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**Does learning at home and from abroad boost the foreign subsidiary
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Does learning at home and from abroad boost the foreign subsidiary performance of emerging economy multinational enterprises?

Abstract

Based on a sample of Chinese firms that have undertaken outward FDI, we examine the extent to which domestic learning and host market learning affect subsidiary performance. The findings indicate that domestic learning through collaboration with foreign firms at home, and host market learning, positively contribute to subsidiary performance. We find some synergetic effects between domestic learning and host market learning, and these two types of learning jointly shape subsidiary performance. By providing new empirical insights into the performance implications of different types of learning, this study helps advance our understanding of EMNEs.

Key words: EMNEs, foreign subsidiary performance, host market learning, domestic learning

Introduction

The substantial increase in outward foreign direct investment (OFDI) by emerging economy MNEs (EMNEs) has stimulated research interest which has resulted in a growing number of studies on this phenomenon (see Deng, 2012; Jormanainen & Koveshnikov, 2012 for a review). Most existing studies have examined the patterns, motivations and entry mode selections of EMNEs' OFDI (Bangara, Freeman and Schroder, 2012; Cui & Jiang, 2012; Lu, Liu & Wang, 2011; Luo and Tung, 2007; Meyer et al, 2014; Ramamurti & Singh, 2009). The findings from these studies have enhanced our understanding of EMNEs' OFDI. However, few have investigated whether different types of learning influence the performance of EMNE overseas subsidiaries. In particular, the extent to which the domestic learning and host market learning of EMNEs affects subsidiary performance is under explored.

Previous research has tended to over emphasize experiential learning through direct operations abroad based on the internationalization process of MNEs from developed countries, but downplay learning through collaboration with foreign firms at home (Eriksson, Johanson, Majkgard, & Sharma, 1997; Johanson & Vahlne, 1977). Such a focus has been built on the implicit assumption that a firm detaches itself from the home country when it goes abroad, such that only experiential learning in host countries matters with regard to further international expansion and overseas subsidiary performance. However, this emphasis may not reflect the characteristics of EMNEs as they are exposed to foreign firms at home before undertaking OFDI. Emerging economies, such as China, have opened up to inward FDI since the early 1980s, and EMNEs have had the opportunity to accumulate knowledge and capabilities through learning from foreign firms before venturing abroad. At the early stages of internationalization, EMNEs may lack experiential knowledge from heterogeneous host-country environments. Therefore, the knowledge and capabilities accumulated at home are more valuable for EMNEs than for well-established MNEs. However, little research has

been conducted on whether learning from foreign firms at home affects the international operations of EMNEs, with a few exceptions. Lu, et al. (2014a) have examined the impact of EMNEs' domestic diversification on international diversification, but they did not consider the effect of learning from foreign firms at home and called for more studies to cover a broader context i.e. the way in which EMNEs accumulate the knowledge and capabilities needed for internationalisation through domestic learning.

In addition, existing studies treat the impact of different forms of learning, such as host market learning through overseas operations, and domestic learning through collaborating with foreign firms, as homogenous (e.g. Delios & Beamish, 2001; Gao et al., 2008; Luo & Peng, 1999; Wu & Lin, 2010). We argue that the impact of host market learning on subsidiary performance should be differentiated from that of domestic learning. Domestic learning through collaborating with and observing foreign firms enables EMNEs to acquire knowledge about international markets, foreign countries' regulations, foreign firms' best practice and advanced technology (Martin & Salomon, 2003; Tsang, 2002). This kind of learning may form the basis of EMNEs' competitive advantage. The lack of attention to different types of learning by EMNEs represents an important theoretical and empirical omission since different dimensions of learning may result in different levels of subsidiary performance. Hence, there is a need to better understand the importance of both types of learning in the subsidiary performance of EMNEs. In particular, few studies explicitly address the interrelationship of host market learning, domestic learning and the overseas subsidiary performance of EMNEs (Li, Poppo, & Zhou, 2010).

This paper aims to fill these research gaps by investigating how different types of learning, such as host market learning and domestic learning, affect subsidiary performance and whether these two types of learning have a synergetic effect on overseas subsidiary

performance. In so doing, we seek to assess the extent to which different types of learning are crucial for the overseas success of EMNEs.

This study makes a number of contributions to the existing literature. First, departing from previous research which has predominately focused on the importance of experiential learning when firms conduct international operations abroad, this study unpacks the performance implications for EMNEs of domestic learning through collaborating with foreign firms at home. We explicitly delineate whether the knowledge and capabilities accumulated through domestic learning affect overseas subsidiary performance. This helps to contribute to our understanding of factors affecting the overseas performance of EMNEs, given that only a limited number of studies have examined the impact of learning on the outcomes of EMNE internationalisation. Second, by considering the knowledge and capabilities accumulated through domestic learning, this study moves beyond the boundary of experiential learning through direct international operations in a host country and helps to build a link between international exposure at home and outward FDI, and broadens the knowledge base for the overseas subsidiary performance of EMNEs. This consideration captures the characteristics of EMNEs that have been exposed to international collaboration at home before going abroad, thus enriching our understanding of EMNEs' competitive advantage embedded in the context of their home country. Collaboration with foreign firms at home provides learning opportunities through which EMNEs accumulate the knowledge and expertise needed for international operations. Finally, we further explore the synergetic effects between the two types of learning by focusing on the interaction between domestic learning and host market learning. Such synergetic effects are absent in the existing literature on EMNEs. This enables us to provide a more complete account of how different types of learning jointly shape the overseas subsidiary performance of EMNEs.

The paper is organized as follows. The next section introduces our theoretical background and hypotheses. We then describe the sample and variables used in the study, while the empirical results are presented in the subsequent section. Finally, we discuss the findings and their implications, followed by conclusions.

Theoretical Background and Hypotheses

The growing literature on EMNEs has mainly examined the patterns, motivations, location choices and entry model selections of EMNEs based on various theoretical perspectives, including the linkage-leverage-learning framework (LLL) (Mathews, 2006), the resource based view, transaction costs theory and institutional theory. The main findings show that OFD decisions by EMNEs are affected by a variety of firm, industry and institutional contextual factors (Bangara, Freeman and Schroder, 2012; Buckley, et al., 2007; Cui & Jiang, 2012; Lu, et al., 2014b; Ramamurti & Singh, 2009; Yamakawa, Peng, & Deeds, 2008; Wang, et al., 2012). While some studies have found that EMNEs use OFDI as a means of acquiring advanced knowledge and catching up with technological leaders in the West (Deng, 2009; Gubbi et al., 2010; Luo & Tung, 2007; Mathews, 2006), others have shown that supportive government policies and ownership significantly affect location choices and entry mode selection by EMNEs (Luo et al., 2010; Meyer, et al., 2014). Several studies have applied an integrated approach to investigate how firms' competitive advantages, industry competition and institutional environments jointly determine OFDI by EMNEs (Lu et al., 2011; Wang et al., 2012; Wei et al., 2014; Yamakawa, Peng, & Deeds, 2008). While these existing studies enhance our understanding of factors affecting OFDI by EMNEs, few have examined the outcomes and performance of EMNEs. In particular, the role of domestic learning through collaborating with foreign firms in EMNEs' home countries is underexplored in the existing

literature. Such an omission limits our understanding of EMNEs' competitive advantage embedded in the context of their home country.

In this study, we adopt an organisational learning perspective to unpack the impact of different types of learning on the subsidiary performance of EMNEs. Organisational learning refers to firms' development of knowledge, or insights that assist in their behavioural change (Hurley & Hult, 1998; Levitt & March, 1988). Recent research decomposes organizational learning into four main elements: knowledge acquisition; information dissemination, by which information from different sources is shared; information interpretation, in which distributed information takes one or more commonly understood interpretations; and organizational memory, representing the means by which knowledge is stored for later use (Clercq et al., 2012; Gao et al., 2008; Huber, 1991; Hult & Ferrell, 1997; Santos-Vijande et al., 2012; Sinkula, 1994; Slater & Narver, 1995). Organisational learning is concerned with access to knowledge and the capabilities needed for utilising and building on such knowledge. In this study, we mainly focus on knowledge acquisition and utilisation. As such we explore how domestic learning and host market learning enable firms to build competitive advantage and generate desirable performance.

When firms engage in international expansion, they learn about the foreign markets they target and accumulate experiential knowledge about the host country in which they operate. This type of learning is defined as experiential learning and refers to the gradual accumulation of knowledge as a firm expands its international activities (Johanson and Vahlne, 1977, 1990). Experiential learning accrues as firms learn from their own engagement in conducting business activities (Argote, 1999). By definition, firms can accumulate knowledge about internationalisation through experiential learning only when they venture abroad and have international operations in which firms can acquire knowledge about a host country incrementally through learning by doing (Johanson & Vahlne, 1977; 1990).

Experiential learning is identified as the most important means by which internationalised firms gain first-hand foreign market knowledge (Clercq et al., 2012; Yeoh, 2004; Zou & Ghauri, 2010). Through experiential learning, firms can reduce the level of liability of foreignness and overcome operational uncertainties (Gao et al., 2008). Experiential experience also helps firms build a local knowledge base and so overcome challenges associated with the unfamiliarity of host country conditions (Peng, 2001). Existing studies have examined how firms acquire host country knowledge through directly engaging in international operations (Erramilli, 1991).

As latecomers, EMNEs at the early stage of internationalisation have limited international operations. Hence, they may lack knowledge of operating in host countries compared to developed economy MNEs (Luo and Tung; Lu et al., 2014b; Wang, et al., 2012). However, they started accumulating their international experience before they ventured abroad through establishing partnerships with foreign firms, such as forming strategic alliances with foreign firms or being local suppliers for foreign firms, or being exposed in other ways to foreign firms in their home country (Gu & Lu; 2011; Luo & Tung, 2007). This suggests that firms can accumulate some elements of international experience even when they only operate domestically. This aspect of domestic learning is particularly important for EMNEs that have engaged in various forms of foreign cooperation at home. More specifically, collaboration with foreign firms at home enables firms to accumulate different types of knowledge needed for outward FDI operations. Thus, we take account of both experiential learning abroad and domestic learning at home by examining the extent to which the two types of learning directly contribute to subsidiary performance as well as the interrelationship between the two forms of learning and subsidiary performance.

Domestic learning

Domestic learning through collaboration with foreign firms at home is critical as it constitutes a unique learning process for EE firms prior to outward FDI. Various forms of collaboration with foreign firms in the home country, such as original equipment manufacturing (OEM), international equity joint ventures or alliances, or being suppliers for foreign firms and developing various business relationships with foreign firms that operate in the home country, have provided EE firms with valuable opportunities to gain access to new technological knowledge, recognize advanced international standards, and acquire managerial knowledge (Child and Rodrigues, 2005; Li and Cui, 2010; Welch and Luostarinen, 1993). Such exposure to foreign firms at home helps EE firms to develop and accumulate the knowledge and capabilities needed for undertaking OFDI. Learning from foreign firms or facing foreign competition at home makes EE firms more efficient through increased productivity and innovation and it is widely recognised that EE firms are able to catch up with foreign firms through imitating their technology and management methods (Buckley, Clegg & Wang, 2002; Liu & Buck, 2007). Through direct interaction with foreign firms, EE firms are exposed to market-based rules and practices which enable them to develop market-based capabilities (Lu, Liu & Wang; 2011; Wei et al., 2014).

In addition, through cooperation with multiple foreign partners who operate in the home country, EE firms may be able to learn about foreign trade techniques and foreign operation characteristics due to exposure to international contexts at home. Through cooperation with foreign firms at home, EMNEs may gain knowledge about how to effectively manage foreign demand and the technical requirements of foreign clients. They may find this knowledge valuable when dealing with challenges associated with foreign operations, local competition and a new customer base in host countries (Buck et al., 2007). It is likely that the more intensively EMNEs collaborate with foreign firms at home, the more knowledge and

experience they can accumulate through such cooperation. Despite their lack of original technology and innovation, the expertise and knowledge accumulated through collaboration with foreign firms at home may enable them to gain competitive advantages when operating abroad (Luo & Tung, 2007).

Finally, apart from the knowledge and experience accumulated through cooperation with foreign firms at home, EMNEs may also have developed their learning capabilities domestically. This learning capability may serve as the basis for expertise and knowledge in international operations and can be exploited in international contexts to enhance the effectiveness of international operations, thus contributing to subsidiary performance (Luo & Wang, 2012; Luo & Tung, 2007; Martin & Salomon, 2003). By actively utilising the knowledge and capability gained through domestic learning, EMNEs may be in a better position to successfully manage overseas subsidiaries and undertake foreign operations. In sum, the knowledge and capabilities developed through learning from foreign firms at home can be exploited by the overseas subsidiaries of EMNEs, thus affecting their performance. Our discussion leads to the following hypothesis:

H1: Overseas subsidiary performance is positively associated with an EMNE's domestic learning.

Host market learning

A subsidiary can be regarded as a means to acquire, assimilate, and exploit knowledge to achieve competitive advantages. Therefore, knowledge about foreign markets and a subsidiary's capability to acquire and exploit host market knowledge are among the most important sources of a subsidiary's sustainable competitive advantage. Host market learning is defined as the experiential learning of a subsidiary in accumulating knowledge about the local market in a host country. An overseas subsidiary's performance depends on its ability to

access and utilise local market knowledge (Eriksson, et al., 1997; Eriksson, Majkgard & Sharma, 2000; Zahra, Ireland & Hitt, 2000). The importance of experiential learning recognised in the broad literature on MNEs also applies to EMNEs (Hennart, 2012). There are two main reasons for this.

First, host market learning enables a subsidiary of EMNEs to resolve problems or select alternative options that align its international operations according to specific local conditions. EMNE subsidiaries can effectively adapt their products to local markets and select appropriate market segments based on their understanding of local market conditions through host market learning. Host country-specific knowledge is context specific and cannot be easily acquired (Inkpen & Beamish, 1997; Luo & Peng, 1999). Researchers find that knowledge generated in one context has less applicability when transferred across borders (Delios & Beamish, 2001; Barkema et al., 1996; Madhok, 1997). Even firms with prior international experience can encounter location-based disadvantages which can only be resolved by accumulating host country knowledge (Lord & Ranft, 2000; Zhou, Wu & Luo, 2007). In light of extant research, specific knowledge about a host-country is more valuable than generic knowledge about global markets (Dikova, 2009; Wu & Lin, 2010). This may be due to the differences in host country markets which require a firm to understand local customer preferences and communicate in a manner that appeals to local customers (Day, 1994). Therefore, local market knowledge accumulated by EMNEs' subsidiaries through directly engaging in host country operations is sticky and difficult to imitate. The tacitness of host market knowledge is a valuable source of competitive advantage and is crucial to generating satisfactory performance in local markets (Deng, 2009; Li, 2007; Mathews, 2006).

Second, local market knowledge helps subsidiaries understand local business practices and culture and facilitates building local networks (Li, Poppo, & Zhou, 2010; Steensma et al., 2008; Tsang, 2002). Host market knowledge is also important in helping subsidiaries reduce

the liability of foreignness and enhance competitive advantages (Delios & Beamish, 2001; Gao et al., 2008). This type of knowledge can only be obtained through an actual presence and operations in the local market (Johanson & Vahlne, 1977; Luo, 2004). Subsidiaries with a high level of local market knowledge are in a better position to compete against local rivals. When subsidiaries are proactively engaged in host market learning, they can establish a competitive advantage relative to their rivals. Such learning enables the subsidiaries to recognise the importance of cultivating and integrating the diverse experiential market knowledge of the host country into their operations, thus affecting subsidiary performance. This leads to the following hypothesis:

H2: Overseas subsidiary performance is positively associated with an EMNE's host market learning.

Synergistic effects

We have discussed the individual impact of domestic learning and host market learning on subsidiary performance above. However, a foreign subsidiary can combine knowledge resources accumulated at home (Gupta & Govindarajan, 2000) and local market knowledge gained through its own operations in a local host market (Lord & Ranft, 2000). These knowledge resources offer the subsidiary the competitive edge in its overseas operations and can be exploited simultaneously to boost subsidiary performance (Winter & Szulanski, 2001; Xie et al., 2011). This implies that there may be a synergistic effect of the two types of learning on subsidiary performance (Fang et al., 2013). Thus, there is a need to go beyond the direct impact of domestic learning and host market learning by examining the interrelationship between the two types of learning and subsidiary performance.

Domestic learning is mainly concerned with knowledge about international operational modes through OEM, licensing, and linkages with suppliers and foreign buyers, while host

market learning is more about the local business context, customers' needs, local culture and networks. The former provides subsidiaries with intangible assets and knowledge stock which further enhance the impact of host market learning on subsidiary performance, whereas the latter enables the subsidiary to apply knowledge from domestic learning to respond to local demands and adapt to local market conditions. These two types of knowledge can be integrated and combined together to boost overseas subsidiary performance. Such an integrative use of knowledge accumulated through these two types of learning produces synergistic value beyond which either could provide independently.

Collaborating with experienced foreign firms at home, EMNEs can develop business links, and leverage these links when operating in foreign countries. As discussed above, knowledge and expertise accumulated through collaboration with foreign firms at home enable EMNEs to learn the operational modes of international activities and develop market-based capabilities which can be transferred when they venture abroad. This means that EMNEs' OFDI activities are not detached from what they have learned at home. In this regard, the knowledge obtained through learning from foreign firms at home may lead EMNEs to devote more effort and time to host market learning. Hence, domestic learning fosters host market learning (Li and Cui, 2010). Pre-existing knowledge of international operations also enables subsidiaries to better utilise local market knowledge as EMNEs have built knowledge stocks and do not need to start from scratch. Equipped with knowledge accumulated through domestic learning, subsidiaries can better make sense of the newly acquired host market specific knowledge and develop strategies and adapt services and products according to local competitive behaviour and market needs (Evans, Mavondo, & Bridson, 2008). By doing so, subsidiaries can more effectively convert host market knowledge into improved performance. Thus, we hypothesize:

H3a: The effect of an EMNE's host market learning on overseas subsidiary performance is positively moderated by domestic learning.

In addition, to have effective and efficient international operations, knowledge from domestic learning needs to be combined with specific host country knowledge, including market conditions, government regulations and local networks (Li, Poppo, & Zhou, 2010). We argue that the impact of domestic learning on subsidiary performance may be positively moderated by host market learning. With increasing host market knowledge, firms become more confident of their ability to correctly estimate risks and returns and effectively manage foreign operations (Erramili, 1991; Luo, 2004). As firms accumulate more host market specific knowledge, they can better exploit knowledge accumulated through domestic learning by meeting the specific demands and requirements of local partners and clients in the host country. Firms can achieve a higher level of performance in host countries, given that subsidiaries can exploit knowledge through domestic learning more effectively when they engage in host market learning. In this regard, host market learning strengthens the impact of domestic learning on overseas subsidiary performance. Thus, we hypothesize:

H3b: The effect of an EMNE's domestic learning on overseas subsidiary performance is positively moderated by host market learning.

The Data and Method

Sample and data collection

To collect data, we collaborated with the Asia Pacific Foundation of Canada (APFC) and the China Council for the Promotion of International Trade (CCPIT)¹. APFC is an independent non-governmental organization focusing on Canada's relations with Asia. CCPIT is China's national non-governmental institution for the promotion of foreign trade, and it has a national

network. It allowed us to access its members through its local representatives who are familiar with these enterprises, and thus encourage participation in the survey. Conducting surveys through local research networks and onsite personal meetings has proved to be effective in obtaining reliable and valid information in emerging economies such as China (Zhou, Tse & Li, 2006). Previous surveys on China's outward FDI conducted by the CCPIT and APFC have been widely cited (e.g. Luo, Xue & Han, 2010; Luo & Tung, 2007; UNCTD, 2006).

Our survey was first developed in English and then, with the assistance of independent translators, translated into Chinese, and finally translated back to English to ensure conceptual equivalence (Hoskisson, Eden, Lau & Wright, 2000). To ensure the content and validity of our measurements, we conducted four in-depth interviews with CCPIT officials who are very familiar with firms conducting outward FDI, and asked each respondent to verify the relevance and completeness of our measurements. On the basis of their responses, we revised a few questionnaire items to enhance their clarity. We then conducted a pilot study with ten senior managers who were in charge of outward FDI in the CCPIT's membership enterprises, who not only answered all the items but also provided their feedback about the design and wording of the questionnaire. We finalized the questionnaire according to the feedback from the pilot study.

To identify Chinese firms that are active in outward FDI, we matched the CCPIT's membership enterprises list with that of Chinese firms that registered their outward FDI activities with China's Ministry of Commerce (MOFCOM), the administration institute that approves and collects information on the outward FDI activities of Chinese firms. The latter list was considered the most comprehensive list of Chinese firms that have outward FDI activities (Cui & Jiang, 2012). Due to cost and administrative constraints, we randomly chose 2,000 firms that were CCPIT's membership enterprises and also on the MOFCOM's

registration list for their outward FDI activities. The CCPIT's local representatives contacted these firms first, and then sent hard copies of the questionnaire to general managers of these firms.

A total of 365 completed questionnaires were received by the headquarters of CCPIT in Beijing, representing a response rate of 18.25%. We double checked basic information such as firm name, location and industry based on CCPIT's membership enterprises database, and found 32 completed questionnaires contained basic information which was inconsistent with that on the CCPIT's membership enterprises database. Thus, these 32 firms were deleted from the data, resulting in 333 verified questionnaires, representing a response rate of 16.7%. We also randomly called 20 respondents to confirm that the questionnaire was completed by senior managers who were familiar with their firms' internationalisation activities. A comparison of location and industries between the responding firms and non-responding ones suggested these two groups of firms have similar distribution patterns in industries and location². We dropped foreign wholly-owned subsidiaries in China (non-Chinese firms) from the sample, given that such firms would not be compatible with Chinese firms (Yiu, Lau, & Bruton, 2007). The final sample consisted of 200 Chinese firms.

Dependent variable

Similar to previous studies (He, Tian & Chen, 2007; Lu et al., 2010; Woodcock, Beamish & Makino, 1994), we used a perceptual measure for the overseas subsidiary performance of Chinese MNEs. The validity of a perceptual measure for performance raised concerns among some researchers who believe that bias may be introduced with subjectivity. Moreover, perceptual differences among managers across countries, across firms and across functional areas can be caused by the different institutional environments in which managers function (Leung et al., 2005, Makhija and Stewart, 2002). However, a perceptual measure can be more reliable than objective measures in international business contexts, especially in emerging

economies such as China, where objective measures are often unreliable or unavailable (Hult et al., 2008; Lukas et al., 2001). The use of a perceptual measure in international business also enables researchers to understand the interpretation of an organisation's performance goals by managers (Brouthers, 2002), and the value that a manager may place on specific financial, operational, or overall effectiveness performance measures (Hult et al., 2008). Furthermore, subsidiaries may have various roles within a MNE's network, indicating that performance outcomes should not be based solely on financial indicators (Dai & Liu, 2009; Demirbag et al., 2007). Managers' satisfaction with a growth rate is considered an appropriate measure of subsidiary performance (Cooper & Artz, 1995). Although difficulties such as self-enhancement and objectivity might be encountered, self-evaluated surveys have been proved to possess strong internal consistency and reliability (Cooper & Artz, 1995; Ketokivi & Schroeder, 2004) and have been widely used in previous studies (Andersson, Forsgren & Holm, 2002; Birkinshaw, Hood & Young, 2005; He et al., 2007; Lu et al., 2010). We employed three seven-point Likert-scale items (1=very dissatisfied; 7=very satisfied) to capture managers' perception of the performance of their most recently established overseas subsidiaries in order for managers to more easily identify the focal foreign subsidiary from others, and thus increase the reliability of the self-evaluated measures. The survey asked the respondents about how satisfied they were in terms of the growth rate of sales, growth rate of market share and growth rate of profit in their overseas subsidiaries. Based on these components, we used factor analysis to construct a proxy for the subsidiary performance of the sample firms.

Independent variables

Domestic learning is measured by the extent to which the parent firm has collaborated with foreign firms in China. We asked each respondent about whether and to which extent the company has been involved collaborating with foreign firms. Based on the evaluation and

practical insights of the managers in our pilot study, we used six seven-point Likert scale items to measure the extent to which their firms have committed to the following collaboration behaviours in the domestic market: (1) become an original equipment manufacturer (OEM); (2) introduced foreign capital; (3) established a joint venture with a foreign company; (4) introduced foreign production lines and equipment; (5) introduced foreign technologies; (6) set-up franchising business for foreign products. Based on these components, we used factor analysis to construct a proxy for the domestic learning of the sample firms.

Host market learning is measured by the extent to which the subsidiary has learnt from the host market (Li, Poppo, & Zhou, 2010; Steensma et al., 2008; Tsang, 2002). Similarly, we asked the respondent about whether and to which extent the subsidiary has engaged in host market learning. Based on previous literatures and the practical insights of the managers in our pilot study, we developed three seven-point Likert scale items and asked the respondents to indicate the extent to which their overseas subsidiaries have: (1) developed local networks and partnerships; (2) adapted to local customers' needs; (3) adapted to local business culture. Using these components, we conducted factor analysis to construct a proxy for host market learning of the sample firms.

Control variables

We controlled for several variables which may also affect subsidiary performance, including *host country experience* measured by foreign subsidiary age (Delios & Beamish, 2001; Fang et al., 2007; Gao et al., 2008), *firm age* measured by the number of years since the founding of the parent firm (Fang, Wade, Delios & Beamish, 2007; Zhou, Wu & Luo, 2007), and *firm size* measured by the logarithm of the total asset of the parent firm (Lu et al., 2010; Luo & Peng, 1999). We also controlled for the ownership effect using an *ownership dummy* to distinguish state-owned enterprises and private firms (Wu & Lin, 2010). We also included the

variable of returnee which measures the international experience of the top management team of the sample firms. Returnees are defined as people who have studied and/or worked in foreign countries and returned to China (Filatotchev, et al., 2009). Such a measure enables us to control for the ability of a top management team to leverage or transfer domestic learning to boost overseas subsidiary performance (Clercq et al., 2012). We created a dummy variable which takes the value of one if firms have returnee(s) in the top management teams, and zero otherwise. We also included *industry dummies* to control for industry specific effects.

Results

Measurement testing

We tested the construct composite reliability (CR), convergent and discriminant validity of the constructs in accordance with accepted practice (Anderson & Gerbing, 1988; Fornell & Larcker, 1981). The CR values for all constructs were good, ranging from 0.82 to 0.88. The three-factor confirmatory factor analysis (CFA) model provided a good overall fit with the data, with all indices meeting the respective criteria: $\chi^2(51)=133.36$, $p<0.001$; NNFI=0.92; CFI=0.93; RMSEA=0.090; SRMR=0.067. Table 1 presents the CFA results, which indicate good convergent validity. The average variance extracted (AVE) and the square of the correlations between constructs are listed in Table 2. Discriminant validity is established if the AVE is larger than the squared multiple correlation coefficients between constructs (Fornell and Larcker, 1981). Our results meet this criterion, thus providing strong support of discriminant validity. Hence, the measurement scales used in this study were found to be reliable and valid.

To minimize the effect of common method variance, we took the following steps. First, multiple item constructs were used in our survey, since response biases are more likely to occur at the item level than at the construct level. In addition, our main hypotheses involve

moderating effects. It is observed that complex relationships between the dependent and independent variables are not part of the respondents' theory-in-use (Chang, Van Witteloostuijn & Eden, 2010). This helps reduce the risks of common method variance. Finally, we conducted Harman's single-factor test and found that the single factor model demonstrated a poor fit to the data. Thus, common methods bias is not a major threat to the subsequent hypothesis testing.

[INSERT TABLE 1 & TABLE 2 NEAR HERE]

Model testing

Table 3 shows the descriptive statistics. We first tested all control variables in Model 1 before adding independent variables, domestic learning and host market learning in Model 2. We then added the interaction terms in Model 3. Table 4 summarises the results for Model 1, 2 & 3.

[INSERT TABLE 3 & TABLE 4 NEAR HERE]

Hypothesis 1 posits that there is a positive association between domestic learning and foreign subsidiary performance. The results from Model 2, indicate that the variable of domestic learning is statistically significant ($\beta=0.160$, $p<0.001$) and positively associated with foreign subsidiary performance. However, the results from Model 3 show that the effect of domestic learning on subsidiary performance is contingent on host market learning. Thus, Hypothesis 1 is partially supported.

Hypothesis 2 predicts that host market learning will be positively associated with foreign subsidiary performance. The results from Model 2 show that the coefficient for host country learning is statistically significant and positively associated with foreign subsidiary performance, suggesting that a higher level of host market learning leads to a better foreign

subsidiary performance ($\beta=0.473$, $p<0.001$). Host market learning remains significantly positive in the interaction Model 3 ($\beta=0.283$, $p<0.01$). Thus, Hypothesis 2 is fully supported.

In Model 2, the coefficients of all the independent variables represent the average effect of a change in these variables on the dependent variable. However, in Model 3, the coefficients of the independent variables, such as domestic learning and host market learning, should not be interpreted as the average effect of a change in these variables on the dependent variable, foreign subsidiary performance, because these coefficients only capture the effects of the independent variables on foreign subsidiary performance when the conditioning variable is zero (see Brambor, Clark & Golder, 2006 for a more detailed explanation). The marginal effects of these independent variables on foreign subsidiary performance can be significant even when the coefficients of these variables are insignificant as presented in Table 4, because of the addition of the interaction term. In other words, the interaction Model 3 asserts that the effect of a change in the independent variables on foreign subsidiary performance depends on the value of the conditioning variables. For example, the coefficient of domestic learning is 0.160 ($p<0.001$) in Model 2, but changes to -0.205 (i.s.) in Model 3 when the interaction term is added. This inconsistency is due to the fact that the coefficient of domestic learning in Model 3 only captures the effect of domestic learning on subsidiary performance when host market learning is equal to 0, unlike in Model 2 where the coefficient represents the average effect of domestic learning on subsidiary performance. In Model 3, the marginal effect of domestic learning on performance is $[-0.205+0.078*(\text{host market learning})]$. A detailed explanation is provided in the Appendix A.

Therefore, in order to provide a meaningful and informative interpretation of the results, such as the marginal effect of independent variables on foreign subsidiary performance, it is necessary to calculate the standard error of interest and plot the marginal effect over the range of the conditioning variable. Such an exercise enables us to determine over which range of

the conditioning variable the marginal effect of the independent variables on foreign subsidiary performance is significant.

For the purpose of determining the range of host market learning over which the effect of domestic learning on foreign subsidiary performance is significantly increased, we follow the guidelines by Brambor, Clark & Golder (2006) and Dobbin & Dowd (2000) and plot the marginal effect of domestic learning on foreign subsidiary performance on the condition of host market learning (Figure 1). When both upper and lower 95% confidence interval lines (broken lines) are above or below the zero line, domestic learning has a statistically significant effect on foreign subsidiary performance. The lower 95% confidence interval crossed the zero line when the score of host market learning equals 4.14 under which the marginal effect of domestic learning on foreign subsidiary performance is $[-0.205 + 0.078 \times (4.14) = 0.113$; s.e. $= 0.057$; $p < 0.05$]. Therefore, when host market learning scores between 4.14 and 7, domestic learning has a statistically significant effect on foreign subsidiary performance, and such a relationship is positively moderated by host market learning. Among the 200 sample firms, 137 firms (68.5%) fall in this range. Therefore, even though the marginal effect of domestic learning is only significant over a limited range of host market learning when considering the moderation effect of the latter, over two-third of the sample firms fall in this range. This indicates that host market learning enhances the impact of domestic learning on foreign subsidiary performance for the majority sample firms. When the host market learning scores below 4.14, the marginal effect of domestic learning on foreign subsidiary performance becomes insignificant. Therefore, Hypotheses 3a is supported within the range of host market learning between 4.14 and 7.

Following the same technique, the marginal effect of host market learning on foreign subsidiary performance on the condition of domestic learning is plotted and presented in Figure 2. The figure shows that the marginal effect of host market learning on foreign

subsidiary performance is significantly positive over the whole range of domestic learning. This effect is positively moderated by the level of domestic learning. Thus, Hypotheses 3b is fully supported.

By considering Figure 1 and Figure 2 together, it is clear that there is a synergistic effect whereby domestic learning and host market learning mutually reinforce each other's effect on subsidiary performance. The positive effect of domestic learning on subsidiary performance becomes significant when host market learning reaches 4.14 and increases with the growth in host market learning, whereas the positive effect of host market learning on subsidiary performance is significant over the whole range of domestic learning and becomes stronger with any increase in domestic learning.

[INSERT FIGURE 1 & FIGURE 2 NEAR HERE]

Discussion

Our study reveals several important findings. First, subsidiary performance is strongly associated with domestic learning. This indicates that learning through collaborating with foreign firms at home has deepened Chinese firms' understanding of international markets and helped them accumulate international knowledge and considerable financial and operational assets before venturing abroad (Deng, 2009; Lane et al., 2001; Luo, 2004). Previous studies proposed that Chinese firms are likely to accelerate their subsequent outward FDI and increase their commitment to international markets by leveraging their learning experience through inward FDI (Deng, 2009; Luo & Tung, 2007). Our results extend this stream of research by linking domestic learning to the performance of overseas subsidiaries and disclose that domestic learning not only motivates outward FDI (Gu & Lu, 2011; Gao, et al., 2013), but also contributes to EMNEs' subsidiary performance in host countries. This finding challenges the view that Chinese firms are latecomers who lack international

knowledge and experience (Liu and Buck, 2009; Mathew, 2006). Although Chinese firms are indeed latecomers in the global market comparing to western firms, their exposure to international collaboration at home can be exploited in overseas subsidiaries. Such domestic learning helps them build competitive advantages and improve subsidiary performance.

Second, our research explicitly examines and measures the extent to which host market learning helps subsidiaries to achieve better subsidiary performance in a host country. Previous research focused on host country experience measured by the number of years of investment history a subsidiary had in the host country (Gao et al., 2008; Luo & Peng, 1999; Wu & Lin, 2010). However, the number of years of operations in a host country is not equivalent to the amount of knowledge accumulated about the host market as learning requires proactive commitment of time and resources. By considering both host market learning and host country experience measured by the age of a subsidiary (as a control variable), we find that it is host market learning instead of subsidiary age that has a significant impact on subsidiary performance. This shows that having a long history in a host country does not guarantee satisfactory subsidiary performance. Our findings contribute to the existing literature by offering a novel explanation for why the empirical results of the performance outcomes of host country experience are not always consistent (Delios & Beamish, 2001; Makino & Delios, 1996; Wu & Lin, 2010).

Finally, our research shows that domestic learning and host market learning have a positive synergistic effect on subsidiary performance. It is important to take into account the synergistic effects arising from the combined usage of different knowledge resources because foreign subsidiary operations often require a broad scope of knowledge including knowledge gained through domestic learning (Fang et al., 2013) and gathered from a host country (Lord & Ranft, 2000). The positive effect of domestic learning on subsidiary performance is significant only when the variable of host market learning scores 4.14 or above, and it is

positively moderated by host market learning (Figure 1). This indicates that firms can only convert knowledge learned at home into foreign subsidiary performance when they have accumulated a certain amount of host country-specific knowledge and adapted their business according to local markets. Knowledge accumulated from domestic learning may not have any impact on overseas subsidiary performance if a subsidiary does not proactively reconfigure internal structures, systems, and processes to fit the new market environment based on a deep understanding of the host market (Ruigrok & Wagner, 2003).

Meanwhile, the effect of host market learning on subsidiary performance is positively moderated by the level of domestic learning (Figure 2). This indicates that firms with a high level of domestic learning can amplify the positive effect of host market learning on subsidiary performance. This implies that firms with accumulated knowledge through collaborating with foreign partners back home have a better capability to exploit host market specific knowledge. Therefore, they are able to benefit more from their host market learning by leveraging the knowledge and capabilities accumulated through domestic learning than firms with a lower level of domestic learning. In contrast with the diminished impact of domestic learning on subsidiary performance when host market learning is low, the impact of host market learning on subsidiary performance remains positive regardless of the level of domestic learning. This shows that host market specific knowledge is irreplaceable by knowledge accumulated through domestic learning. Experiential learning which is accumulated in a host country is a crucial and non-substitutable element in subsidiary performance, whereas the benefits of domestic learning are not automatic, but contingent on the level of host market knowledge.

This study takes a first step toward examining the impact of different types of learning, such as domestic learning and host market learning, on subsidiary performance and whether there are some synergetic effects between the two forms of learning. It contributes to existing

literature in several ways. First, our research broadens the concept of experiential learning by taking account of the domestic learning that firms accumulate through international collaboration at home. This represents an important extension of prior research by capturing the characteristics of EMNEs that have actively engaged in various forms of collaboration with foreign firms in their home country. Collaborating with foreign firms at home has served as a training ground for the international operations of EMNEs. Second, we consider synergic effects between the two types of learning. We not only differentiate the impact of host market learning from domestic learning, but also examine the extent to which the two types of learning complement and mutually reinforce each other, jointly affecting subsidiary performance. This thus sheds light on the interrelationship between different types of learning and subsidiary performance, which has been underexplored. Third, this study is among the few which appropriately and informatively interpret the interaction effects between different types of learning. Our more fine-grained analysis of interaction effects based on Brambor, Clark & Golder (2006) reveals additional insights into the moderating effect of the two types of learning. The impact of domestic learning on subsidiary performance is conditional on a medium-high level of host market learning and becomes significant only when a subsidiary has accumulated sufficient local knowledge. Meanwhile, the marginal effect of host market learning on subsidiary performance is positively significant given any level of domestic learning. Thus, the findings reveal the interrelationship between the two types of learning and represent an empirical contribution.

Managerial implications

The findings of this study have important implications for managers. First, unlike suggestions by previous research that firms can only start to accumulate knowledge about international operations through experiential learning (Johanson and Vahlne, 1977, 1990), our findings indicate that EMNEs can start to build up their knowledge about international operations

through collaborating with foreign firms at home. Managers of EMNEs should proactively seek the opportunity to work with and learn from foreign firms at home to develop their learning capacities and to accumulate knowledge resources for their overseas subsidiary operations. Managers can draw on domestic learning to build their competitive advantage in foreign markets, and convert learning experience at home into desirable subsidiary performance.

Furthermore, managers also need to invest in host market learning in order to gain sufficient host country-specific knowledge. Managers should seek more information about local markets from various means, such as government agencies, embassies and business associations in foreign countries, to develop a better understanding of local host markets in which their subsidiaries operate. Managers should be aware of the importance of host market learning. Without sufficient local-specific knowledge, the effect of domestic learning on subsidiary performance will be diminished.

Finally, the central message which can be drawn from our research is that both host market learning and domestic learning are complementary and jointly enhance subsidiary performance. Managers should take a holistic view of engaging in learning when undertaking OFDI activities overseas. Parental firms should transfer the knowledge accumulated through collaborating with foreign firms at home to overseas subsidiaries which should then combine this knowledge with host country-specific knowledge to enhance subsidiary performance. By exploiting the two types of learning simultaneously, overseas subsidiaries can achieve a higher level of performance than relying on one type of learning or exploiting each type of learning separately. This will help to increase EMNEs' chance of success in overseas markets.

Limitations and future studies

Our study has some limitations which represent avenues for future studies. First, we only used a perceptual measure for subsidiary performance. Future studies could use objective measures to compare how domestic learning and host market learning affect different dimensions of subsidiary performance. Second, our sample is based on membership of CCPIT, which may expose the study to selection bias although the data using the same survey method has been employed in previous studies (Lu, Liu and Wang, 2011; Luo, Xue & Han, 2010). Third, our study is based on a sample of Chinese MNEs, but further research is needed to examine whether our findings can be generalized in other emerging economy contexts. In addition, this study classified two types of learning, domestic learning and host market learning, to capture the experiential learning of EMNEs in an international context. However, we did not distinguish learning through collaboration and the focal firms' own experiences of operations. Future study could further delineate learning in order to provide a more comprehensive picture of how different types of learning contribute to EMNE subsidiary performance. Finally, as the sample covers only the newest subsidiaries, this research cannot show how persistent the effect of pre-learning and host-country learning will be. Future research could take a longitudinal approach to explore whether there is a lasting effect of various types of learning on foreign subsidiary performance and when different kinds of learning started to take effect. Further examination of this issue will help to advance our understanding of EMNEs.

Conclusions

This study has examined the learning effect on the subsidiary performance of a sample of Chinese MNEs. Adopting a learning perspective, we focus on the link between domestic learning, host market learning and subsidiary performance. The findings show that learning

by collaborating with foreign firms at home positively contributes to subsidiary performance along with host market learning. There are some synergetic effects between host market learning and domestic learning, and these two types of learning mutually reinforce and jointly contribute to subsidiary performance. The evidence indicates that different types of learning are crucial to enhancing the subsidiary performance of EMNEs.

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Appendix A

Equation 1 represents a more generic form of Model 3 which includes both independent variables and the interaction term:

$$Y = \beta_0 + \beta_1 X + \beta_2 Z + \beta_3 XZ + \varepsilon \quad 1$$

The marginal effect of X on Y is $\beta_1 + \beta_3 Z$. It is clear that β_1 only captures the effects of the independent variable X on dependent variable Y when the conditioning variable Z is zero. Therefore, in order to see whether X has a significant marginal effect on Y, we need to calculate the standard error of $\beta_1 + \beta_3 Z$ instead of the standard error of β_0 , β_1 , β_2 , or β_3 . The standard error of the marginal effect coefficient is (Brambor et al., 2006; Dobbin & Dowd, 2000):

$$\sigma_{\frac{\partial y}{\partial x}} = \sqrt{\text{var}(\beta_1) + Z^2 \text{var}(\beta_3) + 2Z \text{cov}(\beta_1 \beta_3)}$$

If the covariance term is negative, it is entirely possible for $\beta_1 + \beta_3 Z$ to be significant for substantively relevant values of Z even if coefficients of the model parameters are insignificant (Brambor et al., 2006). Therefore, the conventional way of presenting results in tables and discussing the significance of β_1 , β_2 and β_3 can be less informative or even misleading. Although researchers in the international business field start to plot interaction effects by presenting the effect of X on Y when Z is high or low (e.g. Fang et al., 2013), without calculating the standard errors of the marginal effects of X, this kind of plotting presents an incomplete picture of the international terms because it does not show whether the marginal effect of X on Y is statistically significant, or over which range of Z the effect is statistically significant.

Table 1: Measurement scales and properties

constructs	Measurement items	CR	Factor loading	R ² value
Subsidiary performance		0.88		
	Subsidiary profit growth		0.80	0.64
	Subsidiary sales growth		0.88	0.77
	Subsidiary market share growth		0.84	0.71
Domestic learning		0.88		
	OEM		0.62	0.38
	Foreign capital		0.79	0.62
	Joint venture		0.79	0.62
	Foreign production line		0.78	0.61
	Foreign skills		0.85	0.72
	License for foreign product		0.62	0.38
Host market learning		0.82		
	Developed local networks and partnerships		0.81	0.66
	Adapted to local customers' needs		0.85	0.72
	Adapted to the local business culture		0.69	0.48

Table 2: Discriminant validity

Constructs	International performance	Domestic learning	Host market learning
Subsidiary performance	0.71		
Domestic learning	0.10	0.55	
Host market learning	0.34	0.08	0.62

Note: Variances extracted are on the diagonal; square correlations are off-diagonal.

Table 3: Means, standard deviations and correlations

	Mean	S.d.	1	2	3	4	5	6	7	8
1. Subsidiary performance	4.01	0.86	1.000							
2. Domestic learning	2.70	1.10	0.376	1.000						
3. Host market learning	4.59	1.05	0.626	0.318	1.000					
4. Host country experience	3.00	2.79	0.068	0.087	0.053	1.000				
5. Firm age	18.21	15.17	0.044	0.128	0.006	0.038	1.000			
6. Ownership	0.27	0.45	-0.036	-0.090	-0.085	-0.061	0.339	1.000		
7. Firm size	6.52	2.24	0.130	0.151	0.026	0.015	0.393	0.266	1.000	
8. Returnee	0.57	0.50	0.175	0.070	0.137	0.033	0.036	0.051	0.140	1.000

Table 4: Results for testing the impact of domestic learning and host market learning

Variables	Model 1	Model 2	Model 3
Domestic learning		0.160*** (0.049)	-0.205 (0.194)
Host market learning		0.473*** (0.060)	0.283** (0.117)
Domestic learning * Host market learning			0.077* (0.038)
Host country experience	0.009 (0.017)	0.010 (0.014)	0.008 (0.013)
Firm age	0.002 (0.004)	-0.001 (0.003)	-0.001 (0.003)
Ownership	-0.087 (0.125)	0.007 (0.108)	0.011 (0.107)
Firm size	0.020 (0.017)	0.025* (0.012)	0.023* (0.012)
Returnee	0.236* (0.124)	0.131 (0.096)	0.143 (0.095)
Industry dummies	yes	yes	yes
R ²	0.072	0.454	0.467

Note: *, ** and *** represent significance at the 0.05, 0.01 and 0.001 levels, respectively.
Robust standard errors in parentheses.

Figure 1: The moderating effect of host market learning on the link between domestic learning and subsidiary performance

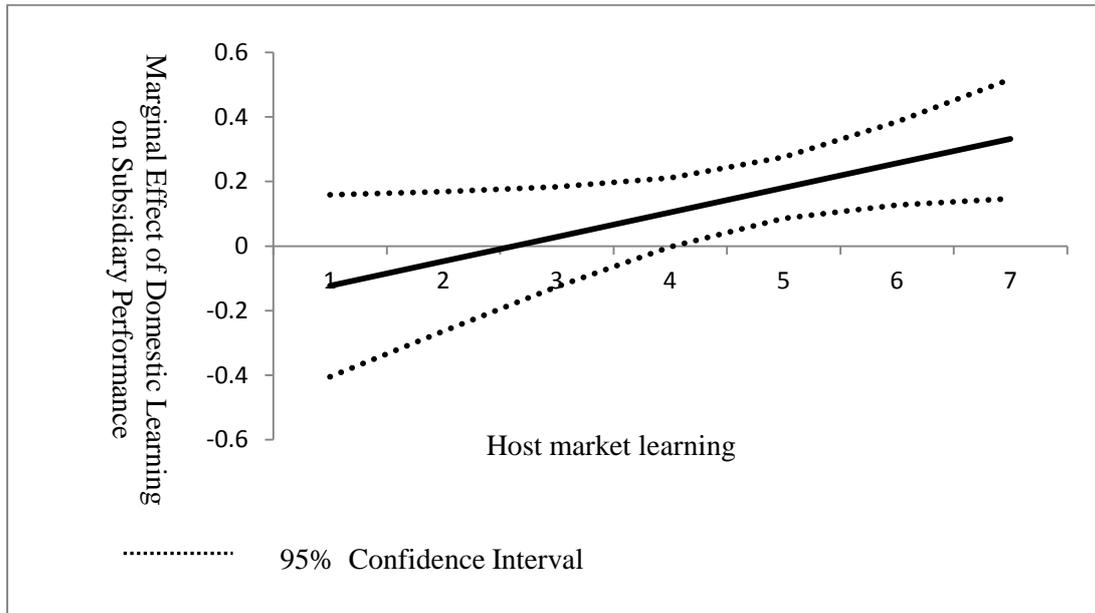


Figure 2: The moderating effect of domestic learning on the link between host market learning and subsidiary performance

