open to multiple modes of understanding (Nutt, 1993), and they are more willing to acquire new knowledge and skills in order to react and adapt to uncertain and changing conditions (Wissema, Van der Pol, & Messer, 1980). Therefore, they are more likely to explore new information from different sources to understand the host country market. Moreover, frontline managers with higher cognitive personality flexibility are less methodical, rigid, and pedantic in thought (Gough, 1960). They are less likely to selectively scan and notice only a small fraction of the environmental stimuli (Starbuck & Milliken, 1988). Therefore, compared with frontline managers with lower cognitive personality flexibility, those with higher cognitive personality flexibility are less likely to have blind spots in their scanning of the host country's market information and can more easily use their global mindset to *notice* critical market information (Kiesler & Sproull, 1982; Nadkarni & Herrmann, 2010). Frontline managers' global mindset can better *interpret* market information and internalize it (Liesch & Knight, 1999) when they have higher cognitive personality flexibility, as those frontline managers are more capable of identifying tacit environmental stimuli and transforming them into firms' market knowledge (Nonaka & Takeuchi, 1995). With the newly transformed market knowledge from their earlier interpretation, frontline managers with a global mindset tend to consider a wider range of strategic alternatives and promote behaviors that may disrupt existing product and resource advantages of the incumbents when their cognitive personality flexibility is higher (Nadkarni & Narayanan, 2007). To evaluate and implement these new strategies, a higher level of information exchange (i.e., action) can be expected between headquarters and subsidiaries within MNEs, thus leading to higher quality HQ-Sub relationships. This leads to our next hypothesis:

**Hypothesis 2 (H2).** The positive relationship between the global mindset of frontline managers and the quality of HQ-Sub relationships is stronger when frontline managers have higher cognitive personality flexibility.

### 2.2.3. Moderating effects of leader-member exchange

The LMX research suggests that leaders develop individualized relationships with each member, instead of having the same type of relationship with all members (Sparrowe & Liden, 1997). Research on organization communication also shows that leaders' communication with members is based on their levels of LMX (Baker & Ganster, 1985), such that information sharing is more frequent, and the information provided is richer in the higher-LMX relationships than in those with lower levels of LMX (Lam, Peng, Wong, & Lau, 2017).

The dynamic managerial capabilities literature further suggests that managers' work ties provide them conduits for information that could assist their sense-making (Adner & Helfat, 2003). In MNEs, we contend that the higher levels of LMX between headquarters managers (i.e., leaders) and frontline managers (i.e., members) could enhance the sense-making process of frontline managers, which strengthens the effect of frontline managers' global mindset on the HQ-Sub information exchange. Because higher-LMX frontline managers have more frequent interactions and share more information with headquarters managers, we expect that frontline managers in such relationships receive more task-related information from headquarters managers than do lower-LMX frontline managers. This extra task-related information obtained through higher LMX ties (i.e., personal sources) could be richer than that available from written sources (Daft & Lengel, 1986). This, in turn, allows higher-LMX frontline managers' global mindset to better scan and *notice* environmental stimuli during their sense-making process in the host country market. In host country markets where the level of uncertainty is usually high, personal sources of information may also provide the direct understanding needed by frontline managers to interpret unclear issues (Daft & Weick, 1984), which could reduce managers' discounting bias (Kiesler & Sproull, 1982) and facilitate a more positive interpretation of the overseas operations from the higher-LMX frontline managers. This, as a result, may encourage MNEs' higher levels of risk-taking and overall involvement (Kahneman & Tversky, 1984) and lead to higher information exchange (i.e., *action*) between headquarters and subsidiaries for their resource and capability deployment at the firm level, resulting in higher quality HQ-Sub relationships.

**Hypothesis 3 (H3).** The positive relationship between the global mindset of frontline managers and HQ-Sub relationships is stronger when the levels of LMX between headquarters and frontline managers are higher.

#### *2.2.4. Moderating effect of overseas study experience*

Recent studies on dynamic managerial capabilities reveal that managerial human capital, including managers' experiences in specific contexts (e.g., education, industry, technology regime, and geographic locations) can interact with managerial cognition (Helfat & Martin, 2015; Kor & Mesko, 2013) because managers can draw on their knowledge and expertise during their sense-making process (Helfat & Martin, 2015). Managers can yield rich and complex information through their formal education (Hambrick & Mason, 1984) while also developing skills and knowledge through their experience and training (Helfat & Martin, 2015).

For frontline managers, studying overseas is a direct immersion experience that exposes them to a foreign environment (Goodwin & Nacht, 1988). It allows frontline managers to become directly involved with foreign cultural, political, economic, and environmental influences, which provides them a general foundation in international awareness (Vance, 2005) and can influence their attention to various issues (Melone, 1994). Moreover, when frontline managers have studied in the country where the subsidiary is located, they can even develop local personal business relationships via their alumni networks (Daily, Certo, & Dalton, 2000; Tan & Meyer, 2010), which can further provide them critical business information in the host country (Hoang & Antoncic, 2003). Therefore, we posit that when frontline managers have more overseas study experience, their *noticing* of complex environmental stimuli in the host country market via their global mindset may be enhanced, as they are more capable of scanning and synthesizing information from a variety of sources. Furthermore, overseas study experience may help frontline managers to lower their psychic distance from foreign markets (Cui et al., 2013), which means more knowledge of the foreign market and lower perceived uncertainties (Evans & Mavondo, 2002). The lower psychic distance can promote path dependency in frontline managers' sense-making process so that they can fit new environmental stimuli into their existing

knowledge base (Kiesler & Sproull, 1982; Lyles & Schwenk, 1992). For instance, frontline managers can utilize the knowledge and skills accumulated from their past overseas study experiences to reason by analogy (Gary, Wood, & Pillinger, 2012) and to make associations between knowledge structures in different contexts (Gavetti, 2012). These abilities are central to developing new interpretations of noticed stimuli and generating a broader range of managerial responses (Bogner & Barr, 2000; Nadkarni & Narayanan, 2007), including higher local adaptation efforts, to gain host country legitimacy. Thus, when frontline managers have more overseas study experience, their global mindset is less likely to evoke both discounting and illusory perception biases (i.e., ‘premature or inappropriate inference of causality through false association of events’) (Kiesler & Sproull, 1982, p. 552) during their sense-making process, allowing them to learn and adapt to the host country market more effectively (Nadkarni et al., 2011). Hence, we propose that a higher level of HQ-Sub information exchange (i.e., *action*) can be expected as a result of frontline managers’ learning and resource deployment through their global mindset for effective local adaptation when they have more overseas study experience, leading to higher quality HQ-Sub relationships.

**Hypothesis 4 (H4).** The positive relationship between the global mindset of frontline managers and the quality of HQ-Sub relationships is stronger when frontline managers have more overseas study experience.

### **3. Methods**

#### *3.1 Data collection*

We collected data from a survey conducted among mainland Chinese firms that were engaged in outward foreign direct investment (FDI) projects. Chinese MNEs are likely to face considerable challenges when operating in the global market (Jiang & Stening, 2013), as they lack FSAs compared to their Western counterparts (Rugman & Li, 2007). To address those challenges, Chinese MNEs need to rely heavily on the environmental perception of their frontline managers (i.e., managers’ sense-making) when making strategic decisions (Tan, 2001). Hence, Chinese MNEs provide us with a unique

opportunity to study how differences in managerial sense making influence the quality of HQ-Sub relationships in MNEs.

From the Statistical Bulletin of China's Outward Foreign Direct Investment published by the Ministry of Commerce of China, we identified approximately 13,000 Chinese firms that engaged in outward FDI projects (MOFCOM, 2011). Since the list of outward-investing firms was not disclosed by the Chinese government and was not accessible to researchers, the names of the outward-investing firms were identified from multiple sources published by the Chinese central and provincial governments. At the national level, we extracted 72 firms from the 2010 issue of the Statistical Bulletin of China's Outward FDI (OFDI) published by China's Ministry of Commerce. At the provincial and municipal levels, we identified 914 firms from provincial and municipal information service websites that provide lists of OFDI firms located in each province/municipality. After scanning the listed firms on the Shanghai and Shenzhen stock exchanges, we extracted 45 firms with OFDI. We also conducted a web search for firms conducting OFDI and thus identified another 350 firms. At the end of the sample construction process, we had obtained a sample of 1,381 firms engaged in OFDI activities.

We developed two sets of questionnaires to collect data: one for managers at headquarters to collect data for the dependent variable and the other for frontline managers in overseas subsidiaries of the firm to collect data on independent and moderating variables. We requested that the respondents be senior executives who were directly in charge of their firms' outward investment activities at both the headquarters and subsidiaries. In the questionnaire for headquarters managers, we asked the respondents to base their assessments on their firms' most recent established subsidiary and to answer all questions concerning that particular subsidiary. The questionnaires for subsidiary respondents were sent to the corresponding subsidiaries identified by the headquarters respondents to collect further information.

We implemented the data collection procedures in two phases. First, we collected data from frontline managers of the most recently established overseas subsidiary as identified by the headquarters respondents. Once the questionnaires from the headquarters respondents were returned, we commenced the second phase of the questionnaire delivery process, in which data were collected from the headquarters. To improve the response rate, reminders were sent to respondents during the two-and-a-

half-month period of data collection. A total of 392 MNEs participated in the survey, and each firm returned two completed questionnaires. 312 of which provided usable questionnaires, yielding a response rate of 22.6%.

### *3.2 Variable measurement*

#### *3.2.1 Dependent variable*

Our dependent variable was the quality of HQ-Sub relationships. In accordance with prior studies (Johnston & Menguc, 2007; Li et al., 2016), we measured the quality of HQ-Sub relationships by asking respondents to indicate their perceived levels of communication effectiveness (Anderson & Weitz, 1989; Menon et al., 1996), mutual trust (Ganesan, 1994), commitment (Anderson & Weitz, 1989), and satisfaction (Smith & Barclay, 1997), where '1' represented 'strongly disagree' and '5' represented 'strongly agree'. We followed Li et al. (2016) and calculated the arithmetic average of the twenty-four items to form a composite variable for the quality of HQ-Sub relationships. A Cronbach's alpha of 0.865 generated from a scale reliability test provided support for the variable's validity.

#### *3.2.2. Independent variable*

Our independent variable was frontline managers' global mindset. To measure this variable, we used a 39-item perceptual measure adopted from Arora et al. (2004). Levy et al. (2007) also recommended the measurement (Refer to Appendix 1). A recent study provided empirical validation (Jiang et al., 2018). We asked our respondents to indicate the two manifest variables, i.e., the degree of conceptualization and the degree of contextualization of frontline managers' global mindset in their work and life, where '1' represents 'strongly disagree' and '5' represents 'strongly agree'. The scale reliability test generated a Cronbach's alpha of 0.925, which provided support for the variable's reliability.

#### *3.2.3. Moderating variables*

The moderating variables were frontline managers' cognitive personality flexibility, LMX with headquarters managers, and overseas study experience. Frontline managers' cognitive personality

flexibility was measured by using items adapted from the Myers-Briggs Type Indicator (MBTI) cited in McGuiness (2004). Respondents were asked to indicate the amount of structure/judgment, which denotes a less flexible personality, and perception, which represents a more flexible personality, required in their outer world across ten dimensions. Structure/judgment reflects a manager's preference for planning and organization in the outer world, indicating a desire for closure, whereas perception reflects a frontline manager's preference for spontaneity and flexibility in the outer world, thus indicating a readiness to explore new alternatives (McGuiness, 2004). We then summed the responses for perception and transformed the sum of perception responses into a 10-point scale (with '1' representing 'least flexible' and '10' representing 'most flexible') to measure the level of frontline managers' cognitive personality flexibility.

To measure frontline managers' LMX with headquarters managers, we used an 11-item perceptual measure adopted from Liden and Maslyn (1998). We asked our respondents to indicate their perceived level of LMX with headquarters managers, where '1' represented 'strongly disagree' and '5' represented 'strongly agree'. The scale reliability test generated a Cronbach's alpha of 0.739, which also provided support for the variable's validity.

Frontline managers' overseas study experience was measured by an exponential function of three dummy variables, i.e., whether they had overseas study experience, whether the country in which they received their overseas education is a developed country, and whether the overseas study happened in the same country where the subsidiary is located. Given that the frontline managers' overseas study experience function is an exponential function, we chose to use values of 1 and 2.7183 (i.e., the value of the mathematical constant  $e$ ) instead of 0 and 1 for each of the three dummy variables. The mathematical constant  $e$  of 2.7183 is the most common base for exponential functions in mathematics (Eves, 1969), and it was employed in the study by Luo and Shenkar (2011). In our study, we coded '1' for respondents who did not study overseas and '2.7183' for respondents who studied overseas to reflect whether they had overseas study experience. We coded '1' for a developing or underdeveloped country and '2.7183' for a developed country to indicate the development of the countries in which they received their overseas education. We also coded '1' for frontline managers who studied in countries other than



the current host country and '2.7183' for those who studied in the same host country to indicate whether the overseas study happened in the same country where the subsidiary is located. The score for frontline managers' overseas study experience was derived by multiplying the scores for the three items.

#### *3.2.4. Control variables*

To avoid alternative explanations of the findings, we included 13 control variables related to firm capabilities and managerial demographics in the analysis. The percentage of MNE sales to overseas markets was used as an indicator of the firm's level of involvement in foreign markets and its dependence on overseas markets for sales revenues (Gomes & Ramaswamy, 1999), which can be expected to affect the quality of HQ-Sub relationships in the MNE. Headquarters and subsidiary sizes indicate firms' assets, resources, and capabilities (Penrose, 1959). A larger subsidiary size is associated with its higher value to the headquarters (Johnston & Menguc, 2007), which is expected to affect the quality of HQ-Sub relationships. We measured headquarters and subsidiary sizes by using the number of employees in the headquarters and subsidiary in the year 2012. We followed prior studies (Ambos, Ambos, & Schlegelmilch, 2006; Mudambi & Navarra, 2004) and included the industries of both headquarters and subsidiaries as dummy variables. We coded '1' for manufacturing and '0' for all nonmanufacturing industries. We also included Chinese parent ownership in the subsidiary as a control variable, as ownership ties reflect the 'weight' of a subsidiary to the headquarters. State ownership in Chinese MNE headquarters was measured by using a dummy variable that took a value of 1 for state-owned Chinese MNEs and a value of 0 for non-state-owned Chinese MNEs (Cui & Jiang, 2009). Chinese state ownership indicates a high level of dependence on resources and political support from the home government (Cui & Jiang, 2012), which may affect the quality of HQ-Sub relationships when a subsidiary faces a high level of isomorphic pressure overseas.

We followed a prior study (Chan & Makino, 2007) and included three types of FDI motivation (i.e., market-, resource- and strategic asset-seeking) as three dummy variables that coded a value of 1 for FDI projects established for market-, resource- or strategic asset-seeking and 0 for FDIs that were not established for these purposes. We controlled for the regulative and cultural distance between the home

and host countries where the focal subsidiaries are located. Regulative distance refers to the regulatory difference between the home and host countries (Kostova, 1999). Regulative distance can trigger external and internal legitimacy issues for MNEs (Kostova, 1999; Xu & Shenkar, 2002), which can affect how organizations interact with each other and their interorganizational relationships (Oliver, 1990). We measured regulative distance by averaging the items of frontline manager-perceived regulative distance between China and the host country adopted from a prior study (Gaur & Lu, 2007), where '1' represented 'very low' and '5' represented 'very high'. Cultural distance refers to the extent to which different cultures in the home country as well as the host countries are similar or different (Shenkar, 2001). This variable was included to reflect external uncertainty (Slangen & Van Tulder, 2009) and potential agency problems (Roth & O'Donnell, 1996), which may affect the quality of HQ-Sub relationships. We followed prior studies (Drogendijk & Slangen, 2006; Li et al., 2016) and used a five-item Likert scale adapted from Hofstede's five cultural dimensions (i.e., power distance, uncertainty avoidance, individualism, masculinity, and long-term orientation) (Hofstede, 2005) to measure cultural distance between China and the host countries. We asked our respondents to indicate their perceived degree of differences on each of Hofstede's cultural dimensions between China and the host country, where '1' represented 'very low' and '5' represented 'very high'. We then averaged the scores on the five questions to form the compound variable of cultural distance.

We also measured each subsidiary manager's nationality by using a dummy variable that took a value of '1' for a mainland Chinese manager and '0' for a non-mainland Chinese manager. Existing literature suggests that the nationality of a subsidiary manager has significant managerial implications (Gupta & Govindarajan, 1991). For example, host country nationals have a greater level of familiarity with the local environment, identification with the subsidiary, and commitment to the subsidiary than do home country nationals. This identification with and commitment to the subsidiary can affect the quality of HQ-Sub relationships.

## 4. Results

### 4.1. Descriptive statistics

Table 1 presents the operational measures, descriptive statistics, and correlations among the independent variables, moderating variables, and control variables. All the correlation coefficients are below 0.6 except for the coefficient for headquarters industry and subsidiary industry. Correlation coefficients above 0.6 are regarded as high (Churchill, 1991). We then examined the variance inflation factors (VIFs) in our regression analysis and found that the maximum value of the VIFs for all major variables in all models was 3.157, which was well below the cut-off value of 10 (Hair, Anderson, Tatham, & Black, 1998). This finding indicates that no multicollinearity problems exist in the data.

Insert Table 1 about here

### 4.2 Hypotheses test

We performed a moderated hierarchical regression analysis with the independent and moderating variables from frontline managers' responses and the dependent variable from headquarters managers' responses to test the hypothesized relationships depicted in Fig. 1. The results of the analysis are presented in Table 2. All models for testing the hypotheses are significant at the 0.001 level, indicating that the models fit the data well.

Insert Table 2 about here

Hypothesis 1 proposes that there is a positive association between frontline managers' global mindset and the quality of HQ-Sub relationships. The results for Model 2 indicate that the coefficient for frontline managers' global mindset is positive and statistically significant ( $b = 0.351$ ,  $se = 0.038$ ,  $p = 0.000$ , 95% CI [0.275, 0.426]). The results for frontline managers' global mindset are consistent in Model 4 ( $b = 0.340$ ,  $se = 0.038$ ,  $p = 0.000$ , 95% CI [0.265, 0.415]), Model 6 ( $b = 0.232$ ,  $se = 0.043$ ,  $p = 0.000$ , 95% CI [0.149, 0.316]), and Model 8 ( $b = 0.305$ ,  $se = 0.044$ ,  $p = 0.000$ , 95% CI [0.219, 0.391]). Therefore, Hypotheses 1 is supported.

Hypothesis 2 proposes that the positive relationship between frontline managers' global mindset and the quality of HQ-Sub relationships is stronger when frontline managers have higher cognitive personality flexibility. As presented in the regression results for Model 4, the interaction term is positive

and statistically significant ( $b = 0.081$ ,  $se = 0.028$ ,  $p = 0.004$ , 95% CI [0.026, 0.137]). The positive moderating effect of frontline managers with higher cognitive personality flexibility is evident in Fig. 2.1. The plot demonstrates that the positive relationship between frontline managers' global mindset and the quality of HQ-Sub relationships is significantly strengthened when frontline managers have higher cognitive personality flexibility relative to when they have lower cognitive personality flexibility. Thus, Hypothesis 2 is supported.

Hypothesis 3 proposes that the positive relationship between frontline managers' global mindset and the quality of HQ-Sub relationships is stronger when the leader-member exchange between headquarters and frontline managers is higher. As the regression results for Model 6 demonstrate, the interaction term is negative and statistically significant ( $b = -0.088$ ,  $se = 0.041$ ,  $p = 0.034$ , 95% CI [-0.169, -0.006]). This negative moderating effect is also presented in Fig. 2.2., which reveals that the positive relationship between frontline managers' global mindset and the quality of HQ-Sub relationships becomes weaker when the leader-member exchange between headquarters and subsidiary managers is higher than when the leader-member exchange is lower. Thus, Hypothesis 3 is not supported. However, three possible explanations for this conflicting finding might be considered. First, according to the information-ceiling effect, the value of information diminishes when it is provided to information-rich individuals compared to those who are information-poor (Ettema & Kline, 1977; Sama, Kopelman, & Manning, 1994). Therefore, although frontline managers could receive more information from their counterparts at headquarters via higher-level LMX in the Chinese MNEs, the extra information received by frontline managers might be less valuable to them (i.e., lower information quality). Second, the information-ceiling effect also suggests that when individuals obtain sufficient information from a particular source, it makes information from other sources less valuable (Ettema & Kline, 1977; Sama et al., 1994). In the context of Chinese MNEs, we could also expect frontline managers to rely more on their headquarters counterparts with whom they share stronger ties (i.e., higher LMX) for information. Hence, frontline managers may regard information from other managers as less valuable and may be less likely to seek information from them (i.e., lower information quantity). Additionally, social network studies indicate that information received from strong relationship ties

tends to be repetitive rather than novel, which makes the information relatively redundant (Granovetter, 1973; Sparrowe & Liden, 1997). This implies that frontline managers are less likely to receive drastically new information (i.e., lower information quality) from their headquarters counterparts who are in the higher-level LMX. In contrast, weaker ties might be more likely sources of new and innovative information for frontline managers (Burt, 1997; Hansen, 1999). Therefore, higher-level LMX between frontline and headquarters managers may weaken, rather than strengthen, the influence of frontline managers' global mindset on quality of HQ-Sub relationships.

Hypothesis 4 proposes that the positive relationship between frontline managers' global mindset and the quality of HQ-Sub relationships is stronger when the frontline managers have more overseas study experience. As the regression results for Model 8 demonstrate, the interaction term is positive and statistically significant ( $b = 0.009$ ,  $se = 0.004$ ,  $p = 0.034$ , 95% CI [0.001, 0.017]). This positive moderating effect is also presented in Fig. 2.3., which shows that the positive relationship between frontline managers' global mindset and the quality of HQ-Sub relationships is stronger when managers have more overseas study experience than when they have less overseas study experience. Thus, Hypothesis 4 is supported.

#### *4.3 Robustness check*

To test the validity of our results, we performed two robustness tests. In the two tests, we followed Hair et al.'s (1998) approach and split the sample into two equal subsamples ( $n = 156$ ). Sub-sample 1 includes the first 50% of the received usable questionnaires, and subsample 2 includes the second 50% of the received usable questionnaires. We then performed hierarchical regression analysis for each of the hypotheses (See Table 3).

We found that the relationship between frontline managers' global mindset and the quality of HQ-Sub relationships is significant and positive in Models 2.1 and 2.2. Furthermore, we found that, consistent with our results presented in Table 2, higher cognitive personality flexibility (Models 4.1 and 4.2) and more overseas study experience (Models 8.1 and 8.2) interact with frontline managers' global mindset and have significant and positive effects on the quality of HQ-Sub relationships,

whereas the interaction between frontline managers' global mindset and higher LMX (Models 6.1 and 6.2) has a significant but negative effect on the quality of HQ-Sub relationships. In summary, all results from the robustness tests based on two sub-samples are consistent with the earlier results

Insert Table 3 about here

## **5. Discussion**

### *5.1. Theoretical contributions*

This study provides three major contributions. First, this study adds to the literature on HQ-Sub relationships and explains how the global mindset of frontline managers enables them to make sense of macro- and meso-level information affecting the quality of the HQ-Sub relationship via information exchanges between subsidiaries and headquarters. This study highlights the relevance of dynamic managerial capabilities to international business research and makes these capabilities more actionable by unpacking the linkage between frontline managers' dynamic managerial capabilities and interorganizational relationships in MNEs. Specifically, the findings suggest that interorganizational relationships can be seen as an outcome of the complex managerial sense-making process, which can be shaped by the dynamic managerial capabilities of frontline managers.

By identifying a positive effect of the global mindset of frontline managers on the quality of HQ-Sub relationships via HQ-Sub information exchange, the findings increase our understanding of how underlying factors of dynamic managerial capabilities influence organizational dynamic capabilities. This study provides evidence in the context of HQ-Sub relationships and provides insight into the significant role of managerial cognition, i.e., the global mindset, in achieving good interorganizational relationships. Such relationships are imperative for MNEs' organizational dynamic capabilities in terms of asset deployment and upgrading. In doing so, this study addresses the calls of Helfat and Peteraf (2015) for further investigation of the relationship between dynamic managerial capabilities and the dynamic capabilities of firms. Furthermore, this study provides a nuanced understanding of the intrinsic processes and conditions of dynamic capabilities development at the organizational level.

Second, this study addresses the calls by Adner and Helfat (2003) and Helfat and Martin (2015) for the advancement of the dynamic managerial capabilities perspective and expands the literature on both

HQ-Sub relationships and dynamic managerial capabilities. It achieves this expansion by explaining how the interactions and dynamics between frontline managers' dynamic managerial capabilities underpinnings – including cognitive personality flexibility (cognition), LMX (social capital), and overseas study experience (human capital) – and their global mindset may inform the process of sense-making and consequently shape HQ-Sub relationships. This study demonstrates that interactive effects can exist between the underlying factors of dynamic managerial capabilities in shaping organizational outcomes (i.e., HQ-Sub information exchange).

Third, by focusing on frontline managers' sense-making processes and their impact on organizational outcomes, this study underscores the distributed nature of dynamic capability functions in an MNE setting, which has been largely overlooked by earlier dynamic capabilities studies (Adner & Helfat, 2003; Lessard, Teece, & Leih, 2016; Teece, 2007). Prior studies suggest that sensing, seizing, and reconfiguring are performed entirely by senior executives at the top level within a firm (Helfat & Peteraf, 2015; Lessard et al., 2016) but do not address how the three dynamic capability functions are distributed across managers at different levels/units within a firm, especially in an MNE. This study suggests that in complex organizations such as MNEs, different dynamic capability functions are likely distributed across managers at various levels/units such that the frontline managers at overseas subsidiaries play key roles in sensing opportunities and threats (via sense-making) in host-country markets. In contrast, the function of seizing is more likely to be shared between the frontline managers of overseas subsidiaries. The senior executives at headquarters because opportunities can only be seized by innovating and implementing new business models, products, and services that involve both headquarters and subsidiaries within the MNE (Teece, 2007).

### *5.2. Practical implications*

From a managerial standpoint, our study provides valuable insights for MNEs' dynamic capabilities on how to foster good HQ-Sub relationships via HQ-Sub information exchange. To develop better HQ-Sub relationships, MNEs need to focus on the managerial capabilities of their frontline managers, particularly the global mindset of their frontline managers, as a strong global mindset enables them to

better make sense of environmental stimuli, which encourages information exchange between headquarters and subsidiaries, leading to better-quality HQ-Sub relationships that are imperative to MNEs' dynamic capabilities. Regarding talent recruitment, MNEs should consider giving more weight to the strength of the global mindset as one of their key selection criteria for managers at both headquarters and subsidiaries. This priority can become even more crucial to those exhibiting a low level of cognitive personality flexibility and limited overseas study experience. Senior managers, who deal with HQ-Sub relationships, are also encouraged to develop their global mindset because senior managers with a strong global mindset can have a better understanding of cultures and political and economic systems in other countries, and they know how their global industries work (Javidan, 2010). MNEs may even consider offering incentives and rewards to managers who attend relevant educational training sessions and workshops specifically for developing or cultivating a managerial global mindset.

### *5.3. Future research directions*

We identify three limitations of this paper that should be addressed in future research studies. First, this paper only examined four dynamic managerial capabilities variables, which may have certain limitations because the study was not able to fully capture certain qualitative differences in managerial cognition, social capital, and human capital that constitute dynamic managerial capabilities. Future research should examine the impacts of those dynamic managerial capabilities on HQ-Sub relationships to gain further insight into their individual and collective impacts on organizational dynamic capabilities. Second, this paper examined managerial cognition (i.e., global mindset) at the aggregate level instead of the sub-dimensional level (i.e., conceptualization and contextualization) (Levy et al., 2007). Prior research has documented that conceptualization structures the way one looks at the world (managers think globally), whereas contextualization refers to the way that a person adapts his or her conceptual framework to the local context (managers act locally) (Arora et al., 2004). Hence, future research could separate managers' global mindset into at least two subdimensions and examine their individual effects on firms' strategies and actions. Such studies could yield an in-depth understanding of managers' sense making in a dynamic global business environment.



## 6. Conclusion

Our research shows that frontline managers who have a stronger global mindset are more likely to promote information exchange between headquarters and subsidiaries through their sense making, which leads to higher quality HQ-Sub relationships. The results further revealed that the relationship between frontline managers' global mindset, HQ-Sub information exchange, and the quality of HQ-Sub relationships depends on other dynamic managerial capability factors. Specifically, frontline managers' cognitive personality flexibility and overseas study experience strengthen the link between frontline managers' global mindset and the HQ-Sub information exchange, whereas LMX with headquarters managers weakens the relationship. Our findings suggest that dynamic managerial capabilities are important factors to consider when studying HQ-Sub relationships, which provides new insights for research on HQ-Sub relationships.

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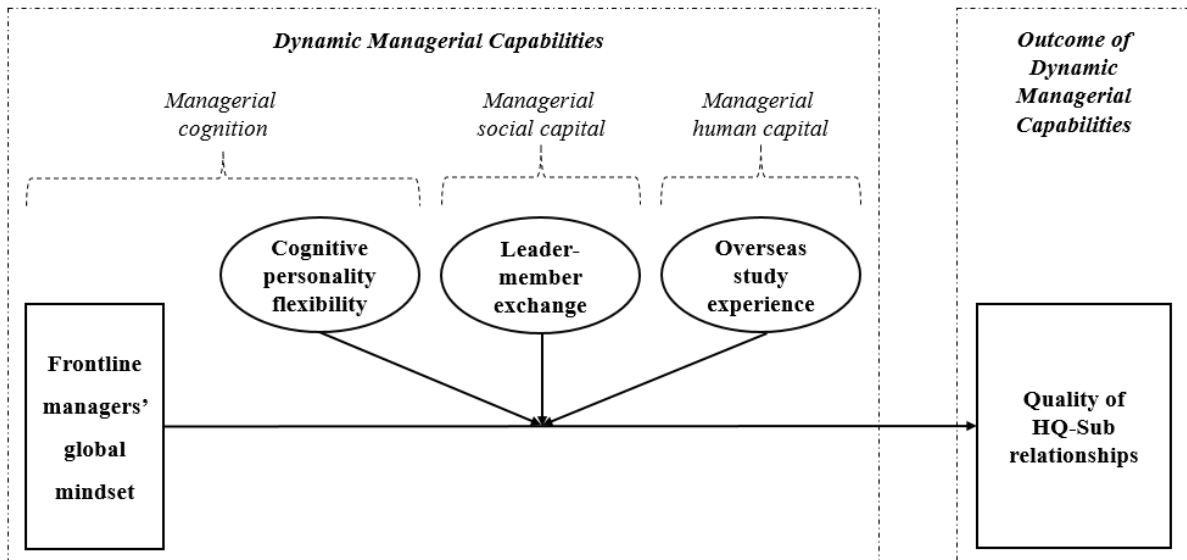
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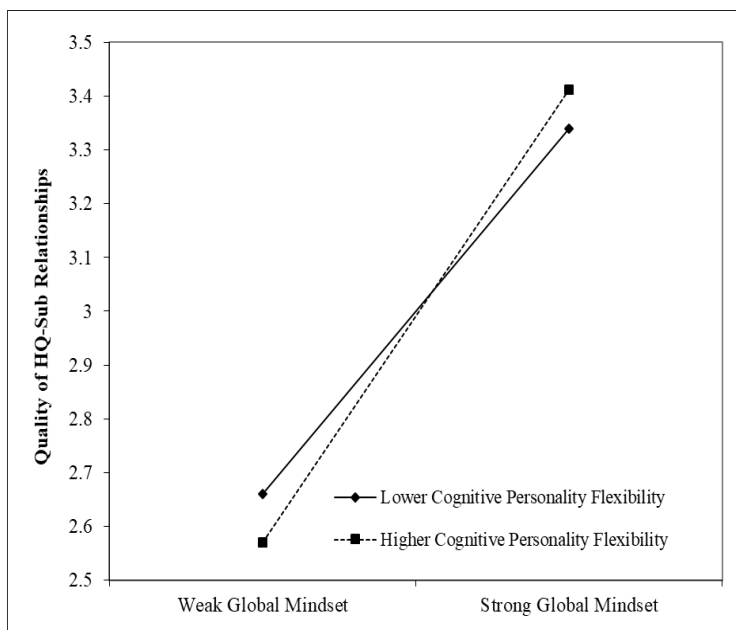
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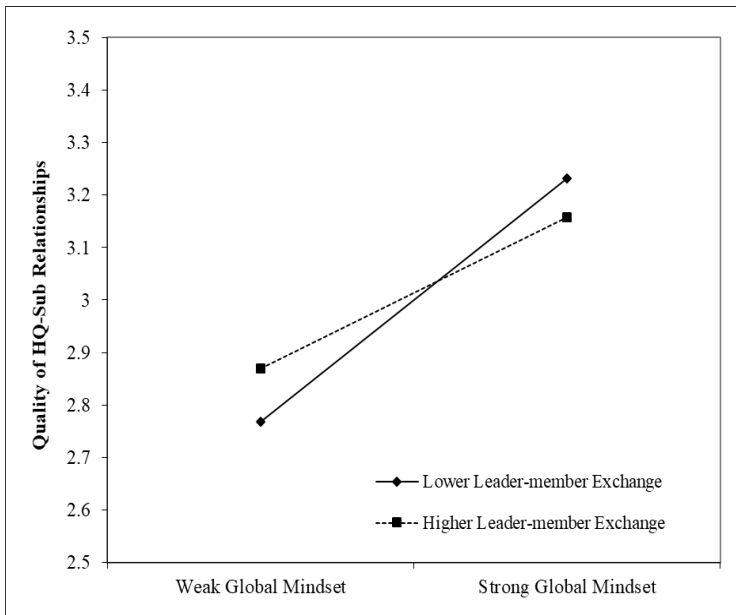


**Fig. 1.** Theoretical framework

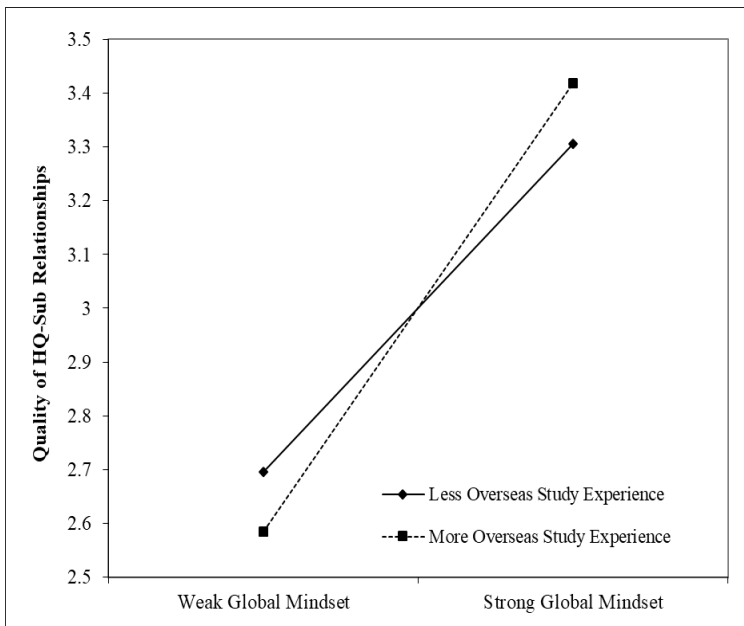


**Fig. 2.1.** Global mindset interacts with cognitive personality flexibility in affecting the quality of HQ-Sub relationships.





**Fig. 2.2.** Global mindset interacts with leader-member exchange in affecting the quality of HQ-Sub relationships.



**Fig. 2.3.** Global mindset interacts with overseas study experience in affecting the quality of HQ-Sub relationships.

**Table 1**  
Descriptive statistics and correlation (n = 312).

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9
1 Sales to overseas market	28.60	22.06	1.000								
2 HQ size	59020.12	171649.11	0.089	1.000							
3 Sub size	6782.48	32419.06	0.087	0.577***	1.000						
4 HQ industry	15.77	5.47	0.052	0.159**	0.098	1.000					
5 Sub industry	16.09	5.45	0.042	0.126*	0.060	0.884***	1.000				
6 Chinese HQ ownership in Sub	75.69	25.35	-0.054	-0.210***	-0.225***	-0.091	-0.074	1.000			
7 State ownership in HQ	0.71	0.45	0.137*	0.522***	0.375***	0.154**	0.131*	-0.201***	1.000		
8 Marketing seeking motivation	0.68	0.47	0.071	-0.084	-0.105	-0.168**	-0.152**	0.222***	-0.054	1.000	
9 Resource seeking motivation	0.34	0.48	0.087	0.137*	0.253***	0.216***	0.229***	-0.238***	0.153**	-0.537***	1.000
10 Strategic asset seeking motivation	0.23	0.42	0.162**	0.091	0.068	0.125*	0.101	-0.057	0.072	-0.135*	0.030
11 Regulative distance	3.66	0.49	0.140*	0.253***	0.190**	0.001	-0.005	-0.069	0.198***	0.127*	0.070
12 Cultural distance	3.60	0.60	0.236***	0.248***	0.160**	0.035	0.015	0.037	0.180**	0.116*	0.025
13 Frontier manager nationality	0.78	0.41	0.077	0.048	0.013	-0.077	-0.044	0.079	-0.041	0.053	0.051
14 Global mindset	3.63	0.44	0.096	0.374***	0.337***	0.055	0.011	-0.039	0.324***	0.046	0.129*
15 Cognitive personality flexibility	3.69	2.09	-0.219***	-0.195**	-0.157**	-0.055	-0.051	0.063	-0.013	-0.061	-0.142*
16 Leader-member exchange	3.85	0.55	0.201***	0.042	0.043	-0.029	-0.046	0.042	0.083	0.135*	-0.051
17 Overseas study experience	2.09	2.36	-0.124*	0.086	0.076	0.079	0.073	-0.237***	0.176**	-0.260***	0.053
18 Quality of HQ-Sub relationships	3.79	0.42	0.154**	0.041	0.013	-0.047	-0.034	0.052	0.050	0.199***	-0.032

**Table 1 (Cont'd)**

Variables	10	11	12	13	14	15	16	17	18
10 Strategic asset seeking motivation	1.000								
11 Regulative distance	0.152**	1.000							
12 Cultural distance	-0.043	0.536***	1.000						
13 Frontier manager nationality	-0.047	0.081	0.105	1.000					
14 Global mindset	-0.034	0.576***	0.645***	0.105	1.000				
15 Cognitive personality flexibility	-0.167**	-0.211***	-0.171**	-0.172**	-0.152**	1.000			
16 Leader-member exchange	0.076	0.331***	0.331***	0.119*	0.533***	-0.156**	1.000		
17 Overseas study experience	0.003	-0.056	-0.051	-0.524***	0.019	0.138*	-0.038	1.000	
18 Quality of HQ-Sub relationships	0.077	0.438***	0.424***	0.102	0.571***	-0.174**	0.630**	-0.065	1.000

\* p < .05; \*\* p < .01; \*\*\* p < .001. (2-tailed).

**Table 2**  
Results of hierarchical regressions analyses for the moderation effects.

Predictor	DV: Quality of HQ-Sub relationships																	
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8			
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>		
	(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)	
<i>Control variables</i>																		
Sales to overseas market	0.058	[0.509]	0.135	[0.086]	0.121	[0.127]	0.149	[0.059]	0.028	[0.705]	0.036	[0.620]	0.139	[0.079]	0.144	[0.067]		
	(0.088)		(0.078)		(0.079)		(0.079)		(0.073)		(0.073)		(0.079)		(0.078)			
HQ size	-0.041	[0.295]	-0.063	[0.072]	-0.070	[0.050]	-0.062	[0.079]	-0.032	[0.328]	-0.036	[0.267]	-0.063	[0.073]	-0.055	[0.116]		
	(0.039)		(0.035)		(0.035)		(0.035)		(0.032)		(0.032)		(0.035)		(0.035)			
Sub size	-0.022	[0.556]	-0.068	[0.039]	-0.069	[0.036]	-0.076	[0.020]	-0.052	[0.083]	-0.051	[0.088]	-0.068	[0.039]	-0.063	[0.055]		
	(0.037)		(0.033)		(0.033)		(0.032)		(0.030)		(0.030)		(0.033)		(0.033)			
HQ industry	-0.008	[0.479]	-0.015	[0.121]	-0.016	[0.117]	-0.013	[0.188]	-0.014	[0.122]	-0.014	[0.121]	-0.015	[0.129]	-0.015	[0.121]		
	(0.011)		(0.010)		(0.010)		(0.010)		(0.009)		(0.009)		(0.010)		(0.010)			
Sub industry	0.005	[0.647]	0.013	[0.180]	0.013	[0.179]	0.011	[0.254]	0.013	[0.164]	0.013	[0.158]	0.013	[0.193]	0.013	[0.186]		
	(0.011)		(0.010)		(0.010)		(0.010)		(0.009)		(0.009)		(0.010)		(0.010)			
Chinese HQ ownership in Sub	0.000	[0.770]	0.000	[0.900]	0.000	[0.936]	-0.001	[0.603]	0.000	[0.891]	0.000	[0.912]	0.000	[0.976]	0.000	[0.870]		
	(0.001)		(0.001)		(0.001)		(0.001)		(0.001)		(0.001)		(0.001)		(0.001)			
State ownership in HQ	-0.002	[0.975]	0.093	[0.162]	0.080	[0.235]	-0.096	[0.152]	0.080	[0.190]	-0.087	[0.150]	-0.098	[0.146]	-0.091	[0.173]		
	(0.074)		(0.066)		(0.067)		(0.067)		(0.061)		(0.061)		(0.067)		(0.067)			
Marketing seeking motivation	0.169	[0.026]	0.169	[0.012]	0.156	[0.021]	0.206	[0.003]	0.149	[0.015]	0.146	[0.016]	0.178	[0.010]	0.170	[0.014]		
	(0.075)		(0.067)		(0.067)		(0.069)		(0.061)		(0.061)		(0.069)		(0.069)			
Resource seeking motivation	0.045	[0.555]	0.004	[0.951]	-0.010	[0.887]	0.038	[0.582]	0.045	[0.463]	0.041	[0.500]	0.008	[0.903]	0.018	[0.792]		
	(0.075)		(0.067)		(0.068)		(0.069)		(0.061)		(0.061)		(0.067)		(0.067)			
Strategic asset seeking motivation	0.102	[0.154]	0.160	[0.012]	0.147	[0.022]	0.175	[0.006]	0.108	[0.065]	0.105	[0.070]	0.161	[0.011]	0.165	[0.009]		
	(0.071)		(0.063)		(0.064)		(0.064)		(0.058)		(0.058)		(0.063)		(0.063)			
Regulative distance	0.234	[0.000]	0.085	[0.082]	0.081	[0.099]	0.086	[0.074]	0.081	[0.069]	0.081	[0.068]	0.086	[0.079]	0.093	[0.056]		
	(0.052)		(0.049)		(0.049)		(0.048)		(0.045)		(0.044)		(0.049)		(0.049)			
Cultural distance	0.213	[0.000]	0.008	[0.860]	0.006	[0.898]	-0.008	[0.866]	0.037	[0.398]	0.047	[0.285]	0.008	[0.862]	0.015	[0.751]		
	(0.048)		(0.048)		(0.048)		(0.048)		(0.044)		(0.044)		(0.048)		(0.048)			
Frontier manager nationality	0.056	[0.417]	0.027	[0.665]	0.016	[0.800]	0.029	[0.636]	-0.004	[0.945]	-0.014	[0.805]	0.047	[0.519]	0.055	[0.443]		
	(0.069)		(0.061)		(0.062)		(0.061)		(0.056)		(0.056)		(0.072)		(0.072)			

**Table 2** (Cont'd)

Predictor	DV: Quality of HQ-Sub Relationships															
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8	
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>
	(s.e.)		(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)	(s.e.)
<i>Independent variable</i>																
Global mindset (H1)			0.351	[0.000]	0.351	[0.000]	0.340	[0.000]	0.201	[0.000]	0.232	[0.000]	0.349	[0.000]	0.305	[0.000]
			(0.038)		(0.038)		(0.038)		(0.040)		(0.043)		(0.039)		(0.044)	
<i>Moderators</i>																
Cognitive personality flexibility					-0.036	[0.194]	-0.049	[0.075]								
					(0.028)		(0.028)									
Leader-member exchange									0.357	[0.000]	0.313	[0.000]				
									(0.046)		(0.051)					
Overseas study experience													0.002	[0.596]	0.001	[0.788]
													(0.005)		(0.005)	
<i>Interaction terms</i>																
Global mindset × Cognitive personality flexibility (H2)									0.081	[0.004]						
									(0.028)							
Global mindset × Leader-member exchange (H3)													-0.088	[0.034]		
													(0.041)			
Global mindset × Overseas study experience (H4)															0.009	[0.034]
															(0.004)	
Sample Size	312		312		312		312		312		312		312		312	
R square	0.279		0.437		0.440		0.456		0.531		0.538		0.437		0.446	
Adjusted R square	0.248		0.410		0.412		0.426		0.507		0.513		0.409		0.416	
Standard error	0.492		0.436		0.435		0.430		0.398		0.396		0.436		0.434	
F value	8.881	[0.000]	16.463	[0.000]	15.515	[0.000]	15.433	[0.000]	22.333	[0.000]	21.468	[0.000]	15.347	[0.000]	14.841	[0.000]

**Table 3**  
Robustness test results of hierarchical regression analysis for the moderation effects

Predictor	DV: Quality of HQ-Sub relationships															
	Sub-sample 1		Sub-sample 2		Sub-sample 1		Sub-sample 2		Sub-sample 1		Sub-sample 2		Sub-sample 1		Sub-sample 2	
	Model 2.1		Model 2.2		Model 4.1		Model 4.2		Model 6.1		Model 6.2		Model 8.1		Model 8.2	
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>
(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		
<i>Control variables</i>																
Sales to overseas market	0.191	[0.088]	0.158	[0.126]	0.229	[0.041]	0.096	[0.442]	-0.028	[0.798]	0.058	[0.568]	0.345	[0.001]	0.176	[0.110]
	(0.111)		(0.103)		(0.111)		(0.124)		(0.109)		(0.101)		(0.100)		(0.110)	
HQ size	-0.155	[0.007]	-0.012	[0.809]	-0.154	[0.006]	-0.075	[0.199]	-0.037	[0.479]	-0.043	[0.328]	0.021	[0.651]	-0.066	[0.161]
	(0.057)		(0.049)		(0.056)		(0.058)		(0.053)		(0.044)		(0.045)		(0.047)	
Sub size	-0.044	[0.375]	-0.077	[0.083]	-0.052	[0.281]	-0.040	[0.427]	-0.070	[0.179]	-0.075	[0.076]	-0.095	[0.016]	-0.039	[0.391]
	(0.049)		(0.044)		(0.048)		(0.050)		(0.052)		(0.042)		(0.039)		(0.045)	
HQ industry	-0.010	[0.476]	-0.018	[0.131]	-0.008	[0.572]	-0.015	[0.362]	0.003	[0.825]	-0.015	[0.245]	-0.015	[0.258]	-0.007	[0.604]
	(0.013)		(0.012)		(0.013)		(0.016)		(0.015)		(0.013)		(0.013)		(0.013)	
Sub industry	0.019	[0.140]	0.016	[0.171]	0.018	[0.173]	0.013	[0.418]	0.002	[0.890]	0.020	[0.142]	0.011	[0.420]	0.007	[0.599]
	(0.013)		(0.012)		(0.013)		(0.016)		(0.015)		(0.013)		(0.014)		(0.013)	
Chinese HQ ownership in Sub	0.000	[0.895]	0.000	[0.856]	-0.001	[0.442]	-0.002	[0.159]	0.000	[0.761]	0.000	[0.835]	0.000	[0.913]	0.001	[0.635]
	(0.002)		(0.001)		(0.002)		(0.002)		(0.002)		(0.001)		(0.001)		(0.002)	
State ownership in HQ	-0.079	[0.393]	-0.051	[0.589]	-0.098	[0.287]	-0.089	[0.331]	-0.120	[0.184]	-0.149	[0.102]	0.008	[0.927]	-0.066	[0.473]
	(0.093)		(0.095)		(0.092)		(0.091)		(0.090)		(0.091)		(0.086)		(0.092)	
Marketing seeking motivation	0.176	[0.078]	0.116	[0.215]	0.226	[0.029]	0.340	[0.001]	0.124	[0.192]	0.092	[0.314]	0.238	[0.007]	0.213	[0.033]
	(0.099)		(0.093)		(0.102)		(0.097)		(0.094)		(0.091)		(0.087)		(0.099)	
Resource seeking motivation	0.019	[0.840]	-0.089	[0.335]	0.068	[0.477]	0.022	[0.822]	0.134	[0.154]	0.010	[0.911]	0.061	[0.473]	0.027	[0.774]
	(0.092)		(0.092)		(0.095)		(0.098)		(0.094)		(0.092)		(0.085)		(0.096)	
Strategic asset seeking motivation	0.256	[0.011]	0.176	[0.047]	0.272	[0.007]	0.222	[0.012]	0.182	[0.052]	0.066	[0.448]	0.009	[0.913]	0.138	[0.132]
	(0.099)		(0.088)		(0.100)		(0.088)		(0.093)		(0.087)		(0.082)		(0.091)	
Regulative distance	0.111	[0.108]	0.123	[0.067]	0.123	[0.071]	0.033	[0.629]	0.011	[0.860]	0.089	[0.196]	0.189	[0.005]	0.133	[0.063]
	(0.069)		(0.067)		(0.068)		(0.067)		(0.064)		(0.069)		(0.066)		(0.071)	
Cultural distance	0.093	[0.195]	0.028	[0.710]	0.075	[0.286]	-0.099	[0.113]	0.093	[0.151]	0.040	[0.538]	0.004	[0.952]	0.055	[0.455]
	(0.071)		(0.076)		(0.070)		(0.062)		(0.064)		(0.064)		(0.061)		(0.074)	
Frontier manager nationality	0.052	[0.555]	0.032	[0.740]	0.061	[0.484]	0.064	[0.480]	0.021	[0.813]	0.043	[0.613]	-0.089	[0.403]	0.115	[0.244]
	(0.087)		(0.069)		(0.086)		(0.090)		(0.087)		(0.085)		(0.107)		(0.098)	

**Table 3 (Cont'd)**

Predictor	DV: Quality of HQ-Sub relationships															
	Sub-sample 1		Sub-sample 2		Sub-sample 1		Sub-sample 2		Sub-sample 1		Sub-sample 2		Sub-sample 1		Sub-sample 2	
	Model 2.1		Model 2.2		Model 4.1		Model 4.2		Model 6.1		Model 6.2		Model 8.1		Model 8.2	
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>
(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		(s.e.)		
<i>Independent variable</i>																
Global mindset (H1)	0.334	[0.000]	0.304	[0.000]	0.312	[0.000]	0.366	[0.000]	0.263	[0.000]	0.255	[0.000]	0.261	[0.000]	0.200	[0.002]
	(0.056)		(0.057)		(0.055)		(0.050)		(0.062)		(0.087)		(0.059)		(0.063)	
<i>Moderators</i>																
Cognitive personality flexibility					-0.057	[0.156]	-0.098	[0.012]								
					(0.040)		(0.039)									
Leader-member exchange									0.262	[0.000]	0.344	[0.000]				
									(0.073)		(0.067)					
Overseas study experience													-0.005	[0.455]	-0.006	[0.402]
													(0.006)		(0.007)	
<i>Interaction terms</i>																
Global mindset × Cognitive personality flexibility (H2)					0.105	[0.008]	0.113	[0.007]								
					(0.039)		(0.041)									
Global mindset × Leader-member exchange (H3)									-0.136	[0.040]	-0.134	[0.022]				
									(0.065)		(0.058)					
Global mindset × Overseas study experience (H4)													0.010	[0.021]	0.017	[0.006]
													(0.004)		(0.006)	
Sample Size	156		156		156		156		156		156		156		156	
R square	0.512		0.427		0.537		0.487		0.523		0.596		0.570		0.456	
Adjusted R square	0.463		0.370		0.484		0.428		0.568		0.550		0.520		0.393	
Standard error	0.443		0.435		0.435		0.431		0.419		0.406		0.397		0.424	
F value	10.556	[0.000]	7.513	[0.000]	10.092	[0.000]	8.245	[0.000]	9.532	[0.000]	12.819	[0.000]	11.510	[0.000]	7.284	[0.000]

## **Appendix 1:** Global mindset scales (Arora et al., 2004).

Scale: 5-point Likert scale (“1” being *strongly disagree*, and “5” being *strongly agree*)

### *Conceptualization*

1. In my job, the best one can do is to plan ahead for one year at the most.
2. I think it is necessary to develop strategic alliances with organizations around the globe.
3. Projects that involve international dealings are long term.
4. I take pride in belonging to an international organization.
5. I believe that in the next 10 years, the world will be the same as it is today.
6. In this interlinked world of ours, national boundaries are meaningless.
7. Almost everybody agrees that international projects must have a shorter payback period than domestic ones.
8. We really live in a global village.
9. In discussions, I always strive for a bigger, broader picture.
10. I believe life is a balance of contradictory forces that are to be appreciated, pondered, and managed.
11. I consider it a disgrace when foreigners buy our land and buildings.
12. I really believe that 5-10 years is the best planning horizon in our line of business.
13. I find it easy to rethink boundaries and change direction and behavior.
14. I feel comfortable with change, surprise, and ambiguity.
15. I get frustrated when someone is constantly looking for context.
16. Contradictors are time wasters that must be eliminated.
17. I have no time for somebody trying to paint a broader, bigger picture.
18. I believe I can live a fulfilling life in another culture.
19. Five years is too long a planning horizon.

### *Contextualization*

1. I enjoy trying food from other countries.
2. I find people from other countries to be boring.
3. I enjoy working on world community projects.
4. I get anxious around people from other cultures.
5. I mostly watch and/or read the local news.
6. Most of my social affiliations are local.
7. I am at my best when I travel to worlds that I do not understand.
8. I get very curious when I meet somebody from another country.
9. I enjoy reading foreign books or watching foreign movies.
10. I find the idea of working with a person from another culture unappealing.
11. When I meet someone from another culture, I get very nervous.
12. Traveling in lands where I can't read the street names gives me anxiety.
13. Most of my professional affiliations are international.
14. I get irritated when we don't accomplish on time what we set out to do.
15. I become impatient when people from other cultures seem to take a long time to do something.
16. I have a lot of empathy for people who struggle to speak my language.
17. I prefer to act in my local environment (community or organization).
18. When something unexpected happens, it is easier to change the process than the structure.
19. In trying to accomplish my objectives, I find that diverse, multicultural teams play a valuable role.
20. I have close friends from other cultural backgrounds.