Integration-responsiveness, local hires and subsidiary performance amidst turbulence: Insights from a survey of Chinese subsidiaries

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Abstract

We study MNE subsidiary performance in a turbulent, emerging economy, focusing on how locally hired managers and integration – responsiveness (I-R) influence performance outcomes. We augment I-R by considering how locally hired managers support or hinder global integration (GI) and local responsiveness (LR) in China. Analysis of data from 104 Chinese subsidiaries suggests higher proportions of locally hired managers do not support GI; GI is sufficient in its own right in dealing with turbulence, positively moderating the relationship between turbulence and performance. However, a higher proportion of locally hired managers does improve subsidiary performance amidst turbulence when accompanied by LR.

Keywords: Global integration; Local responsiveness; Local hires; Environmental turbulence; China; Subsidiary performance.

1. Introduction

The influence of environmental forces on organizations' survival and growth is widely acknowledged in international business (Doz & Prahalad, 1991; Ghoshal, 1987; Kawai & Strange, 2014; Luo, 2007; Meyer & Su, 2015; Venaik, Midgley, & Devinney, 2005). In recent years, Multinational Enterprise (MNE) strategies have been increasingly impacted by an accelerating rate of change in the external environment (Ben-Manahem, Kwee, Volberda, & Van Den Bosch, 2013). This is particularly so in emerging economies like China (Buckley, Clegg, Cross, Liu, Voss, & Zhang, 2007), regarded as promising but highly volatile and marked by rapid economic growth, immaturity of the economic structure, and frequent restructuring of industry composition (Buckley et al., 2007; Peng, 2003; Tian & Slocum, 2014; Zhou, Tse, & Li, 2006). While it is acknowledged that MNE strategy is often shaped by host country environmental turbulence (Ben-Manahem et al., 2013; Rosenzweig & Singh, 1991), there remains a gap in research on how this plays out in emerging economies.

In this study we investigate subsidiary performance amidst turbulence in an emerging economy – China. We argue that subsidiary performance is dependent on choices that the MNE takes when responding to environmental turbulence at the subsidiary level. Our investigation of these choices is inspired by two theoretical approaches. The first is the contingency theory (Hofer, 1975; Lawrence & Lorsch, 1967), which we use in the form of the integration-responsiveness (I-R) paradigm (Bartlett & Ghoshal, 1989, 1991; Ghoshal, 1987). This approach utilizes orthogonal dimensions of pressures for global integration (GI) and pressures for local responsiveness (LR) as an analytical framework for describing MNE strategies at both corporate and subsidiary levels. The I-R paradigm is the dominant framework used to study MNE strategy (Meyer & Estrin, 2014); it has been empirically tested and shown to be robust (Jarillo & Martíanez, 1990; Johnson, Arya, & Mirchandani, 2013; Kawai & Strange, 2014; Lin & Hsieh, 2010; Luo, 2001, 2002; Roth & Morrison, 1992; Taggart, 1998). Nevertheless, its application in an emerging economy context is less clear in the literature. With the exception of a few studies (e. g. Luo, 2001, 2002; Meyer & Estrin, 2014; Meyer & Su, 2015; Tian & Slocum, 2014), MNEs in developed economies have been the primary contexts

for research on the I-R paradigm (e.g. Birkinshaw & Morrison, 1995; Harzing, 2000; Kawai & Strange, 2014; Oh & Rugman, 2012; Roth & Morrison, 1990).

The second theoretical approach that we build upon in this research draws from Human Resource Management (HRM) in MNE subsidiaries, and in particular the choice between appointing expatriates or local hires to subsidiary management positions (Colakoglu & Jiang, 2013; Fang, Jiang, Makino, & Beamish, 2010; Gaur, Delios, & Singh, 2007; Harzing, 2001; Kobrin, 1988; Tan & Mahoney, 2006). Management staffing decisions are a crucial way for MNEs to implement or enact their GI/LR strategy in overseas subsidiaries and they have a strong potential to impact subsidiary performance (Colakoglu, Tarique, & Caligiuri, 2009). The choice of expatriates has been attributed to the need for knowledge transmission, control and integration of the subsidiary (Fang et al., 2010; Harzing, 2001) and stresses the importance of internal social capital they possess (Colakoglu & Caliguri, 2008; Tan & Mahoney, 2006). However, locally hired managers can also be an appropriate choice when there is a need for external social capital; local knowledge and expertise (Harzing, 2001; Kobrin, 1988) and relevant local communication skills with local employees and other constituencies (Sekiguchi, Babenroth, & Li, 2011).

Studies of the impact of staffing decisions on subsidiary performance have not been conclusive thus far (Colakoglu & Jiang, 2013). While some studies evidence positive (e.g. Gong, 2003) or negative (e.g. Gaur et al., 2007) relationship between assignment of expatriates and performance, other studies do not establish any valid relationship between these variables (e.g. Sekiguchi et al., 2011), suggesting that this relationship is influenced by contingency factors (Colakoglu et al., 2009; Colakoglu & Jiang, 2013).

To date, studies have not analyzed staffing decisions in conjunction with the strategic choices relating to GI and LR in the context of emerging economies. While it has been implicitly assumed that using expatriates is consistent with GI and using locally hired managers is consistent with LR (Hyun, Oh, & Paik, 2015; Tan & Mahoney, 2006), to date, no study has actually investigated these choices from the perspective of subsidiary performance amidst turbulence in an emerging economy. Given that scholars have argued the relationship between subsidiary staffing and performance should include both subsidiary context and subsidiary strategy (Colakoglu et al., 2009), we believe our study is timely.

Our study addresses the gap by examining jointly the impact of environmental turbulence (the context), GI and LR (strategy) and the appointment of local hires to top subsidiary management positions on subsidiary financial performance. More specifically, we study the moderating effect of GI and LR on the relationship between environmental turbulence and subsidiary performance (2-way interactions) and the moderating effects of GI/LR combined with the use of locally hired managers on the relationship between environmental turbulence and performance (3-way interactions). To date, no study has taken this approach. The empirical analysis is based on a unique sample of 104 subsidiaries of non-Chinese MNEs operating in China. Because of regional disparities in economic growth in China (Démurger, 2001; Du & Williams, 2017) and differences in the local competitive dynamics, we take the view that environmental turbulence is locally defined and should not be assumed to be constant across the country. In other words, the level of environmental turbulence for each subsidiary in China will vary according to the distinctive conditions in which the subsidiary operates. We show that when environmental turbulence is high, global integration of the subsidiary has a positive effect on performance, but that the appointment of locally hired managers undermines this relationship. On the other hand, although local responsiveness has some moderating effect on the relationship between turbulence and performance, its impact is enhanced when it is accompanied by an increasing proportion of locally hired managers into the subsidiary.

Our study contributes to the literature on I-R in MNEs as well as to the growing literature on MNE subsidiaries in emerging economies. We demonstrate *two different paths to performance* in subsidiaries in emerging economies that are faced by turbulent environments. The first is GI-centric and provides support to recent claims in the parenting advantage literature that headquarters involvement with their subsidiaries will help them deal with local challenges (Ambos & Mahnke, 2010; Nell & Ambos, 2013; Paik & Sohn, 2004). The second approach is LR-centric - where the subsidiary relies more on locally hired managers to enact an LR strategy in turbulent environments. Overall, we provide support for the contingency theory of the I-R paradigm in an emerging economy. We also provide a theoretical extension to the I-R paradigm in terms of how levels of local management staffing determine performance in turbulent settings. Our findings also have important implications for MNE managers as they formulate strategy in turbulent environments.

They suggest that subsidiary top management staffing decisions should be aligned with the strategic choice between GI and LR and that MNEs should carefully determine an optimal combination of expatriates and local hires in support of their strategy in turbulent emerging economies.

2. Theoretical background and hypotheses

2.1. Host country turbulence and subsidiary performance

The idea that the external environment has an impact on organizational performance is widespread in the strategy and international business literature (Ghoshal & Nohria, 1989; Ghoshal & Bartlett, 1998; Kobrin, 1991; Luo & Peng, 1999; Rosenzweig & Singh, 1991). When it comes to MNE subsidiaries, understanding environmental demands in host countries is essential to evaluating the kind of organizational capabilities and configuration subsidiaries need to build in order to perform (Ghoshal & Nohria, 1989, 1993). Research has shown how difficulties in the external environment in host countries will negatively impact subsidiary performance (Wu & Lin, 2010).

Highly relevant to our study is that scholars have asserted that *host country turbulence* will be at the forefront of the concerns that MNEs will have when seeking performance from their subsidiaries (Kim, Lu & Rhee, 2012; Kirca, 2011; Williams, Vashchilko & Martinez, 2017; Wu & Lin, 2010). Turbulence is defined by how easily environmental change occurs and how predictable any change in the firm's environment will be (Ansoff & Sullivan, 1993; Boyne & Meier, 2009). Furthermore, turbulence can be assessed in terms of different aspects of the environment (Kim et al., 2012), including changes related to actions of competitors, customers and suppliers, as well as changes in the technological and regulatory environment (Kuivalainen, Sundqvist, Puumalainen, & Cadogan, 2004).

Emerging economies like China have experienced rapid, complex change in their political, economic and institutional structures (Hoskisson, Eden, Lau, & Wright, 2000; Peng, 2003). This has drastically changed the structure of industries; for example, there has been an increase in private enterprises and private business groups to increase competition within China (Li, Poppo, & Zhou, 2008). These changes

have also occurred non-uniformly across the country; there have been large regional disparities with Tier-1 developments out-pacing Tier-2 and Tier-3 economic developments, and even big differences within Tier-1 cities (Démurger, 2001; Du & Williams, 2017). Unprecedented and rapid changes in these localized market conditions make it difficult for subsidiary managers to predict the future and make effective strategic decisions (Li, Zhou, & Shao, 2009). Indeed, under conditions of turbulence, it is uncertain how much change to expect and how much business risk may arise (Westhead, Wright, & Ucbasaran, 2004). Collectively, this literature suggests the level of environmental turbulence for each subsidiary in China will differ based on the unique conditions in which they operate.

Research suggests that perceptions of environmental turbulence affect managerial decision-making and strategies (Zahra & Bogner, 1999; Zahra, Neubaum, & Huse, 1997). When dealing with a complex and rapidly-changing environment, it can be very difficult to determine where and how to deploy resources (Ghoshal, 1987). Social cognition theory also suggests that managers will have limited capacity in information processing, making it hard for them to revise their mental models fast enough to match the changing environment (Hodgkinson, 1997). Furthermore, in a turbulent, ever-changing environment there are limits to the potential to build a sustainable competitive advantage on a single product or service offering (Eisenhardt & Martin, 2000; Nadkarni & Narayanan, 2007). Turbulent environments also severely restrict feedback-based learning. Strategic actions quickly become outdated and no longer applicable, impacting the usefulness of learning from past experience (Bogner & Barr, 2000).

The impact of host country turbulence on subsidiary performance has been investigated in a series of empirical studies. Zahra et al. (1997) suggested that when turbulence intensifies, there may be higher costs for foreign operations (more marketing, advertising, and customer loyalty development), which may reduce profits (Zahra & Garvis, 2000). Luo (2003) argued that high environmental turbulence can reduce the effect of a resource in improving performance and increase the risks associated with resource commitment. Similarly, Wu and Lin (2010) asserted that experiencing turbulence in the foreign host country makes it difficult for subsidiary managers to collect, interpret, and organize the information essential to operate a foreign subsidiary. Overall, this body of work leads us to our baseline hypothesis:

Baseline hypothesis: Ceteris paribus, the greater the level of turbulence facing a subsidiary, the lower the level of subsidiary performance.

2.2. Environmental turbulence, subsidiary performance and the I-R paradigm

The integration-responsiveness (I-R) paradigm has been influential in our understanding of how MNEs are able to address the negative impact of host country turbulence on subsidiary performance. Subsidiaries of MNEs are both part of the MNE and at the same time actors in a specific local environment (Meyer, Mudambi, & Narula, 2011). They contribute to the global strategy of MNEs by creating and exploiting opportunities in their local context (Ambos, Andersson, & Birkinshaw, 2010; Cantwell, & Mudambi, 2005). Although subsidiaries can pursue strategies like independent firms, in so doing, they depend on the MNE for resources and guidance (Ciabuschi, Dellestrand, & Martin, 2011; Meyer & Estrin, 2014). Indeed, MNEs and their subsidiaries face dual pressures of integration and responsiveness from the environments in which they operate (Doz & Prahalad, 1991; Lin & Hsieh, 2010). According to the I-R paradigm, these dual pressures will compel the MNE to pursue global integration (GI) and/or local responsiveness (LR) accordingly in search of performance (Prahalad & Doz, 1987).

GI pressures encourage MNEs to take an approach that involves pursuing maximum efficiency through tight coordination of business units. In particular, firms are prompted to integrate in order to gain efficiencies to handle the need for cost reduction, maintaining global consistency, dealing with access to raw materials and energy, handling competition worldwide, and developing global technology platforms (Prahalad & Doz, 1987). Global integration as a strategic response to such pressures has been referred to as "rationalization that may entail standardization of product, centralization of technological development, or the vertical or horizontal integration of manufacturing" (Kobrin, 1991: 18).

At the same time, firms face a countervailing set of pressures encouraging them to adapt their activities to the unique circumstances of individual countries in which they operate (Venaik et al., 2005). LR pressures that need to be handled include variation in customer needs and distribution channels, availability of substitutes and ever-changing demands of the market and host governments that require flexibility and

adaptation (Meyer & Peng, 2005; Meyer & Su, 2015; Prahalad & Doz, 1987; Xu & Meyer, 2013). Local responsiveness as a way of dealing with these pressures has been defined in terms of "a subsidiary's agility in understanding local competitive dynamics, detecting changes in local regulations and customer trends, and its ability to quickly respond to such changes" (Colakoglu & Jiang, 2013: 702).

The received conceptualization of the MNE assumes that headquarters orchestrates the MNE as a differentiated system in which various subsidiaries are assigned different roles and controlled in different ways depending on their level of resources and capabilities and the extent of dynamism in the external environment (Forsgren, 2008; Ghoshal & Nohria, 1989; Nohria & Ghoshal, 1997). GI is pursued to develop and sustain a competitive advantage through efficiency, standardization (Prahalad & Doz, 1987) and integrated learning (Meyer & Su, 2015). Knowledge sharing and the organization of shared services are globally integrated activities that headquarters can establish as part of its 'parenting advantage' (Ambos & Mahnke, 2010; Goold & Campbell, 2002; Goold, Campbell, & Alexander, 1998; Nell & Ambos, 2013).

As the environment of the subsidiary becomes more turbulent, the subsidiary is exposed to increasing uncertainty and vulnerability. According to the GI line of thinking, in this situation, local operations require resources and consistent guidance from MNE headquarters. Resources are accessed from the parent, such as learning and experience from other markets in how to deal with environmental challenges. Local decisions are shaped by the parent leveraging its knowledge to offset the negative effects of host country turbulence on subsidiary performance. This acts to reduce uncertainty for the subsidiary and lessen its vulnerability arising as a result of unpredictable turbulence in its environment, eventually resulting in positive performance outcomes. In sum, when the MNE pursues GI for a subsidiary it relies on internal strengths across the MNE to respond to environmental turbulence facing the focal subsidiary and ensure positive performance. Hence, from a GI perspective:

> Hypothesis 1: The relation between environmental turbulence and subsidiary performance will be moderated by global integration such that under high levels of global integration (as opposed to low), the relation will be positive (as opposed to negative).

The I-R framework stipulates that MNEs can choose to emphasize one dimension over the other or respond to both GI and LR pressure simultaneously (Prahalad & Doz, 1987; Luo, 2001). An MNE's ability to handle GI and LR has become increasingly critical for growth and survival (Lin & Hsieh, 2010; Luo, 2002; Tian & Slocum, 2014; Venaik et al., 2005). Scholars have argued that, in emerging economies, the trade-off between integration and responsiveness is particularly salient because of the distinctive features of the business environment in these markets, which can inhibit the smooth transfer of business practices (Meyer & Su, 2015).

Environmental turbulence facing the subsidiary increases pressure for the subsidiary to be set-up as a locally responsive unit (Kawai & Strange, 2014; Luo, 2001). Firms can change the way they search for new knowledge (Cyert & March, 1963) and for exploring and exploiting opportunities (March, 1991), suggesting that a locally responsive approach will help the subsidiary deal with turbulence. Subsidiaries of MNEs facing greater turbulence in their environment will perform if they are granted the decision rights and autonomy to be able to explore and exploit (Meyer & Su, 2015). Local responsiveness is a means for achieving this (Kawai & Strange, 2014; Meyer & Peng, 2005; Tian & Slocum, 2014).

By being locally responsive, subsidiaries adapt their activities to the unique circumstances of the situation in which they operate and are able to respond to diverse consumer tastes, and varying rules in government regulation and business cultures. A subsidiary that is able to demonstrate a dynamic learning capability and adapt well is able to develop sustainable advantages, quickly generating new resources to deal with changing local demands. In turn, this creates more competitive opportunities for the MNE and offsets the negative effects of environmental turbulence. Consequently, we suggest that when a subsidiary pursues LR, it interacts with the local context and conditions, it learns about its inherent dynamics, and finds solutions to those conditions such that any negative effects of environmental turbulence are attenuated and the subsidiary is able to generate positive performance outcomes. Hence, from an LR perspective:

> Hypothesis 2: The relation between environmental turbulence and subsidiary performance will be moderated by local responsiveness such that under high levels of local responsiveness (as opposed to low), the relation will be positive (as opposed to negative).

2.3. Relevance of local hires in helping GI and LR deal with turbulence

When implementing GI or LR, an important question that arises is that of what type of managers will implement the GI or LR in the subsidiary. In particular, what role do expatriates vs. locally hired managers play in helping or hindering GI and LR deal with turbulence at the subsidiary level?

Expatriation traditionally has been thought to be useful for MNEs to serve implementation of GI. Expatriates are employees "who are sent on international assignments to host country subsidiaries" (Colakoglu & Jiang, 2013: 711) to perform a variety of missions, in which their managerial and technological know-how is put into use (Collings & Mellahi, 2009). The use of expatriates is attributed to the roles of knowledge transfer, coordination and control and the development of a shared vision that expatriates play (Colakoglu & Jiang, 2013; Dowling, Festing, & Engle, 2008; Fang et al., 2010; Harzing, 2001). Because expatriates have been trained by the MNE and have socialized within the firm for a significant period of time prior to being assigned to management positions at subsidiaries (Fang et al., 2010; Gong, 2003; Harzing, 2001; Tan & Mahoney, 2006), they are considered as knowledge carriers who bring their personal experience and knowledge (Delios & Bjorkman, 2000; Gong, 2003; Gupta & Govindarajan, 2000) and act as boundary spanners across knowledge communities within an MNE (Edström & Galbraith, 1977; Fang et al., 2010). Given its tacit character, knowledge is rooted in an individual's experience and can consequently be best transferred through personal interaction between those who have the knowledge of the company (i.e. expatriates) and the local staff in subsidiaries (Brock, Shenkar, Shogam, & Sisvocik, 2014; Kobrin, 1988; Kühlmann & Hutchings, 2010).

Expatriates have internalized the values of the MNE (Gong, 2003; Gregersen & Black, 1996) and they are familiar with organizational practices and people in key positions within the MNE (Gupta & Govidarajan, 2000). Moreover, expatriates are believed to have accumulated intra-firm social capital (Tan & Mahoney, 2006) which facilitates communication between headquarters and subsidiaries (Harvey,

Speier, & Novicevic, 2001) thus enhancing social coordination mechanisms and information networking within the MNE (Edström & Galbraith, 1977; Fang et al., 2010; Hocking, Brown, & Harzing, 2004). Expatriates are often considered by the headquarters as being more committed to the firm and to implementing its strategy compared to locally hired managers (Doz & Prahalad, 1986; Kobrin, 1988; Tan & Mahoney, 2006) thus reducing agency problems. Headquarters might therefore use them to effectuate personal and cultural control, which serves to replace or complement headquarters direct supervision of subsidiaries (Harzing, 2001). When a significant number of expatriates is present in a subsidiary, this facilitates the institutionalization of practices and the development of a shared vision between the parent and the subsidiary (Colakoglu & Jiang, 2013), which is one of the critical governing mechanisms in MNEs and acts in favor of global integration (Kostova & Roth, 2002).

On the other hand, using managers employed locally from the host country also has several advantages. Locally hired managers are considered to have local knowledge, defined as "contextual knowledge- the knowledge that develops in interaction among people with the programs, operations or objects (physical artefacts) that are specific to a local context" (Yanow, 2004: S11-S12). Local hires are familiar with the local context and have a better understanding of it (Kühlmann & Hutchings, 2010); they share the same language and culture with local stakeholders (Barner-Rasmussen, Ehrnrooth, Koveshinikov, & Mäkelä, 2014; Fang et al., 2010) and they have accumulated deep personal local knowledge by living in a particular country. As a part of a responsiveness approach, locally hired managers contribute to designing locally adapted solutions, in the spirit of autonomy awarded to the subsidiary (Reiche, 2007). Locally hired managers can therefore deal with local idiosyncrasies more efficiently (Harzing, 2001; Kobrin, 1988) and they can 'recontextualize' the corporate values or existing corporate practices, redefining their focus to make them suitable to their localities (Gertsen & Zølner, 2012; Hyun et al., 2015). Furthermore, local managers are embedded in local business networks; they have accumulated local social capital and can use it for the purpose of the MNE's business (Hutchings, 2005). They also help the MNE to gain legitimacy (Chan & Makino, 2007; Kostova & Roth, 2002), reducing its liability of foreignness (Forestenlehner & Mellahi, 2011), and building confidence and positive local perceptions of the MNE (Hyun et al., 2015).

We argue that too many locally hired managers used *in conjunction* with GI to address problems caused by environmental turbulence will be problematic. This combination will lead to a mismatch between the purpose of GI on the one hand (and the steps taken by headquarters to pursue GI) and the lack of understanding of how such mechanisms can be internalized and used by local managers on the other hand. In GI logic, the headquarters' priority would be to limit the effect of environmental turbulence by allowing MNE resources and experience to come to the aid of the subsidiary. The MNE would try to keep the subsidiary fully integrated within the MNE with strong inter-linkages across subsidiaries and affiliates. The MNE would encourage the subsidiary to draw on centrally-designed and developed product offerings that take account of global perspectives (Bartlett & Ghoshal, 1987; Meyer & Su, 2015; Tan & Mahoney, 2006). In such a purely GI-centric view, local culture and traditions take second place. Given that locally hired managers are less capable of - and less committed to - transferring organizational knowledge and practices from the headquarters to the subsidiary (Fang et al., 2010; Harzing, 2001), we question the efficacy of using a high proportion of them in helping to implement a GI strategy amidst turbulence. When there is a high proportion of locally hired managers, there is automatically a lower proportion of expatriates. A high proportion of locally hired managers entails lower opportunities for local employees to have direct contacts with expatriates and to receive the parent-firm knowledge and experience and develop shared vision. While locally hired managers may understand the causes of local turbulence, they will not be as appreciative of the global perspectives from headquarters and other subsidiaries as expatriate managers would be. Because of their relative inexperience operating within internal networks within the MNE, and their relative lack of knowledge of practices that have been tried and tested in other locations of the MNE, and because of the lack of commitment to implement these practices, high numbers of locally hired managers will challenge the viability of GI in situations where the subsidiary is facing local turbulence. Hence:

> Hypothesis 3: The relation between environmental turbulence and subsidiary performance will be moderated by global integration and local hires such that under high levels of global integration (as opposed to low) and low levels of local hires (as opposed to high), the relation will be positive (as opposed to negative).

Researchers have noted how local hires will contribute to the realization of a locally responsive strategy (Hutchings, 2005; Kühlmann & Hutchings, 2010; Reiche, 2007; Tan & Mahoney, 2006). A higher ratio of local hires will be more beneficial for an LR strategy than expatriates because such managers are more able to shed light on specific local offering decisions, on how to preempt and counter local indigenous competitors, respect local traditions, or communicate with local customers as needs change. Given that LR involves formulating strategy based on local market conditions and upgrading products and services to meet local market needs accordingly, we argue that, with a high number of local hires, the viability of an LR strategy is enhanced. A higher proportion of locally hired managers will mean higher levels of language and cultural skills in key roles internal to the subsidiary, as well as in intermediary (or 'go-between') roles between the subsidiary and its stakeholders (Barner-Rasmussen et al., 2014). This will act to decrease any tensions or problems arising as a result of the subsidiary's ongoing operations within a turbulent external environment. This is particularly crucial in emerging economies in which there is a long tradition of doing business based on interpersonal relationships. Because individuals are embedded in ongoing systems of social relations, interactions with others shape behavior, mindset and decision-making patterns (Granovetter, 1995). Local managerial ties are a source of relational capital which helps grasp culturally specific business practices, mitigate the environmental pressure and stabilize the business (Luo, 2002). When local hires occupy top management positions in subsidiaries in order to implement LR, not only are they equipped with the locally-relevant skills and relational capital, they also are empowered to take local decisions. Consequently, it is the locally hired managers that would have the necessary competencies to implement LR and consequently attenuate the effect of environmental turbulence on subsidiary performance. Hence:

> Hypothesis 4: The relation between environmental turbulence and subsidiary performance will be moderated by local responsiveness and local hires such that under high levels of local responsiveness (as opposed to low) and high levels of local hires (as opposed to low), the relation will be positive (as opposed to negative).

3. Methodology

3.1. Sample and data collection

We tested these hypotheses using data from a questionnaire mail survey of senior managers in MNE subsidiaries in China in 2011. There are a number of reasons as to why China was deemed an ideal setting to study the impact of turbulence on subsidiary performance and the interaction effects with GI, LR and local hires. First, China is the world's second-largest economy and the largest emerging economy. It has become one of the top countries for foreign direct investment (FDI) from foreign MNEs (Reuters, 2013). Second, China has been regarded as turbulent as it runs the course of economic liberalization and transformation. These massive changes pose severe challenges to MNE subsidiaries operating in China. Finally, China is a relevant example of an emerging economy that can be informative for other emerging economies, with its rapid pace of economic development and adoption of policies that favor a free market system (Li et al., 2008; Peng, 2003).

We first conducted a pilot test, in order to ensure that our questionnaire was well understood by senior managers in subsidiaries in China. Because the design of our questions was informed by the academic literature in English, we developed our questionnaire in English. A native Chinese speaker with a high proficiency level in English then translated the questionnaire into Chinese. To ensure consistency of the procedure, this questionnaire was back-translated into English by a bilingual (English-Chinese) researcher. The back-translation procedure aimed at ensuring not only the translation, but also the conceptual equivalence – the fact that the concepts have the same role in the Chinese culture (Cascio, 2012). We then compared the initial version of the questionnaire in English and the one that resulted in back-translation. This comparison showed slight differences in wording, but these did not refer to any of the measured constructs and did not alter the meaning of the questions. We then discussed the differences and agreed upon the wording for the questionnaire that was to be sent out to respondents. The preliminary versions of the questionnaires in both English and Chinese were sent to twenty senior managers in MNE subsidiaries in Shanghai. We asked respondents also to provide feedback about the design and wording of the questionnaire. To reduce the likelihood of social desirability bias (Podsakoff & Organ, 1986), we informed

all respondents in advance of the academic purpose of the project, that their responses would remain confidential and would be used only in aggregated analysis. Face-to-face interviews were conducted with subsidiary executives in Shanghai. On the basis of this pilot study, we revised the questionnaire to enhance clarity. To ensure content validity (Cascio, 2012), the revised items were again translated into English and translated back into Chinese, following the same procedure as the one that we applied in the design of the preliminary version of the questionnaire.

We selected 400 foreign subsidiaries from a list of clients or members provided by Shanghai Foreign Service Co., Ltd (SFSC), China International Intellectech Corporation (CIIC), and the European Union Chamber of Commerce in China. SFSC and CIIC are leading human resources service providers in China with clients that were MNE subsidiaries including enterprises listed in the *Fortune 500*. Both English and Chinese versions of the questionnaire were sent to the senior managers of the 400 foreign subsidiaries during the year 2011. These managers' job positions are immediately below and reporting directly to the subsidiary CEO; they can therefore be considered as key informants in the matters of GI, LR and subsidiary staffing. The geographical focus was on investments in the Yangtze River Delta (Shanghai, Jiangsu and Zhejiang). This was chosen because it represented the fastest growing and the most prosperous region during China's transition to a market economy, and regions with potentially high variance in terms of environmental turbulence.

A cover letter in both English and Chinese was used to explain the purpose of the survey and respondents were informed of the voluntary nature of the survey and confidentiality of their responses. We received 152 responses. After deleting responses with missing data, we had usable responses from 104 MNE subsidiaries, an effective response rate of 26 percent. We obtained a diverse range of industries in the sample including petroleum, consumer goods, IT, industrial machinery, consulting, pharmaceuticals and healthcare. We tested for sample selection bias using a t-test by splitting the total sample into two groups based on the two different sources of data. A comparison by firm size, age, ownership mode, and industry revealed no significant differences.

3.2. Measurements

Scales for performance, turbulence, global integration, local responsiveness were constructed. Each construct was measured as the average of responses to the questions on a five-point Likert scale. For all scales, Cronbach's α was above the minimum recommended level (Nunnally, 1978). We assessed the structure of each scale using a principal component factor analysis. In each case, only one factor emerged with an eigenvalue > 1. As the four main hypotheses concern moderating effects, the probability that they are affected by common method variance is low. Nevertheless, in order to make sure that common method bias is indeed not a concern in our study we deployed two techniques. Firstly, in the design of the questionnaire, we positioned the dependent variable (financial performance) after the independent variables, and also used more objective measures such as subsidiary size, age, home region and industry as control variables, reducing the dependency on subjective measures. These steps reduce the effects of consistency artifacts and help with social desirability biases (Mudambi, Pedersen & Andersson, 2014). Secondly, we ran Harman's single-factor test (an un-rotated factor analysis on all questionnaire items used in the model) to check for common method bias (Podsakoff & Organ, 1986). This revealed variance explained by the first factor at 28% - less than half of the total variance**.** Common method bias is unlikely to be a threat to the findings of this study. Items loaded on their respective scales correctly and there were no cross-loadings that would make item to construct associations ambiguous.

Performance. Our performance measure was adapted from Birkinshaw, Hulland, & Morrison (1995), Venaik et al. (2005) and Lin & Hsieh (2010). The respondents were asked to rate firm performance relative to competitors over the last three years on: (1) sales growth rate; (2) return on investment; (3) profitability. Cronbach's α for this scale was 0.90. Subjective measures were used for two reasons. First, the literature shows that subjective scales are widely used and that there are high correlations between subjective and objective firm performance measures (Birkinshaw et al., 1995; Song, Droge, Hanvanich, & Calantone, 2005; Lazarova, Peretz, & Fried, 2017). Second, objective financial data at subsidiary level are currently not publicly available in China.

Environmental turbulence. We measured environmental turbulence in the host country using items adapted from Luo and Peng (1999) and Zahra (1993). The respondents were asked to rate changeability of the environment on these items including: (1) competitors: our competitors in the local market frequently modify their strategies; (2) regulation: local policies tend to change frequently in unpredictable directions; (3) consumers: local consumer preference tends to change fast and frequently; (4) operations: the operating risks in Chinese market are relatively high. Cronbach's α for this scale was 0.64.

Global integration. This measure is adapted from previous theoretical and empirical works (Doz & Prahalad, 1991; Luo, 2001). The respondents were asked to rate their degree of agreement on the following questions: (1) decisions on manufacturing in our company have always taken account of global market perspectives; (2) product quality standard and service process are designed by the parent company; (3) products and services of our company are primarily based on global consumer needs; (4) our company completely adopts global-based technical development platforms and management systems; (5) our company is highly dependent on inter-linkages with the parent companies and affiliates; (6) R&D outcomes of our company are shared across all subsidiaries. These items were measured based on a five-point Likert scale. Cronbach's α for this scale was 0.87.

Local responsiveness. Local responsiveness was measured as the average of responses to six questions which were taken from previous theoretical and empirical works (Doz & Prahalad, 1991; Luo, 2001). Respondents were asked to rate their degree of agreement on the following items: (1) our company responds rapidly to local customers and their needs; (2) our company always formulates strategy based on the local market; (3) our company has a high local sales volume of products and services; (4) our company tends to develop or upgrade products with intention to meet local market needs; (5) we respect local culture and traditions and take them into account in our products and services; (6) our company has a high level of differentiation in marketing and sales based on the local market. These items were measured based on a five-point Likert scale. Cronbach's α for this scale was 0.88.

Local hires. Here we used a single item which captured the ratio of locally hired employees among the top management team in the subsidiary, i.e. reporting directly to the CEO.

Control variables. We included seven control variables that might affect the hypothesized relationships. We included subsidiary age and size (natural logs) as control variables because they have implications for the extent to which an MNE has committed to a host country, as well as the experience of the MNE in a given location. We also controlled for industry (nine categories), home region of the MNE (three categories: Europe, Asia, North America), the establishment phase of the subsidiary (five categories: entering stage-less than two years, growth stage, expansion stage, stabilization stage, planning for exit), the perceived importance of the host country, and the use of knowledge management systems to process knowledge about the host country environment. The questionnaire items used in the survey are shown in the Appendix.

4. Results

Table 1 presents the means, standard deviations, and inter-correlations for all variables used in the study. In terms of control variables there is a positive and significant correlation between subsidiary size and performance ($r=0.25$, $p<0.05$). As expected, subsidiary size and age are positively correlated ($r=0.33$, $p<0.001$). Older and larger subsidiaries in our sample are performing better in China. Consistent with the emphasis on worldwide learning within the I-R paradigm, we also see positive and significant correlations between the use of knowledge management systems and GI and LR ($r=0.43$, $p<0.001$). In terms of the main variables of interest, we note that there is no significant correlation between turbulence and performance. However, there is a positive and significant bivariate correlation between performance and global integration ($r=0.25$, $p<0.05$) and between performance and local responsiveness ($r=0.51$, $p<0.001$ and $r=0.53$, $p<0.001$ respectively). We also note that larger subsidiaries tend to adopt a local responsiveness strategy ($r=0.31$, $p<0.001$).

Table 1 goes about here

The analysis of moderating effects for GI is shown in Table 2 and for LR in Table 3. Separate models were used to test the effects of control and independent variables (direct effects models), 2-way and 3-way interactions. For the direct effects we see, as expected, the sign for turbulence is negative, but the direct effect of turbulence on performance is not significant. This suggests that the level of turbulence does not impact performance alone and the baseline hypothesis finds no support. However, turbulence matters in conjunction with strategic choices of GI, LR and local hires. This is in line with research arguing that combinations of variables, rather than a single variable lead to better subsidiary performance (Venaik et al., 2005). We also note that LR has a positive and significant effect on performance, but not GI. We see that the local hires variable does not have a direct effect on performance. In 2-way interactions (models 2 in Tables 2 and 3), we see that GI positively moderates the impact of turbulence on performance (supporting H1). Similarly, LR is seen to positively moderate the impact of turbulence on performance in model 3 in Table 3, providing some support for H2. In 3-way interactions (models 3 in Tables 2 and 3), we see that the combination of turbulence, GI and local hires has a negative and significant impact on performance (supporting H3) while the combination of turbulence, LR and local hires has a positive and significant impact on performance (supporting H4).

As an additional check, we test for the relevance of turbulence as an independent variable and consequently of studying the moderation effects between GI/LR and subsidiary staffing on the relationship between turbulence and performance by removing turbulence from our estimations (last column in Tables 2 and 3). As the findings clearly show, turbulence plays a crucial role in our model, despite the fact that we do not find support for our baseline hypothesis. This finding is in line with prior work by Venaik et al. (2005) who show that environmental conditions play a central role in the relationship between organizational choices and performance.

Table 2 goes about here

Table 3 goes about here

5. Discussion and Conclusion

Our conceptual framework and empirical test add to the I-R literature by considering how the interaction of locally hired managers with GI and LR helps the MNE deal with turbulence in an emerging host country. We respond to recent calls to link the I-R framework to contemporary circumstances (Meyer & Estrin, 2014; Meyer & Su, 2015; Rugman, Verbeke, & Yuan, 2011), broadening its application to emerging economies characterized by a high rate of environmental turbulence and transforming institutions (Buckley et al., 2007; Meyer & Estrin, 2014; Meyer & Su, 2015). Our hypotheses relate to strategic choices that have the potential to allow the MNE to deal with turbulence and uncertainty in such countries. More broadly, our research also answers calls made by scholars to analyze the impact of I-R decisions on outcomes (Haugland, 2010; Meyer & Su, 2015; Qu & Zhang, 2015). Financial performance of a subsidiary is a particularly relevant outcome, both from the perspective of the parent firm and from the perspective of the subsidiary.

Our study provides new evidence supporting recent claims in the parenting advantage literature that headquarters' roles have become more involved and hands on, especially in turbulent environments (Ambos & Mahnke, 2010; Nell & Ambos, 2013). This literature argues headquarters is able to provide guidance and advice to subsidiaries in handling challenging and changing environments around the world. MNEs with globally integrated subsidiaries have been shown to significantly benefit from reverse knowledge flows that influence the MNE's ability to integrate, combine and create new knowledge (Ambos, Ambos, & Schlegelmilch, 2006). The line of thinking here is that by tightly controlling and integrating the subsidiary, the headquarters is able to bring the MNE's knowledge and capabilities to bear to deal with turbulence within an emerging host country. Additionally, the results also show the importance of allowing subsidiaries in an emerging economy to have the freedom to respond to local conditions in ways that are most appropriate to the situation on the ground. As indicated by the 2-way interaction plots in Figures 1 and 2, where there are high levels of GI (Figure 1) and LR (Figure 2), the relation between turbulence and performance becomes positive. This finding contributes to our understanding of the

beneficial effects of GI and LR in situations where remote subsidiaries in emerging economies are confronted with rapidly changing and unpredictable conditions in their local environment.

Figures 1 and 2 go about here

Moreover, our study extends these arguments by including the role of locally hired managers in the analysis. Figures 3 and 4 show 3-way interactions between variables of interest. When we consider locally hired managers and GI, we see a potent effect for minimizing the proportion of locally hired managers (Figure 3). Conversely, when we consider locally hired managers and LR, we see the best result in the presence of high turbulence when local responsiveness is used with a high proportion of local hires (Figure 4). Figure 4 also shows the potentially disastrous combination of trying to deploy local responsiveness without using local hires in the presence of environmental turbulence.

Figures 3 and 4 go about here

The ability to tightly monitor subsidiaries in emerging economies helps the MNE deal with local challenges in a timely and efficient manner. Headquarters is able to provide resources as necessary when subsidiaries experience difficulties, or to provide access to global networks to learn from both other firms with experiences in emerging economies, and their other subsidiaries in emerging economies. While this is broadly in line with earlier portrayal of the MNE as an international differentiated network (Prahalad & Doz, 1987), we provide a further advancement to this line of reasoning by shedding light on the role of local hires in dealing with turbulent environments during the actual implementation of I-R (Dowling et al., 2008; Harvey et al., 2001; Harzing, 2001; Hyun et al., 2015; Tan & Mahoney, 2006). Our results suggest appointing local hires in turbulent environments in an emerging economy is problematic, creating a tension between the transfer of knowledge and management practices as part of GI and the inadequate implementation of these practices at the local level by locally hired managers.

Our results show that LR can lead to positive performance in turbulent environments when supported by a high share of locally hired managers. This extends the notion in extant I-R research that foreign

companies must be locally responsive to address each country's differences (Kawai & Strange, 2014; Luo, 2001; Meyer & Peng, 2005), including in the case of China (Tian & Slocum, 2014), suggesting that it is desirable to appoint a high proportion of locally hired managers to implement the responsiveness strategy. Extant research examining the choice between GI and LR, particularly when taking into account the turbulence of the environment (Kawai & Strange, 2014; Meyer & Peng, 2005; Tian and Slocum, 2014) has not explicitly questioned the proportion of local versus expatriate managers.

The key to performance could actually reside in the insight that LR will only be successful if combined with a higher share of locally hired managers. Local hires possess appropriate local market knowledge (Fang et al., 2010; Hyun et al., 2015; Selmer, 2003), which is particularly salient in culturally different environments (Hutchings, 2005) and emerging economies (Luo, 2002), where business practices are strongly influenced by - and intertwined with - interpersonal relationships. Local managers are embedded in local networks and have accumulated local social capital, which allows them to successfully implement a locally responsive strategy, mitigating the negative effects of environmental turbulence and reducing subsidiary vulnerability. In this sense, our findings support the literature on subsidiary managers as boundary spanners (Barner-Rasmussen et al., 2014) between the subsidiary and its local environment.

An important issue that emerges from our analysis relates to the appropriateness and feasibility of a transnational strategy (i.e. a combination of high GI and LR) within turbulent environments in emerging economies. Our results suggest GI necessitates avoiding appointing too many local managers to top management subsidiary positions, while LR is efficient only in conjunction with appointing such managers. There is a paradoxical situation here for MNEs pursuing a pure transnational strategy. Our findings raise important questions in this respect: Can such a strategy actually be pursued in a turbulent environment in an emerging economy and if so, how is it supported 'on the ground' in terms of staffing decisions? Is it the case that MNEs that claim to be pursuing a transnational strategy do not grant the same importance to both GI and LR and rather tend towards more GI or towards more LR in turbulent environments? In this case, how is the dominant organizational system supported by appropriate local staffing decisions? We call for more research in this respect in order to advance understanding not only of the organizational choices related to

the design of transnational strategies in turbulent environments but also of the ways they are put into work, in particular with respect to the staffing decisions - appointing managers that carry them out, support them, and make them legitimate.

Our findings provide important contributions to the literature on MNE strategy in emerging economies. We show how contingency theory as utilized in the I-R paradigm is challenged when applied in an emerging economy context such as China. Compared with their counterparts in developed economies, MNEs operating in emerging economies face a different set of challenges relating to environmental turbulence (Meyer & Su, 2015; Tian & Slocum, 2014) because the market-supporting institutions such as the legal system and strategic factor markets are less developed (Gao, Murray, Kotabe, & Lu, 2010; Hoskisson et al., 2000). Our findings show that under certain conditions both GI and LR can lead to positive outcomes and that there is no single, unique pathway to dealing with turbulent environments. Indeed, we highlight *two different paths to performance* in turbulent emerging economies. Our results differ from and challenge the findings of several previous studies including those conducted in recent years, which point to either GI (e.g. Nell & Ambos, 2013) or to LR (e.g. Meyer & Peng, 2005; Kawai & Strange, 2014; Tian & Slocum, 2014) as the appropriate choice for subsidiary strategy. Indeed, we show that GI is a powerful solution to environmental turbulence, but if accompanied by locally hired managers, LR can be too.

The results of this study have important implications for MNE managers. Taken together, they suggest that in order to support GI in dealing with turbulence, the number of locally hired managers should be reduced, while to support LR in dealing with turbulence, the number of local hires should be increased. Although this message might seem confusing, what it suggests is that subsidiaries have two alternative paths in managing turbulence as long as their managerial staffing strategy (i.e. ratio of local hires) is compatible with their overall strategy for the subsidiary in terms of GI and LR. Overall, the subsidiary top management staffing decisions in turbulent environments should be afforded crucial attention as they strongly impact the outcome of strategic decisions of GI or LR on subsidiary performance. With the rise of emerging economies, there is a greater need for competent and experienced global managers (Collings, Scullion, & Morley, 2007). This leads to competition between MNEs to attract such managers and

subsidiary management staffing decisions should be meticulously examined with reference to the strategic direction (GI/LR) followed.

There are several limitations to the current study and avenues for future research. Firstly, the sample size is modest, and although we collected 152 returns, 48 of these were not usable due to the missing values on our items of interest. However, some recent similar studies have comparable samples (the sample size of Lin & Hsieh (2010) is 62 and Kawai & Strange (2014) is 88 subsidiaries). Secondly, our data are single-source and cross-sectional, which can also be considered as limitations. Data obtained from multiple respondents within the same subsidiary, and data for a single or a small number of sectors, may generate richer insights. Thirdly, some of our measures (such as that of turbulence and strategic choices of GI and LR) are subjective, as they are based on managers' perceptions, which might be seen as a limit of our study, as argued by Tian and Slocum (2014). However, the phenomena under investigation are complex and require enhanced understanding of the micro-conditions in which subsidiaries operate and of the decisions they make. Because our inquiry does not focus on the general environmental conditions in a country but rather on the specific competitive settings in which subsidiaries make their decisions and compete with other firms and because managers make decisions primarily based on their perceptions of the environment we believe that these perception-based measures are appropriate for our study. Fourthly, we do not account for various forms of distance between home and host country. As indicated by Colakoglu and Caligiuri (2008), cultural distance could play a role in determining how the staffing decisions impact subsidiary performance.

As avenues for further research we suggest to continue this line of investigation by considering more subsidiaries from other industries. Also, we focused on MNE subsidiaries in China. While China is a suitable setting to conduct this type of study, a cross-country study involving several emerging economies around the world would ensure greater generalizability of our findings. Future research could also examine the behavioral processes within MNEs that enable subsidiaries to access and gain support from parent headquarters when dealing with turbulence. Investigating these internal mechanisms to ascertain whether MNE subsidiaries tend to use integrative mechanisms that are specific to subsidiaries in emerging

economies would be interesting. Finally, testing for the conditions under which GI is more important than LR (and vice-versa) could be examined in future work. We hope that these steps will help build our understanding of how MNE subsidiaries in emerging economies use local hires to underpin international strategy in order to remain competitive in a turbulent world.

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TABLES

Table 1. Descriptive Information and Bivariate Correlations

	1	2	3	4	5	6	7	8	9	10	11	12
Performance 1												
Turbulence 2	-0.05											
Global integration (GI) 3	0.25**	0.06										
Local responsiveness (LR) 4	0.51***	-0.04	0.09									
Local hires 5	-0.01	-0.07	0.02	-0.02								
Sub size (ln) 6	0.25*	-0.08	-0.10	0.31***	-0.11							
Sub age (ln) 7	0.18+	0.01	0.10	0.11	-0.07	0.33***						
Home region 8	-0.29**	0.03	-0.35***	-0.08	-0.05	-0.13	-0.03					
Industry 9	-0.04	-0.09	-0.16+	0.02	0.03	0.05	0.06	0.01				
Sub establishment phase 10	-0.19*	0.06	-0.09	0.03	0.03	0.26	0.06	0.04	-0.01			
Host country importance 11	0.20*	0.01	0.18*	0.20*	-0.12	0.19*	0.09	-0.05	0.04	-0.03		
KM system in use 12	0.49***	0.13	0.43***	0.51***	-0.03	0.21*	0.15+	-0.19*	0.03	-0.10	0.18*	
Mean	3.64	3.24	3.48	3.60	47.97	6.55	2.71	1.79	5.88	2.96	4.52	3.57
St. Dev.	0.82	0.63	0.91	0.74	32.95	1.80	0.83	0.96	2.42	0.91	0.68	1.05

***p<0.001; **p<0.01; *p<0.05; +p<0.1

Table 2. Analysis for moderating effect of Global Integration (n=104)

		Performance			
	Expectation	1	2	3	Turbulence removed
Sub size (ln)		0.05	0.02	0.03	0.05
		(0.05)	(0.05)	(0.05)	(0.05)
Sub age (ln)		0.03	0.08	0.04	0.03
		(0.09)	(0.09)	(0.08)	(0.09)
Home region		0.01	0.01	0.03	0.02
		(0.10)	(0.10)	(0.09)	(0.10)
Industry		-0.04	-0.05	-0.04	-0.04
		(0.03)	(0.03)	(0.03)	(0.03)
Sub est. phase		-0.14+	-0.16+	-0.15+	-0.14+
		(0.08)	(0.08)	(0.08)	(0.08)
Host importance		0.10	0.09	0.07	0.11
		(0.10)	(0.10)	(0.10)	(0.10)
KM system		0.24**	0.28**	0.28***	0.24**
		(0.09)	(0.09)	(0.09)	(0.09)
Turbulence (TURB)	-	-0.09	-0.10	-0.08	
		(0.11)	(0.11)	(0.10)	
Global int. (GI)	+	0.04	0.04	0.03	0.03
		(0.10)	(0.09)	(0.09)	(0.09)
Local resp. (LR)	+	0.28*	0.25*	0.29**	0.29*
		(0.12)	(0.11)	(0.11)	(0.12)
Local hires (LH)		0.001	0.001	0.002	0.001
		(0.002)	(0.002)	(0.002)	(0.002)
TURB x GI	H1 (+)		**0.19***	0.11	
			(0.08)	(0.08)	
TURB x LH				-0.21**	
				(0.07)	
GI x LH				-0.01	-0.02
				(0.07)	(0.07)
TURB x GI x LH	H3 (-)			**-0.16***	
				(0.08)	
Constant		1.69	1.89	1.65	1.39
F		5.57***	5.97***	6.48***	5.50
Adj. R2		0.33	0.37	0.44	0.32
R2 change			0.04	0.08	
Max. VIF		2.16	2.21	2.31	

***p<0.001; **p<0.01; *p<0.05; +p<0.1

Table 3. Analysis for moderating effect of Local Responsiveness (n=104)

		Performance			
	Expectation	1	2	3	Turbulence removed
Sub size (ln)		0.05	0.04	0.06	0.05
		(0.05)	(0.05)	(0.04)	(0.05)
Sub age (ln)		0.03	0.02	-0.01	0.04
		(0.09)	(0.09)	(0.09)	(0.09)
Home region		0.01	0.001	0.03	0.03
		(0.10)	(0.10)	(0.10)	(0.10)
Industry		-0.04	-0.04	-0.03	-0.04
		(0.03)	(0.03)	(0.03)	(0.03)
Sub est. phase		-0.14+	-0.13	-0.12	-0.15
		(0.08)	(0.08)	(0.08)	(0.08)
Host importance		0.10	0.09	0.03	0.10
		(0.10)	(0.10)	(0.10)	(0.10)
KM system		0.24**	0.25**	0.24**	0.25**
		(0.09)	(0.09)	(0.09)	(0.09)
Turbulence (TURB)	-	-0.09	-0.07	-0.03	
		(0.11)	(0.11)	(0.11)	
Global int. (GI)	+	0.04	0.03	0.04	0.03
		(0.10)	(0.10)	(0.09)	(0.09)
Local resp. (LR)	+	0.28*	0.26*	0.31**	0.30*
		(0.12)	(0.12)	(0.11)	(0.12)
Local hires (LH)		0.001	0.001	0.001	0.001
		(0.002)	(0.002)	(0.002)	(0.002)
TURB x LR	H2 (+)		0.10	**0.12+**	
			(0.07)	**(0.07)**	
TURB x LH				-0.16*	
				(0.07)	
LR x LH				0.001	0.04
				(0.08)	(0.09)
TURB x LR x LH	H4 (+)			**0.19***	
				(0.08)	
Constant		1.70	1.84	1.59	1.33
F		5.57	5.31	5.86	5.52
Adj. R2		0.33	0.33	0.41	0.32
R2 change			0.01	0.09	
Max. VIF		2.16	2.16	2.24	

***p<0.001; **p<0.01; *p<0.05; +p<0.1

Figure 1. Effect of GI on the relationship between turbulence and financial performance (from Table 2, model 2)

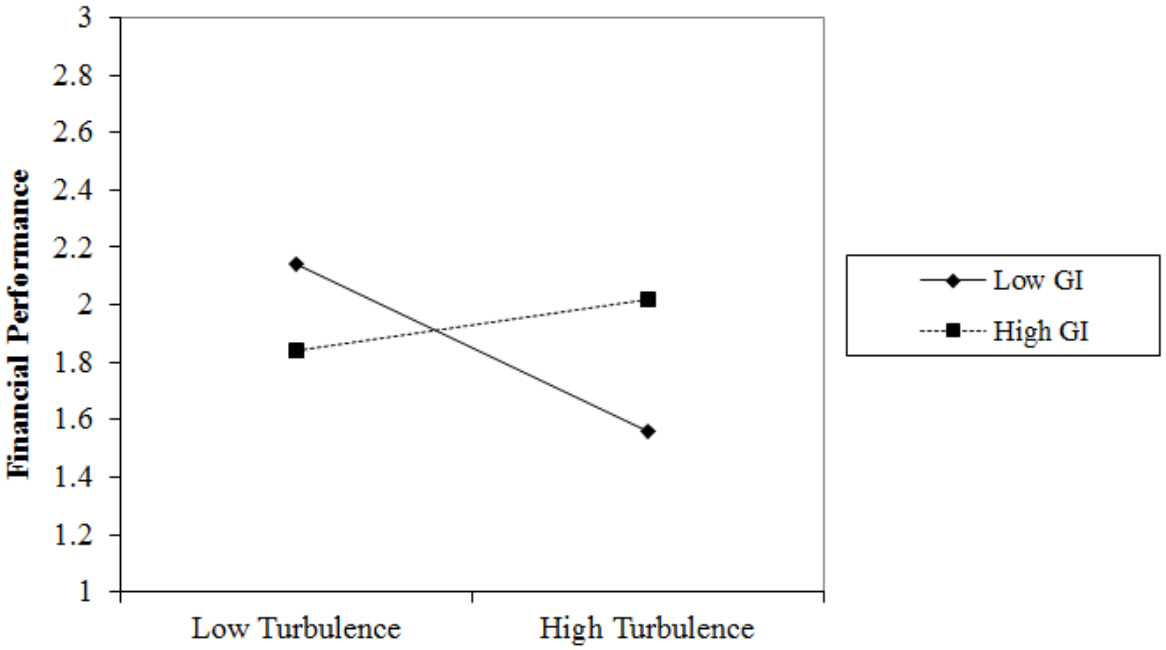


Figure 2. Effect of LR on the relationship between turbulence and financial performance (from Table 3, model 3)

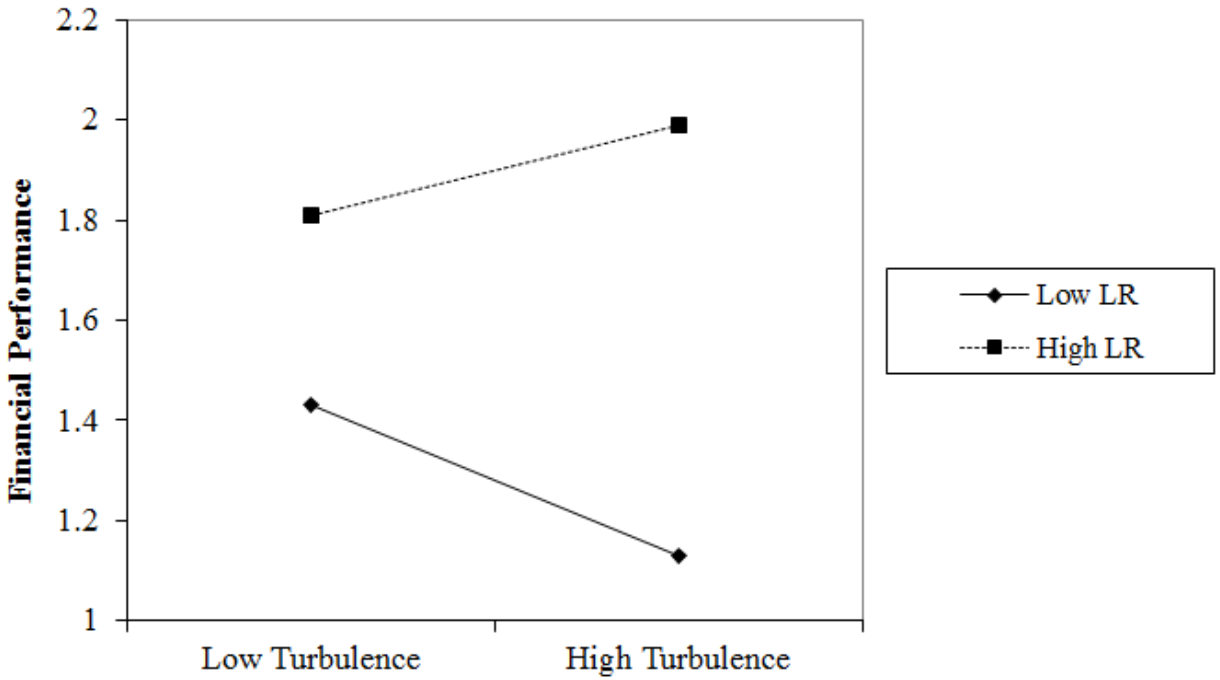


Figure 3. Effects of GI and local hires on the relationship between turbulence and financial performance

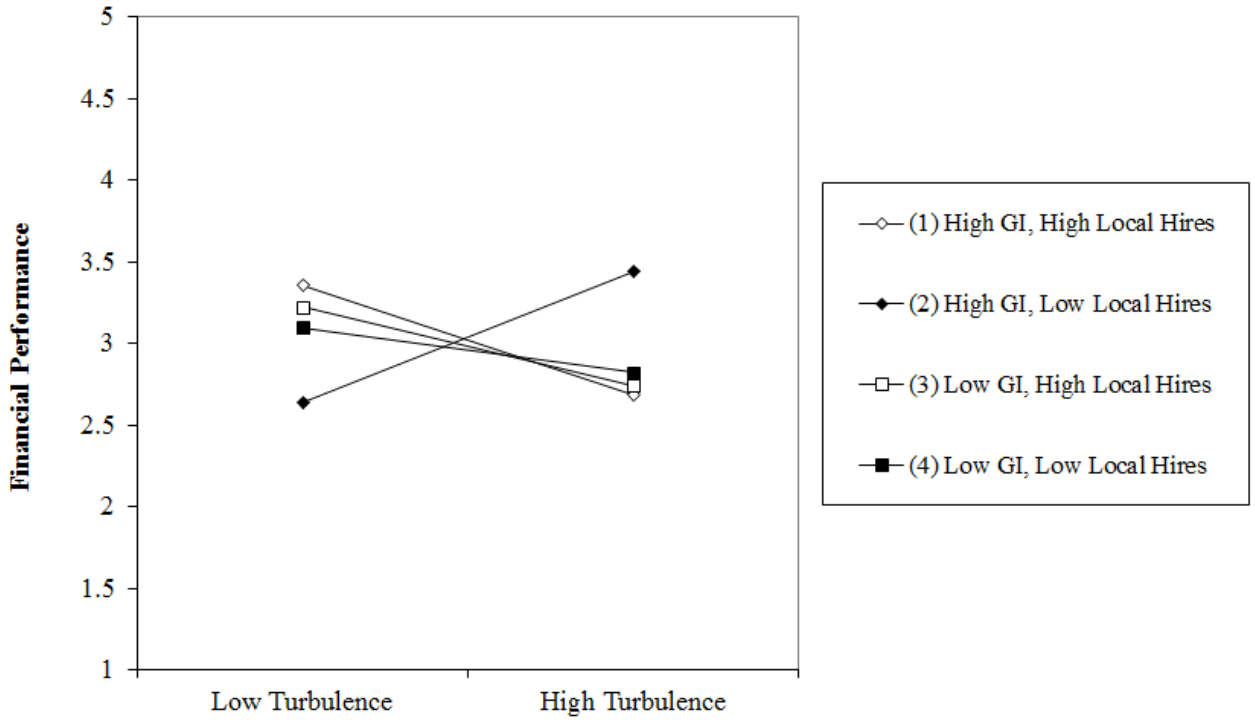
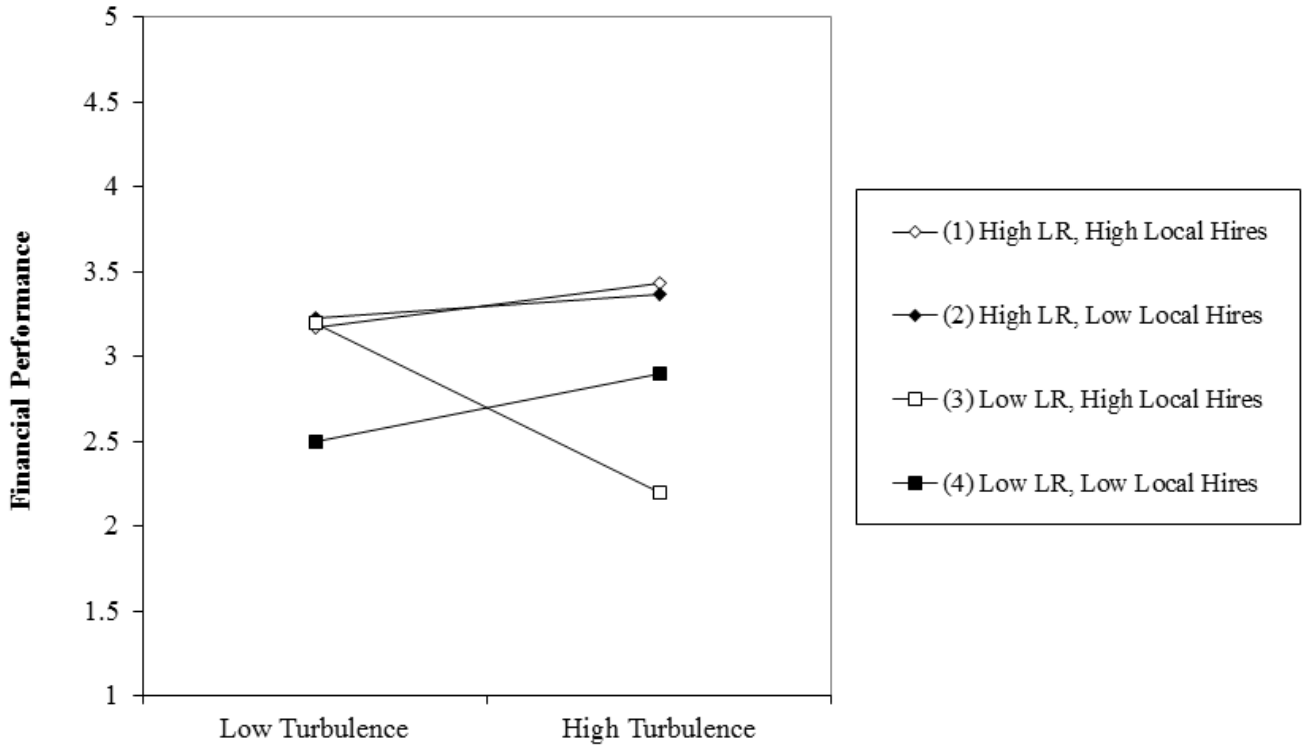


Figure 4. Effects of LR and local hires on the relationship between turbulence and financial performance



APPENDIX A

Questionnaire items used in the survey

A1. Your current company was established in year _____(unless stated otherwise, 'the company' hereinafter shall refer to the Chinese affiliate of its parent company).

A2. Its parent company was founded in year _____ and entered Chinese market in year _____.

A3. The parent company is registered in which country or region:

□ North America
□ Europe
□ Japan/Korea
□ Taiwan/HK/Macau
□ Southeast Asia
□ Other, Please specify: _____.

A4. What industry is your company involved in?

□ Agriculture, Fishing, Livestock, Mining
□ Petroleum Industry
□ Consumer Goods textile, food, clothing, beverage）
□ IT, Communication, Electronics and Hi-tech
□ Industrial machinery
□ Network Technology
□ Consulting, Finance, Education
□ Pharmaceuticals and Healthcare
□ Other, Please specify：_____

A5. Your company currently has a number of _____employees (including labor dispatched), and _____ of them are of non-Chinese nationalities.

A6. Among top management (reporting directly to CEO), the ratio of locally hired managers is _____%.

A7. In which internationalization phases is your company currently? (single option)

□Entering stage: Established within 2 years; business in form of direct exportation or representative office
□Growth stage: Accelerated business-led growth; with overseas sales/service centre or manufacture bases set up
□Expansion stage: Horizontal expansion or vertical integration; harmonization with local firms with product diversification
□Stabilization stage: Insignificant business growth; focus on internal standardization and precision management
□Exit stage: Planning to withdraw from Chinese market in one or two years
□Other stage: Please specify: _____

A8. The percentage of sales in China accounting for global sales revenue is _____%.

A9. Knowledge management system (5-pont Likert; 1=strongly disagree; 5=strongly agree)

We have a knowledge management system to ensure knowledge accumulation regarding the business environment.

A10. Environmental turbulence (5-pont Likert; 1=strongly disagree; 5=strongly agree)

1) Our competitors in the local market frequently modify their strategies.
2) Local policies tend to change frequently in unpredictable directions.
3) Local consumer preference tends to change fast and frequently.
4) The operating risks in Chinese market are relatively high.

A11. Global integration (5-pont Likert; 1=strongly disagree; 5=strongly agree)

1) Decisions on manufacturing in our company have always taken account of global market perspectives.
2) Product quality standard and service process are designed by the parent company.
3) Products and services of our company are primarily based on global consumer needs.
4) Our company completely adopts global-based technical development platforms and management systems.
5) Our company is highly dependent on inter-linkages with the parent companies and affiliates.
6) R&D outcomes of our company are shared across all subsidiaries.

A12. Local responsiveness (5-pont Likert; 1=strongly disagree; 5=strongly agree)

1) Our company responds rapidly to local customers and their needs.
2) Our company always formulates strategy based on local market.
3) Our company has a high local sales volume of products and services.
4) Our company tends to develop or upgrade products with intention to meet local market needs.
5) We respect local culture and traditions and take them into account in our products and services.
6) Our company has a high level of differentiation in marketing and sales based on local market.

A13. Financial performance (5-point Likert; 1=highly unsatisfactory; 5=highly satisfactory)

Rate your company's performance relative to competitors over the last three years on:
1) Sales growth rate.
2) Return on investment
3) Profitability.